



# Monthly Report

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### Abbreviations and symbols

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 Data unknown, not to be published or not meaningful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

Discrepancies in the totals are due to rounding.

## ■ Commentaries

### ■ Economic conditions

#### Underlying trends

*Sluggish second-quarter growth masks economy's fairly robust underlying cyclical trend*

In the second quarter of 2016, the German economy will probably post a significantly slower pace of growth than at the beginning of the year. A number of factors indicate this. The favourable weather effects from the final quarter of last year and the first quarter of this year have run their course, meaning the construction sector in particular is lacking stimulus. Moreover, after rising sharply in the first quarter, industrial output is likely to take a brief pause. Industrial orders have not quite kept up with production, and even fell of late. The volatile development of German economic growth expected in the first half of this year masks the economy's continuing and fairly robust underlying cyclical trend. The positive sentiment indicated by surveys of both firms and households suggests that economic growth is likely to regain momentum in the second half of the year following a weak second quarter.

#### Industry

*Industrial output in April at first-quarter level*

German industrial output advanced clearly by a seasonally adjusted 1% in April compared with the relatively weak figure for March, and at the beginning of the second quarter it matched the average level of the first quarter as a result. Production volumes were rather heterogeneous across the individual categories of goods. Whereas the output of consumer goods saw no appreciable change compared with the first quarter, the changes in the production volumes of intermediate (-3/4%) and capital goods (+3/4%) largely balanced each other out. The substantial growth rates in automotive manufacturing were particularly noticeable. As a result, the automotive sector was able to continue the already strong upward movement seen in the previous quarter.

Industrial orders received in April showed a substantial seasonally adjusted decrease (-2%) compared with March, the March figure having been markedly revised upwards. The volume of incoming orders was therefore down slightly (-1/2%) on the first quarter of 2016. Looking at the individual sectors of the economy, only intermediate goods producers posted an increase in orders (+4 1/2%). By contrast, the order books of producers of capital goods (-3 1/2%) and consumer goods (-2%) saw sharp declines. Heterogeneity was pronounced in regional terms, too. Growth in orders from Germany was robust (+1 3/4%), whereas orders from abroad fell sharply (-2 1/4%). Excluding foreign orders for other transport equipment, which in April were a good two-fifths up on the average of the first quarter, orders received from both the euro area (-2 3/4%) and non-euro-area countries (-5%) fell substantially.

*Subdued intake of orders due to low demand from abroad*

Industrial sales in April rose markedly by 3/4% on the month after seasonal adjustment. However, the figure for April only reached the level for the first quarter of 2016. A marked decline was recorded in domestic sales (-1%), whereas foreign sales went up by almost the same extent (+1%). Growth in export sales was primarily attributable to non-euro-area countries, with producers of capital goods benefiting in particular. Nominal exports of goods in April remained largely unchanged on the month. However, given the sharp increases in the previous two months, the average of the first quarter of 2016 was nonetheless exceeded quite considerably (+1 3/4%). The decline in export prices meant that the increase was even slightly greater in real terms (+2%). Nominal imports of goods were down marginally on the month (-1/4%). The average of the last three months was undershot by a far greater extent (-1 3/4%). The decrease was at much the same level when calculated in real terms.

*Significant rise in foreign business and exports*

## Economic conditions in Germany\*

Seasonally adjusted

Period	Orders received (volume); 2010 = 100			
	Industry			Main construction
	Total	of which		
Domestic		Foreign		
2015 Q3	109.4	104.7	113.2	110.3
Q4	110.1	105.9	113.4	121.5
2016 Q1	111.0	105.0	115.8	129.3
Feb	109.7	105.2	113.3	128.8
Mar	112.6	105.5	118.3	128.2
Apr	110.4	106.9	113.2	...
Period	Output; 2010 = 100			
	Industry			Construction
	Total	of which		
Intermediate goods		Capital goods		
2015 Q3	110.4	105.9	118.1	104.9
Q4	110.1	106.2	117.5	106.5
2016 Q1	112.3	107.7	120.6	110.2
Feb	112.3	108.4	120.2	112.1
Mar	111.2	107.0	118.8	108.7
Apr	112.4	107.0	121.4	106.9
Period	Foreign trade; € billion			Memo item Current account balance in € billion
	Exports	Imports	Balance	
	2015 Q3	299.26	238.97	60.29
Q4	297.59	237.04	60.55	64.70
2016 Q1	298.77	236.44	62.33	74.34
Feb	99.40	79.43	19.97	27.31
Mar	101.33	77.57	23.76	26.33
Apr	101.33	77.38	23.95	26.83
Period	Labour market			
	Employment	Vacancies <sup>1</sup>	Unemployment	Unemployment rate in %
	Number in thousands			
2015 Q3	43,115	577	2,792	6.4
Q4	43,231	607	2,767	6.3
2016 Q1	43,413	630	2,727	6.2
Mar	43,459	634	2,722	6.2
Apr	43,500	638	2,706	6.2
May	...	653	2,695	6.1
Period	Prices; 2010 = 100			
	Import prices	Producer prices of industrial products	Construction prices <sup>2</sup>	Consumer prices
	2015 Q3	100.6	103.9	111.5
Q4	99.1	102.9	111.8	106.9
2016 Q1	96.1	101.4	112.5	106.6
Mar	96.2	101.2	.	106.8
Apr	96.1	101.2	.	107.1
May	...	...	.	107.3

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

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## Construction

Seasonally adjusted construction output in April posted a steep 1¾% decline on the month, the figure for March having been revised slightly upwards. Output in April also fell significantly (-3%) below the average of the previous quarter, which saw a very sharp rise. The decrease was attributable to the main construction sector, which suffered particularly severe losses (-5½%). This was due in part to the fact that the extremely mild weather conditions had temporarily led to higher output, notably in February, and that these stimuli are no longer being generated in the second quarter. Output in the finishing trades, which maintained the previous quarter's level, cushioned the downturn somewhat. Despite the severe decline in activity in the main construction sector at the beginning of the second quarter, construction activity in Germany is still robust. This is borne out by orders received by the main construction sector, which showed a substantial quarter-on-quarter increase of 6½% in the first quarter of 2016 (data are available up to then). In the first three months of this year, building permits measured in terms of the estimated costs of work likewise rose very steeply on the quarter (+12¼%).

*Construction output well below positive, weather-related level of winter months*

## Labour market

There was a further steep rise in employment in April, too. The seasonally adjusted number of persons in work in Germany climbed by 41,000 compared with March, with the year-on-year increase amounting to 544,000 persons, or 1.3%. For quite some time now, employment growth has been driven by an expansion in the number of employees subject to social security contributions. In March, this figure was 681,000, or 2.2%, up on the same month one year earlier. According to both the Ifo employment barometer and the labour market barometer of the Institute for Employment Research (IAB), enterprises' willingness to recruit new staff remains high. The Federal Employment

*Steep rise in employment continues*

Agency's BA-X labour market index even rose quite considerably again in May from its already high level.

*Widening of active labour market policy measures; registered unemployment down again*

In May, the seasonally adjusted figure for registered unemployment fell significantly on the month, as it had in April. As this report went to press, 2.70 million persons were registered with the Federal Employment Agency as unemployed. The unemployment rate went down by 0.1 percentage point to 6.1%. Compared with the same month one year earlier, there were 98,000 fewer persons out of work and the unemployment rate was 0.3 percentage point lower. Total underemployment (excluding short-time work) as recorded by the Federal Labour Agency was up of late, however, as the scope of labour market policy measures was expanded. This was partly the result of the growing use of instruments to get refugees into work who would otherwise be registered as unemployed. The most recent results of the IAB labour market barometer to the effect that registered unemployment could edge upwards over the next few months are probably also linked to the growing number of refugees entering the job market.

## Prices

*Recovery of crude oil prices continues*

Crude oil prices continued on their upward trajectory in May after a brief pause at the beginning of the month. Average prices were just less than 11% higher than in April, but were still just over 25% lower than in May 2015. In the first half of June, prices rose somewhat on the month. As this report went to press, the price of a barrel of Brent crude oil stood at US\$48.3. The premium on crude oil futures was US\$2.0 for deliveries six months ahead and US\$3.3 for deliveries 12 months ahead.

*Import and producer prices largely unchanged*

Import and producer prices in April were largely unchanged compared with the previous month. Energy prices were higher as a result of crude oil price hikes. However, this was more or less offset by the muted price trend for other goods

in the case both of imports and of producer prices, even though the decline in prices for other imported goods was weaker of late than in previous months. The year-on-year price decline widened to 6.6% in the case of imports. As for industrial producer prices, the negative year-on-year gap remained at 3.1%.

Consumer prices rose by a seasonally adjusted 0.2% in May. This was mainly due to higher energy prices as a result of further crude oil price hikes. By contrast, food prices dropped as a result, above all, of tumbling dairy product prices. Excluding the marked rise in the prices of tobacco goods, price increases for industrial goods excluding energy were on the weak side. The same is true of services including rents. The national Consumer Price Index (CPI) edged up 0.1% on the year, while the Harmonised Index of Consumer Prices (HICP) changed by 0.0%. Both indexes had been in slightly negative territory (-0.1% and -0.3% respectively) in April. Going by current financial market expectations of oil price developments, the rate of increase is likely to gain pace slowly in the months ahead.

*Consumer prices up mainly due to higher cost of energy*

## ■ Public finances<sup>1</sup>

### Public long-term care insurance scheme

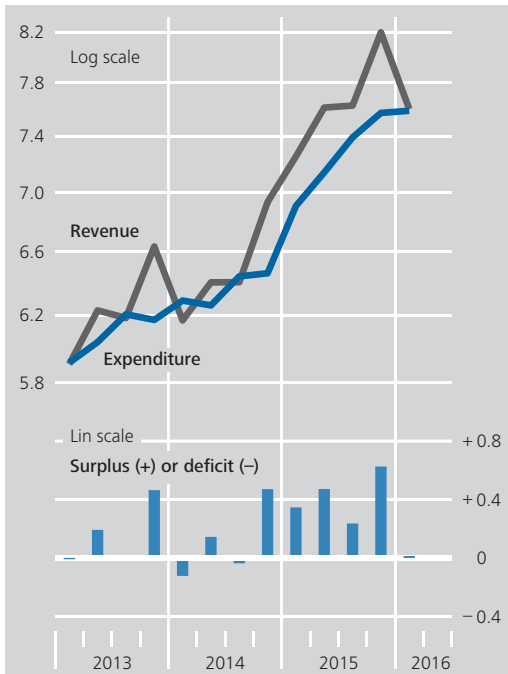
In the first quarter of 2016, the public long-term care insurance scheme recorded a balanced budget in the core area. Receipts equivalent to one-tenth of a percentage point of the contribution rate were transferred, as planned, to the Long-term care provident fund, which was thus topped up by just under €½ billion. This constituted a marked year-on-year financial deterioration. Total receipts – as well as

*Deterioration in Q1 after further robust expenditure growth*

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

### Finances of the public long-term care insurance scheme\*

€ billion, quarterly



Source: Federal Ministry of Health. \* From 2015: long-term care insurance scheme in the core area excluding the Long-term care provident fund; preliminary quarterly results. Deutsche Bundesbank

employee contributions – saw significant year-on-year growth of 5% owing to favourable employment and wage developments.<sup>2</sup> However, the rise in total expenditure was distinctly stronger, at 10%. Just over two-thirds of this expenditure growth stems from an increase in non-financial benefits. The latter still largely reflects the benefit increases enacted by the 2015 Act to Strengthen Long-term Care; their full impact on expenditure is likely to have unfolded only after a certain time lag. Furthermore, the transfer to the Long-term care provident fund was even lower in the same quarter of the previous year.<sup>3</sup>

*Surplus expected in core area for year as a whole*

A surplus – albeit reduced – is expected in the core area for the year as a whole. With contribution receipts remaining robust, increases in expenditure are likely to tail off markedly. In parallel with this, the Long-term care provident fund will be further topped up by a total of just over €1 billion, as planned (thus reporting a corresponding surplus). As of 2034, the deple-

tion of the reserves accumulated in the fund should curb the expected increases in the contribution rate.

## Securities markets

### Bond market

At €118.7 billion, gross issuance in the German bond market in April 2016 was up slightly on the previous month's figure (€114.0 billion). However, after deducting redemptions and taking account of changes in issuers' holdings of their own debt securities, the outstanding volume of domestic debt securities fell by €3.5 billion. Foreign debt securities worth €15.3 billion were placed in the German bond market during the reporting month, which meant that the outstanding volume of debt instruments in the German market increased by €11.8 billion overall.

*Net redemptions in the German bond market*

In April, the public sector redeemed debt securities worth €12.7 billion net. On balance, this was attributable almost exclusively to central government, including the resolution agency which is classified as part of it (€12.0 billion). Predominantly five-year Federal notes (Bobls) and ten-year Federal bonds (Bunds) were redeemed in net terms (€13.6 billion and €7.5 billion respectively). This contrasted with net issuance of two-year Federal Treasury notes (Schätze) worth €4.5 billion, 30-year bonds worth €2.1 billion and Treasury discount paper (Bubills) worth €1.7 billion. State governments redeemed bonds to the value of €0.7 billion in net terms.

*Decline in public sector capital market debt*

In the reporting month, domestic enterprises issued bonds worth €2.0 billion net, compared with €4.5 billion in the previous month. On bal-

*Net issuance of corporate bonds*

<sup>2</sup> The above chart shows the typical seasonal pattern of particularly high revenue in the last quarter. At the turn of 2014-15, this is compounded by the additional receipts stemming from the contribution rate rise on 1 January 2015.

<sup>3</sup> This effect contributed 1½ percentage points to the growth in expenditure.



ance, these were almost exclusively bonds with maturities of more than one year. Non-financial corporations were issuers (€2.4 billion), while non-bank financial enterprises redeemed bonds in net terms.

*Rise in credit institutions' capital market debt*

Domestic credit institutions issued bonds totalling €7.2 billion net in April. Above all, debt securities issued by specialised credit institutions (€6.6 billion) and other bank debt securities which can be structured flexibly (€1.5 billion) were placed in the market, as were, to a lesser extent, mortgage Pfandbriefe (€0.6 billion). By contrast, the outstanding volume of public Pfandbriefe declined by €1.4 billion.

*Purchases of debt securities*

Domestic non-banks, including insurers and investment firms, and the Deutsche Bundesbank were the primary buyers of debt securities in April. The former bought bonds worth €23.7 billion net, with interest focused on foreign paper. The Bundesbank acquired debt securities worth €15.8 billion net under the Eurosystem's asset purchase programmes; this involved almost exclusively domestic paper issued by the public sector. This contrasted with net sales on the part of foreign investors totalling €22.6 billion. Domestic credit institutions, too, offloaded interest-bearing paper worth €5.1 billion net.

## Equity market

*Little net issuance in the German equity market*

In the reporting month, domestic enterprises placed only small quantities of new shares in the German equity market. The volume of foreign equities in the German market fell by €1.1 billion over the same period. Domestic non-banks were the sole purchasers, adding a net €1.2 billion worth of equities to their portfolios, all of which were foreign shares on balance. However, non-resident investors offloaded domestic shares with a net value of €1.7 billion. German credit institutions also reduced their share portfolios (by €0.6 billion overall).

## Sales and purchases of debt securities

€ billion

Item	2015	2016	
	April	March	April
<b>Sales</b>			
Domestic debt securities <sup>1</sup>	4.1	12.7	- 3.5
<i>of which</i>			
Bank debt securities	6.5	1.3	7.2
Public debt securities	- 5.7	6.9	- 12.7
Foreign debt securities <sup>2</sup>	3.9	13.8	15.3
<b>Purchases</b>			
Residents	8.5	26.9	34.4
Credit institutions <sup>3</sup>	- 15.9	1.3	- 5.1
Deutsche Bundesbank	11.4	13.4	15.8
Other sectors <sup>4</sup>	13.0	12.2	23.7
<i>of which</i>			
Domestic debt securities	4.7	1.5	4.0
Non-residents <sup>2</sup>	- 0.5	- 0.4	- 22.6
<b>Total sales/purchases</b>	<b>8.0</b>	<b>26.5</b>	<b>11.8</b>

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

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## Mutual funds

In April, domestic mutual funds recorded inflows of €6.7 billion net. Specialised funds reserved for institutional investors benefited from this in particular (€5.0 billion). Among the asset classes, bond funds (€2.1 billion), funds of funds (€1.5 billion), mixed securities funds (€1.5 billion) and open-end real estate funds (€1.4 billion) were able to sell the highest volume of new shares. By contrast, money market funds redeemed their own shares (€0.5 billion). The outstanding volume of foreign funds distributed in Germany increased by €6.2 billion during the reporting month. In April, mutual fund shares were purchased mainly by domestic non-banks (€13.8 billion), as well as by resident credit institutions (€0.7 billion). By contrast, foreign investors sold German mutual fund shares worth €1.6 billion in net terms.

*German mutual funds record inflows*

## Major items of the balance of payments

€ billion

Item	2015		2016
	Apr	Mar	AprP
I Current account	+ 21.5	+ 29.9	+ 28.8
1 Goods <sup>1</sup>	+ 22.6	+ 28.3	+ 27.8
Exports (fob)	99.1	105.6	103.2
Imports (fob)	76.5	77.3	75.3
Memo item			
Foreign trade <sup>2</sup>	+ 21.8	+ 26.2	+ 25.6
Exports (fob)	100.4	107.0	104.3
Imports (cif)	78.6	80.9	78.7
2 Services <sup>3</sup>	- 1.4	- 2.1	- 0.8
Receipts	18.6	20.3	19.0
Expenditure	20.1	22.4	19.8
3 Primary income	+ 3.3	+ 7.4	+ 3.5
Receipts	16.3	15.9	15.6
Expenditure	13.0	8.6	12.1
4 Secondary income	- 2.9	- 3.7	- 1.7
II Capital account	+ 0.3	- 0.8	+ 1.3
III Financial account (increase: +)	+ 31.2	+ 19.4	+ 42.6
1 Direct investment	+ 6.1	+ 5.0	- 2.3
Domestic investment abroad	+ 5.6	+ 22.9	+ 3.0
Foreign investment in the reporting country	- 0.6	+ 17.9	+ 5.3
2 Portfolio investment	+ 15.2	+ 22.5	+ 46.3
Domestic investment in foreign securities	+ 6.9	+ 22.7	+ 20.4
Shares <sup>4</sup>	+ 0.1	+ 5.4	- 1.1
Investment fund shares <sup>5</sup>	+ 2.9	+ 3.6	+ 6.2
Long-term debt securities <sup>6</sup>	+ 5.2	+ 16.1	+ 14.2
Short-term debt securities <sup>7</sup>	- 1.3	- 2.3	+ 1.1
Foreign investment in domestic securities	- 8.3	+ 0.2	- 25.9
Shares <sup>4</sup>	- 4.4	+ 2.4	- 1.7
Investment fund shares	- 3.4	- 1.8	- 1.6
Long-term debt securities <sup>6</sup>	- 8.3	+ 4.0	- 28.0
Short-term debt securities <sup>7</sup>	+ 7.8	- 4.3	+ 5.5
3 Financial derivatives <sup>8</sup>	+ 1.9	+ 0.9	+ 2.5
4 Other investment <sup>9</sup>	+ 7.9	- 8.9	- 4.5
Monetary financial institutions <sup>10</sup>	+ 4.8	- 0.4	- 27.9
of which			
Short-term	+ 2.2	- 1.3	- 31.0
Enterprises and households <sup>11</sup>	+ 1.5	- 5.3	+ 14.6
General government	+ 2.9	- 3.2	- 3.2
Bundesbank	- 1.2	0.0	+ 11.9
5 Reserve assets <sup>12</sup>	- 0.1	- 0.1	+ 0.7
IV Errors and omissions <sup>13</sup>	+ 9.3	- 9.8	+ 12.6

1 Excluding freight and insurance costs of foreign trade. 2 Special trade according to the official foreign trade statistics (source: Federal Statistical Office). 3 Including freight and insurance costs of foreign trade. 4 Including participation certificates. 5 Including reinvestment of earnings. 6 Long-term: original maturity of more than one year or unlimited. 7 Short-term: original maturity of up to one year. 8 Balance of transactions arising from options and financial futures contracts as well as employee stock options. 9 Includes in particular loans and trade credits as well as currency and deposits. 10 Excluding the Bundesbank. 11 Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households. 12 Excluding allocation of special drawing rights and excluding changes due to value adjustments. 13 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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## Balance of payments

Germany's current account recorded a surplus of €28.8 billion in April 2016. This is €1.1 billion down on the figure posted one month earlier as surpluses dipped slightly in both the goods account and the invisible current transactions item, the latter comprising services as well as primary and secondary income.

*Current account surplus down somewhat*

The surplus in the April goods account shrank by €0.5 billion on the month to stand at €27.8 billion because goods exports fell more strongly than goods imports.

*Goods account surplus narrows slightly*

April saw the surplus on invisible current transactions come in at €1.0 billion, €0.6 billion short of the March figure. This decline came as net receipts in the primary income balance fell by €3.9 billion to €3.5 billion, largely on the back of higher dividend payouts to foreign investors, which improvements in the other two sub-accounts failed to offset. The deficit in the services sub-account was €1.3 billion narrower at €0.8 billion, with the decline in travel expenditure, which had risen sharply one month earlier, playing a notable role in this regard. The secondary income deficit stood at €1.7 billion, its €1.9 billion decline being driven primarily by an upturn in government revenue from current taxes on income and wealth as well as a fall in government expenditure, notably on account of lower payments to the EU budget.

*Surplus on invisible current transactions smaller*

Market players' expectations over the future path of monetary policy in the major currency areas continued to have a bearing on developments in international financial markets in April. This was the backdrop against which Germany's cross-border portfolio investment ran up net capital exports of €46.3 billion. Resident investors continued to accumulate large quantities of foreign paper (€20.4 billion), some of which promised higher yields than their domestic counterparts. They displayed particularly strong demand for foreign bonds (€14.2 billion) and investment fund shares (€6.2 billion), and offloaded €1.1 billion in foreign equities.

*Portfolio investment sees outflow of funds*

Investor activity in the other direction saw non-residents shed €25.9 billion worth of domestic securities, mainly public sector bonds (€29.2 billion). The Bundesbank once again acquired a sizeable volume of German bonds from non-residents as part of the expanded asset purchase programme (EAPP). On a lesser scale, foreign investors also pulled out of equities (€1.7 billion) and investment fund shares (€1.6 billion) issued by residents, instead adding more private debt securities issued in Germany (€1.2 billion) as well as a notable volume of money market paper (€5.5 billion) to their portfolios.

interests, and pared back their intra-group loans to non-resident group entities.

Other statistically recorded investment, comprising loans and trade credits (where these do not constitute direct investment) as well as bank deposits and other investments, saw net capital imports of €4.5 billion in April. Monetary financial institutions (excluding the Bundesbank) accounted for the bulk of this figure (€27.9 billion), having seen a sharp increase in deposits by non-residents. General government, too, attracted net inflows of funds from abroad (€3.2 billion), while cross-border corporate and household activity in April yielded net capital exports of €14.6 billion. Transactions sent the Bundesbank's unsecuritised net external position €11.9 billion higher; on balance, this was solely due to higher claims from the TARGET2 payment system.

*Inflows of funds  
 in other  
 investment*

*Net capital  
 imports in direct  
 investment*

April saw direct investment yield net capital imports of €2.3 billion. Foreign enterprises injected €5.3 billion into their German affiliates by stepping up both their intra-group loans (€3.5 billion) and their equity stakes (€1.7 billion). German enterprises, meanwhile, supplied their affiliates abroad with funds to the tune of €3.0 billion, primarily by increasing their equity

The Bundesbank's reserve assets rose – at transaction values – by €0.7 billion in April.

*Reserve assets*



## Outlook for the German economy – macroeconomic projections for 2016 and 2017 and an outlook for 2018

*The German economy's underlying cyclical trend is fairly robust. Its main driver is buoyant domestic demand, which is being bolstered by the favourable situation in the labour market and by rising household income. This year, domestic demand is being additionally boosted by purchasing power gains resulting from renewed falls in crude oil prices and from an expansionary fiscal policy. Foreign business, by contrast, is receiving only weak stimuli on account of the sluggish growth in world trade. In the coming years, however, it is likely that it will gain more traction and compensate for domestic demand, growth of which is expected to tail off somewhat.*

*Overall, the German economy could grow by 1.7% in 2016, 1.4% in 2017 and 1.6% in 2018. Here, calendar effects mask the rather uniform growth rates in working-day-adjusted terms of 1.6% in both 2016 and 2017 and 1.7% in 2018. The expected growth rates are therefore higher than the estimated increase in potential output, which has been raised slightly as a result of the higher labour-market-oriented migration that is now expected. Aggregate capacity utilisation at the end of the projection horizon is therefore likely to be significantly higher than the long-term average. The attendant increase in labour market bottlenecks and the resulting higher wage growth will continue to be mitigated by high levels of migration, particularly this year and in 2017. In terms of public finances, the previously attained sizeable surplus is likely to be largely depleted in 2016 and only just remain in positive territory for the remainder of the time horizon.*

*Against this background, consumer price inflation is likely to increase considerably. The dampening effect of the renewed fall in the prices of crude oil and other commodities at the start of 2016 should largely vanish as of 2017, which means that the robust growth in domestic wage costs is likely to once again manifest itself more visibly in consumer price inflation. As measured by the Harmonised Index of Consumer Prices (HICP), inflation could rise from 0.2% this year to 1.5% next year and 1.7% in 2018. Excluding energy, HICP inflation is expected to climb from 1.0% in 2016 to 1.8% in 2018.*

*Compared with the projection from December 2015, expectations for economic growth in 2016 and 2017 have been slightly lowered, while inflation projections have been brought down significantly. The revision of expected price developments was attributable in part to lower than expected core inflation, but above all to the unexpected renewed fall in crude oil prices. Fluctuations in these prices continue to present a risk, particularly to the inflation forecast, but on the whole appear balanced, as do the risks to economic growth. However, there is a downside risk for the price projection if wage growth were to falter or if higher labour costs were not passed on to consumers to the extent assumed here.*

## ■ Economic outlook<sup>1</sup>

*Strong growth in the German economy in the fourth quarter of 2015/first quarter of 2016*

The German economy grew strongly in the period spanning the fourth quarter of 2015 and the first quarter of 2016. Real gross domestic product (GDP) rose by 0.9% in seasonally and calendar-adjusted terms, and thus slightly more strongly than expected in the December projection.<sup>2</sup> This was chiefly attributable to the particularly high growth in the first quarter of 2016, which was boosted by special factors. For example, the industrial sector expanded its production unexpectedly strongly following the subdued second half of 2015, while the construction sector was the main beneficiary of the mild weather. A countermovement of sorts may therefore be expected in the second quarter. The current expectation indicators and new orders in the manufacturing industry are indicating a flatter underlying upward trajectory in this area. Lastly, the beneficial effects of the favourable weather conditions in the construction sector will not carry over.

*Brisk domestic demand and renewed stronger stimulus from abroad over the projection horizon*

The current volatility of economic growth in Germany, which is attributable to special factors, masks a rather strong underlying tendency, which, in light of the overall favourable conditions (see the box on pages 18 to 21), is likely to continue through to the end of the projection period. Domestic economic activity looks set to continue to benefit from strong employment growth, which is being driven to a considerable extent by employment-related migration from European Union countries, and from robust income growth. This is expected to have an impact on private consumption and housing construction. In the current year, domestic demand is additionally being supported by the renewed fall in the price of crude oil and the attendant purchasing power gains. Furthermore, fiscal policy will have been particularly expansionary in 2016 thanks in no small part to additional government expenditure in connection with refugee migration. Foreign business, by contrast, is likely to receive only limited stimuli in the current year, as world trade is growing at only a subdued rate. In annual average

terms, an impact is also being felt on account of German exporters having had to surrender some of their considerable previous gains in market share in the second half of 2015, a development likely to continue somewhat in 2016. Over the next two years, exports are expected to again grow more in line with sales markets and thus compensate for a slight drop in the momentum of domestic demand growth.

Growth in calendar-adjusted real GDP could therefore increase to 1.6% in 2016 and 2017, possibly followed by an additional marginal rise in 2018. However, due to variations in the number of working days from one year to the next, the unadjusted annual average growth rates reveal a slightly different picture over the time horizon, with growth rates of 1.7% for 2016, 1.4% for 2017 and 1.6% for 2018 (see the table on page 15). Thus, for 2016, GDP growth is expected to be slightly lower than assumed in the December projection, with the boost from lower oil prices being counteracted by the less favourable prospects for exports. The expectations for 2017 have been revised downwards by 0.3 percentage point, above all because the international environment is now assumed to be somewhat less favourable over the entire projection horizon (for more information on the revisions since the December projection, see the table on page 25).

*Consistent, fairly strong economic growth ...*

According to this projection, the German economy is consistently expanding at a faster rate than production capacity. The utilisation rate, which is already above average this year, is therefore continuing to rise, with the result that capacity utilisation at the end of the projection horizon will be significantly higher than the long-term average. Potential growth – at 1.4% in both 2016 and 2017 and marginally less in 2018 – is once again estimated to be

*... is causing capacity utilisation to increasingly outstrip its long-term average*

<sup>1</sup> This projection for Germany was completed on 18 May 2016. It was incorporated into the projection for the euro area published by the ECB on 2 June 2016.

<sup>2</sup> See Deutsche Bundesbank, Outlook for the German economy – macroeconomic projections for 2016 and 2017, Monthly Report, December 2015, pp 13-32.

somewhat higher than of late. This is because the beneficial effects of the upwardly revised assumptions for labour-market-oriented migration outweigh the countervailing effects of lower refugee migration.<sup>3</sup>

*Exports growth rates rising*

The positive outlook for the German economy hinges in key measure on exports regaining their footing over the projection horizon. Growth during the period spanning the last quarter of 2015 and first quarter of 2016 fell significantly short of the rates projected in December. International trade continued to develop only at a sluggish pace. Furthermore, German exporters have been losing market share in their sales markets since the middle of 2015. Particularly where trade with non-euro-area countries is concerned, this should probably be interpreted mainly as a correction of previous market share gains not explained by price competitiveness. This process could continue further into 2016 according to Ifo and DIHK surveys, in which industrial firms reported subdued export expectations and only a comparatively moderate increase in exports this year. Given the assumed growth in the international sales markets, exports should nonetheless pick up pace again slightly as 2016 progresses. Exports are expected to expand roughly in line with foreign demand in both 2017 and 2018.

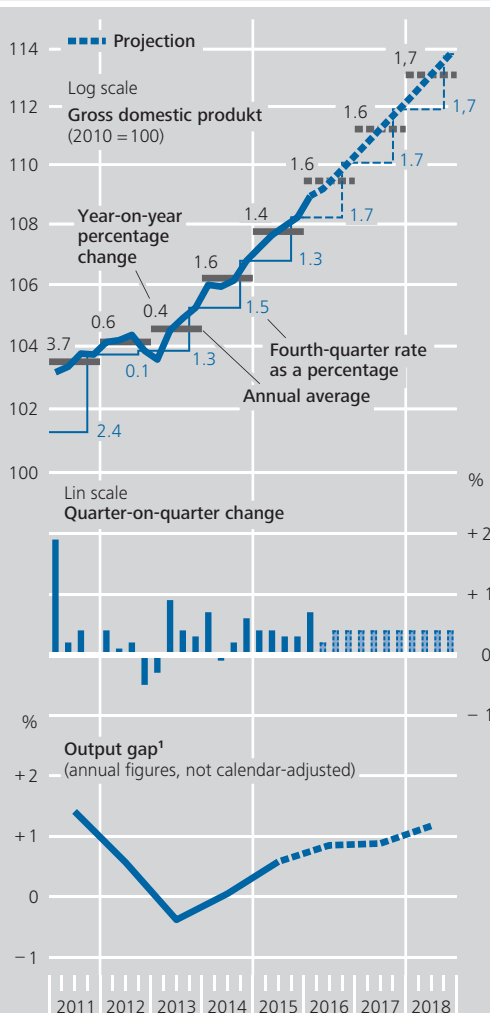
*Further increase in industrial investment as capacity utilisation rises*

Along with the surprisingly rapid upturn in manufacturing activity, corporate investment rose more sharply than expected over the period spanning the final quarter of 2015 and first quarter of 2016. While enterprises upped their investment in new buildings, in particular, at the end of 2015, purchases of new machinery and equipment, especially motor vehicles, at the beginning of 2016 likewise played a role. With domestic demand remaining consistently strong, a further pick-up in foreign demand and capacity utilisation set to expand again grad-

<sup>3</sup> For more on the projection's underlying assumptions regarding the influx of refugees and its macroeconomic impact, see the box on pp 18-21.

## Aggregate output and output gap

Price, seasonally and calendar-adjusted



Sources: Federal Statistical Office and Bundesbank calculations. 2016 to 2018 Bundesbank projections. <sup>1</sup> Deviation of GDP from estimated potential output. Deutsche Bundesbank

## Technical components of the GDP growth projection

As a percentage or in percentage points

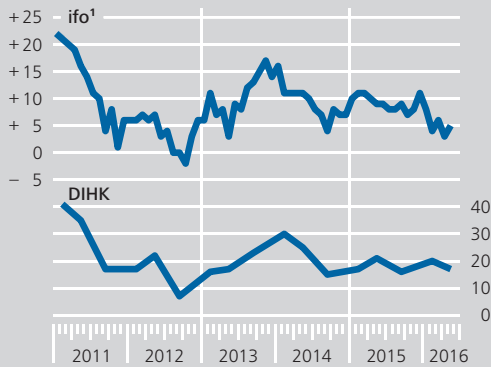
Item	2015	2016	2017	2018
Statistical carry-over at the end of the previous year <sup>1</sup>	0.5	0.4	0.6	0.6
Fourth-quarter rate <sup>2</sup>	1.3	1.7	1.7	1.7
Average annual GDP growth rate, calendar-adjusted	1.4	1.6	1.6	1.7
Calendar effect <sup>3</sup>	0.2	0.1	-0.2	-0.1
Average annual GDP growth rate <sup>4</sup>	1.7	1.7	1.4	1.6

Sources: Federal Statistical Office; 2016 to 2018 Bundesbank projections. <sup>1</sup> Seasonally and calendar-adjusted index level in the fourth quarter of the previous year in relation to the calendar-adjusted quarterly average of the previous year. <sup>2</sup> Annual rate of change in the fourth quarter, seasonally and calendar-adjusted. <sup>3</sup> As a percentage of GDP. <sup>4</sup> Discrepancies in the totals are due to rounding.

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### Export expectations\*

% , balances of responses

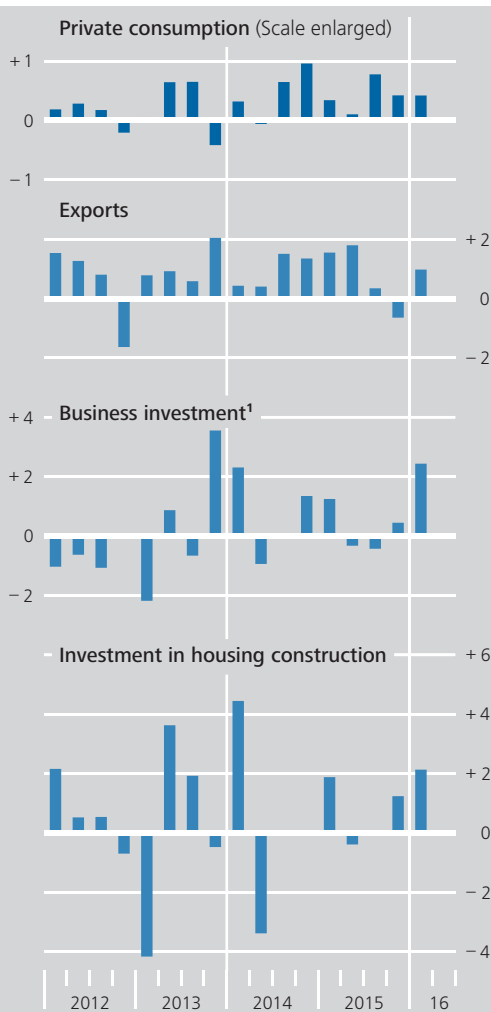


Sources of the original data: Ifo Institute and the Association of German Chambers of Commerce and Industry (DIHK). \* Expectations refer to the next three months (ifo) or the next 12 months (DIHK). 1 Seasonally and calendar-adjusted.

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### Major demand components

Quarter-on-quarter percentage change, price, seasonally and calendar-adjusted



Source: Federal Statistical Office (national accounts). 1 Private non-residential fixed capital formation.

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ually over the projection horizon, enterprises are likely to invest more in expanding production capacity in addition to replacement and modernisation projects. The healthy financial position of enterprises and the fact that financing conditions remain extremely favourable mean that investment looks to increase further. Over the projection horizon, the price-adjusted industrial investment ratio could therefore match its peak in previous economic cycles.

Housing construction investment gained greater momentum in the period spanning the fourth quarter of 2015 and first quarter of 2016 than predicted in the December forecast. This was due to intermittent spells of mild weather as well as to a strong pick-up in housing demand reflected in a sharp increase in orders received and building permits.<sup>4</sup> In addition to the generally upbeat labour market situation and positive outlook for income and job security, high levels of immigration and a reduction in interest rates on mortgage loans are likely to have played a role in this development. Because these favourable conditions are largely set to continue over the projection horizon, housing investment should expand strongly this year and next. However, in 2018, the unfavourable demographic trends that Germany is currently experiencing could intensify as immigration decreases, which will probably be accompanied by a perceptible decline in housing demand and considerably weaker investment activity in the housing market.

*Housing construction investment to expand strongly in 2016 and 2017 before slowing in 2018 due to demographic factors*

It is assumed that, over the projection period, government investment will grow more strongly than of late, mainly in connection with rising construction investment.<sup>5</sup> First, central government is planning to make improvements

*Stronger growth in government investment*

<sup>4</sup> However, anticipatory effects stemming from the tightening of energy standards for new buildings at the start of 2016 are also likely to have played a part in the sharp rise in building permits observed over the last few months.

<sup>5</sup> At times, fluctuations in investment in machinery and equipment perceptibly influence the dynamics of government investment as a whole. These fluctuations are mainly due to military procurements which are recorded in the national accounts at the time of delivery.



in the area of maintaining the public infrastructure. Second, the room for manoeuvre that the relatively good budget situation of many states and local governments<sup>6</sup> may provide over the next few years is also expected to be put towards more investment.

*Gross fixed capital formation set to expand fairly substantially across the board*

This means that gross fixed capital formation will rise fairly substantially overall this year and next. In terms of growth rates, it should be borne in mind that calendar effects in 2017 will be decidedly negative. As things currently stand, fixed capital formation is also expected to rise to a similar extent in 2018 as countervailing trends in corporate and housing investment will practically offset each other.

*Steep upward trajectory in underlying cyclical trend for private consumption, additionally strengthened by one-off factors in 2016*

Private consumption significantly boosted economic growth in the period spanning the final quarter of 2015 and first quarter of 2016. However, despite a marked decline in energy prices, households' real disposable income did not rise quite to the extent expected as recently as December 2015 and the saving rate went up slightly. Nonetheless, the underlying trend in private consumption is still following a clear upward trajectory, on which it is likely to also remain owing to extensive employment growth, low unemployment and noticeable wage growth over the projection horizon. Two one-off factors will lend additional momentum this year – the renewed marked decline in oil prices and rising government transfers, mainly on account of the large numbers of refugees arriving in Germany, will further boost price-adjusted household income. Although the saving rate is likely to increase marginally, private consumption may therefore show slightly stronger growth than in 2015. Real disposable income will probably rise less markedly in the following years as consumer price inflation rebounds. The saving rate, which has gone up slightly since 2014, partially on the back of the fall in oil prices, should recede somewhat over the projection horizon if households gradually convert purchasing power gained from earlier falls in the price of oil, some of which was initially channelled into savings, into higher con-

## Key figures of the macroeconomic projection

Year-on-year percentage change

Item	2015	2016	2017
GDP (real)	1.7	1.7	1.4
GDP (real, calendar-adjusted)	1.4	1.6	1.6
Components of real GDP			
Private consumption	2.0	2.2	1.5
<i>Memo item</i> Saving ratio	9.7	9.8	9.7
Government consumption	2.5	2.8	1.5
Gross fixed capital formation	2.2	3.5	2.6
Business investment <sup>1</sup>	2.3	2.9	2.1
Private investment in housing construction	1.6	3.3	2.5
Exports	5.4	2.1	3.2
Imports	5.8	4.1	4.5
<i>Memo item</i> Current account balance <sup>2</sup>	8.6	8.4	8.1
Contributions to GDP growth <sup>3</sup>			
Domestic final demand	2.0	2.4	1.6
Changes in inventories	-0.5	-0.1	0.0
Exports	2.5	1.0	1.5
Imports	-2.3	-1.6	-1.7
Labour market			
Total number of hours worked <sup>4</sup>	1.2	1.2	0.8
Employed persons <sup>4</sup>	0.8	1.1	0.8
Unemployed persons <sup>5</sup>	2.8	2.8	2.8
Unemployment rate <sup>6</sup>	6.4	6.3	6.4
Wages and wage costs			
Negotiated pay rates <sup>7</sup>	2.3	2.1	2.4
Gross wages and salaries per employee	2.8	2.2	2.5
Compensation per employee	2.6	2.1	2.6
Real GDP per employed person	0.9	0.5	0.6
Unit labour costs <sup>8</sup>	1.7	1.6	2.0
<i>Memo item</i> GDP deflator	2.1	1.7	1.8
Consumer prices <sup>9</sup>	0.1	0.2	1.5
Excluding energy	1.1	1.0	1.5
Energy component	-7.0	-6.5	0.8

Sources: Federal Statistical Office; Federal Employment Agency; 2016 and 2017 Bundesbank projections. **1** Private non-residential fixed capital formation. **2** As a percentage of nominal GDP. **3** In arithmetical terms, in percentage points. Discrepancies in the totals are due to rounding. **4** Domestic concept. **5** In millions of persons (Federal Employment Agency definition). **6** As a percentage of the civilian labour force. **7** Monthly basis (pursuant to the Bundesbank's negotiated wage index). **8** Ratio of domestic compensation per employee to real GDP per employed person. **9** Harmonised Index of Consumer Prices (HICP).

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sumer spending. The anticipated reduction in real consumption growth based on households' income projection will thus be more gradual. Growth rates for 2017 and 2018 are still expected to be significantly above the average increase recorded since German reunification.

Overall, real government consumption is likely to increase slightly more sharply again this year than in 2015, and is then expected to show

*Temporary further acceleration in government consumption*

**6** In addition, central government last year transferred €3.5 billion to a special fund for promoting investment expenditure by financially weak local authorities, whose effects are yet to be felt.

## Major assumptions underlying the macroeconomic projections

This projection is founded on assumptions made by the Eurosystem's experts concerning the global economy, exchange rates, commodity prices and interest rates based on information available as at 10 May 2016. The assumptions regarding economic activity in the euro area are derived from projections made by the national central banks of the euro-area countries. With respect to the fiscal policy framework in Germany, this projection incorporates all measures which have been adopted or adequately specified and are regarded as likely to be implemented. In addition, assumptions needed to be made for the projection horizon concerning the migration of refugees and its fiscal and macroeconomic effects.

Global economic growth flagged in the period spanning the fourth quarter of 2015 and first quarter of 2016 and thus once again fell short of the expectations contained in the previous projection. One factor in the slowdown was to be found in the US economy, despite the fact that the underlying cyclical trend in the United States has probably remained intact. The advanced economies as a group, too, can be expected to quickly overcome the temporary lull. The other factor was that, in the first quarter, the commodity-exporting emerging market economies (EMEs) continued to feel the effects of falling commodity prices in the global markets, and the pace of growth in the Asian EMEs receded again slightly. As a consequence of expectations that commodity prices will continue to gain strength and that the Chinese economy will undergo economic policy stimulus measures, economic activity in these groups of countries may be expected to rebound somewhat in the coming months, however. Nonetheless, the emerging market economies' outlook for growth remains muted overall, and, compared with the December projection, has been downgraded yet again for the coming year as well. The current projection presumes that the global economy as a whole (excluding the euro area)

will grow by 3% in the current year, picking up only slightly to 3¾% in 2017 and 2018 (purchasing power parity-weighted).

In line with global economic growth, world trade also looks set to accelerate again over the course of this year and the next.<sup>1</sup> The import slump in the past half-year spanning the fourth quarter of 2015 and the first quarter of 2016 was regionally broadly based and led to a considerable downward revision for the current year. The EMEs, by contrast, are the sole reason why imports are projected to continue recovering at a more modest pace throughout the rest of the projection horizon than assumed in December. Overall, international trade (excluding the euro area) is assumed to grow by 1¾% this year, followed by growth rates of 3½% and 4%, respectively, in the two following years.

Following the finalisation of the December projection, crude oil prices initially remained under considerable pressure. It was only at the end of January that this situation began to unwind. The prospect of a smaller glut may have been a contributory factor. Although the temporary drop in prices had been fully recouped by the time this projection was completed, the forward quotations from which the crude oil price assumptions are derived are showing a significantly flatter upward trajectory over the projection horizon than assumed in the December projection. The crude oil prices underlying this forecast will therefore, in 2017, too, remain well below the assumptions made in

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<sup>1</sup> Over the medium term, the projection presumes a global trade elasticity, ie the ratio of the rates of change of global trade and global economic output, of around one, and thus a considerably lower value than had been assumed prior to the global financial and economic crisis. The decline in global trade elasticity can be explained to a major degree by the sustained growth lead of the EMEs over the advanced economies since the former show a much lower trade elasticity and their weight is on the rise. For more on this, see also Deutsche Bundesbank, On the weakness of global trade, Monthly Report, March 2016, pp 13-35.

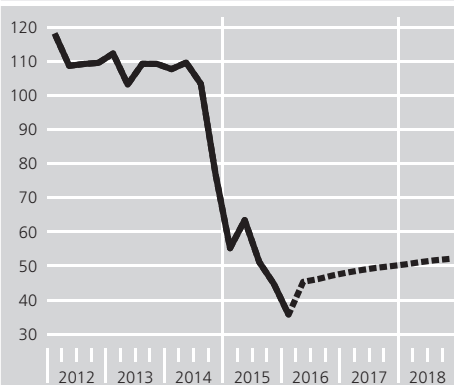
the preceding projection. Owing to the appreciation of the euro against the US dollar, the discrepancy is actually a little greater still if calculated in euro. Quoted prices for other commodities likewise fell away sharply up until the beginning of the year but they, too, have rebounded perceptibly since then. Given the expected moderate growth of the global economy, in 2017 and 2018 prices are likely to rise again even on an annual average.

As already announced in October 2015, the Governing Council of the ECB, at its December meeting, reviewed the accommodativeness of its monetary policy and decided to further loosen its monetary policy stance. In March 2016 the ECB Governing Council adopted a further package of measures.<sup>2</sup> These accommodative monetary policy measures contributed to a further sharp decline in interest rates. Market expectations regarding future interest rate movements and the technical projection assumptions derived therefrom for the trajectories of short-term interest rates and the yields on nine to 10-year government bonds are at a very low level, well below the assumptions contained in the December projection round. The same goes for the forecast of interest on bank loans in Germany. According to an economic survey conducted in early summer by the Association of German Chambers of Industry and Commerce (DIHK) and the Ifo Credit Constraint Indicator, access to credit in Germany is still extremely favourable.

Following the ECB Governing Council's December meeting, the euro appreciated somewhat, as the adopted measures had probably fallen short of market participants' expectations. In addition, poorer economic data from the United States, in conjunction with the expectation that the US Federal Reserve would only gradually raise its policy rates, along with surprisingly upbeat euro-area economic data for the first quarter, caused the single currency to gain further ground against the US dollar. In addition, the euro also rose against the pound sterling on the back of uncertainty about

### Oil price

US\$ per barrel, quarterly



Sources: Thomson Reuters and Bundesbank calculations. 2016 Q2 to 2018 Q4, projection assumptions. Deutsche Bundesbank

### Major assumptions of the projection

Item	2015	2016	2017	2018
Exchange rates of the euro				
US dollar/euro	1.11	1.13	1.14	1.14
Effective <sup>1</sup>	106.5	111.0	111.2	111.2
Interest rates				
Three-month Euribor	0.0	-0.3	-0.3	-0.3
Yield on government bonds outstanding <sup>2</sup>	0.5	0.2	0.3	0.5
Commodity prices				
Crude oil <sup>3</sup>	53.6	43.4	49.1	51.3
Other commodities <sup>4, 5</sup>	-19.9	-3.3	4.3	4.6
German exporters' sales markets <sup>5, 6</sup>	2.4	3.0	3.9	4.3

<sup>1</sup> Compared with the currencies of the 38 most important trading partners of the euro area (EER-38 group of currencies); 1999 Q1 = 100. <sup>2</sup> Yield on German government bonds outstanding with a residual maturity of over nine and up to ten years. <sup>3</sup> US dollars per barrel of Brent crude oil. <sup>4</sup> In US dollars. <sup>5</sup> Year-on-year percentage change. <sup>6</sup> Working-day adjusted.

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<sup>2</sup> Under the December 2015 package, the deposit facility rate was cut and the asset purchase programme (APP) was extended to March 2017 or, if necessary, even longer. The March 2016 package of measures contained not only a policy rate cut and an increase in the monthly volume of asset purchases but also an expansion of the APP to include a corporate sector purchase programme (CSPP) and four new targeted longer-term refinancing operations (TLTRO II). At the same time, the Governing Council made it clear that its policy rates would remain very low even after the purchase programmes have expired.

whether the United Kingdom will remain in the European Union. In the period used for deriving the exchange rate assumptions, the euro traded at US\$1.14, 4½% higher than assumed in the December projection. In relation to the 38 most important currencies in terms of foreign trade, the euro appreciated by 4¼%.

The euro-area economy grew considerably to kick off the year. Bearing in mind that fluctuations in quarterly rates of change are not unusual and that the mild weather will have probably had a positive impact on the first quarter, developments in the period spanning the fourth quarter of 2015 and first quarter of 2016 are largely consistent with the continuation of the recovery process anticipated in the December projection. Domestic demand is set to continue providing strong growth stimuli over the projection horizon. Export growth rates can be expected to rise gradually in line with developments in foreign sales markets. Exporters are likely to benefit, above all, from mounting demand within the euro area. Some countries might see a positive impact from higher price competitiveness in foreign markets outside the euro area owing to the persistently low inflation rates and the lagged effects of earlier euro depreciations.

Given the tapering-off of external influences from outside the euro area, GDP growth in the euro area (excluding Germany) is expected to be slightly down on the December projection at 1.6% this year and 1.7% next year. This means that aggregate economic capacity utilisation in the euro area as a whole could be back at normal levels by the end of the projection horizon, even if it does not quite get there. The rather strong growth in the euro area excluding Germany, in connection with these countries' high trade elasticity, means that German exporters' sales markets will grow somewhat more strongly than global trade over the projection horizon.

In the area of public finances, the fiscal policy measures considered in this projection will worsen the general government fiscal

balance up to 2017 by ½% of GDP compared with 2015 (primarily in 2016).<sup>3</sup> On the revenue side, the countervailing influences will almost entirely cancel each other out. Whereas, above all, income tax will be reduced over the projection horizon (including higher income tax allowances and a rightward shift in income tax rates in the current year), social contribution rates will increase. The health insurance institutions in particular raised their additional contribution rates by an average of ¼ percentage point at the beginning of the year. In 2017, the contribution rate to the public long-term care insurance scheme – as part of the second reform of long-term care – is to be increased by an additional 0.2 percentage point. On the expenditure side, the benefit increases brought about by the long-term care reforms of 2015 and 2017 will weigh on general government budgets (in some cases with a time lag). Moreover, changes to the law in the areas of healthcare and housing allowances will also make themselves felt in the current year. Elsewhere, expenditure on areas such as infrastructure, child day-care, social housing construction and the military is expected to be upped progressively. The fiscal effects of the measures included will be insignificant in 2018.

In the light of recent developments, the assumptions relating to the extent of refugee migration to Germany for the 2016 to 2018 period have been revised sharply lower compared with the December projection.<sup>4</sup> A gross influx of 1.85 million refugees – amidst a sharply declining tendency – is

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<sup>3</sup> Not included here are the temporary effects of the frequency auction in the third quarter of 2015, which are recorded in the national accounts on an accrual basis and thus, for the most part, in 2017.

<sup>4</sup> This contrasts with the assumptions made regarding other immigration, which have been raised noticeably. See the remarks on p 23 for further details.

### Projected influx of refugees and its impact on the labour market between 2015 and 2018\*

(Thousands)

Item	2015	2016	2017	2018	2015 to 2018
Influx of asylum seekers (gross)	800	500	300	250	1,850
Net immigration due to asylum	660	280	70	50	1,060
Year-on-year change					
Recognised refugees	+ 130	+ 500	+ 310	+ 120	+ 1,060
... of working age	+ 100	+ 370	+ 240	+ 110	+ 820
Labour force (including employed asylum seekers)	+ 80	+ 200	+ 110	+ 60	+ 450
Employed persons (including asylum seekers)	+ 50	+ 90	+ 60	+ 60	+ 260
Unemployed persons	+ 30	+ 110	+ 50	0	+ 190

\* The influx of asylum seekers prior to 2015 is also factored into the net immigration figures and labour market impact.

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expected over the 2015 to 2018 period.<sup>5</sup> Since only part of this number – albeit a considerable part – will be granted asylum in Germany and some refugees will voluntarily leave again, it is possible that a total of nearly 1.1 million recognised refugees could stay in Germany, just over 800,000 of whom of working age.

However, owing to language and skills obstacles, refugees will probably often enter the labour market only after something of a delay. For these reasons, a comparatively large share of recognised refugees will be either unemployed or not in gainful employment for other reasons over the projection horizon, even despite the high demand for labour, including for simple tasks.<sup>6</sup> The cumulative increase in the labour force will probably therefore be modest, at around 1% over the 2015 to 2018 period. Around three-fifths of these members of the workforce could be employed by 2018, with the rest unemployed.

The influx of refugees will not only impact on the labour market but also exert a positive influence on domestic demand, through an increase in additional – unfunded – government spending. Expenditure on social transfers in kind (especially for healthcare), other tangible goods purchases (such as to cover basic needs and for accommodation) and personnel will drive up government consumption. As more and more applications for asylum are approved, an ever-

growing share of support will be provided as means-tested monetary social welfare benefits (especially unemployment benefit II), thus propping up private consumption. This projection assumes that the increased expenditure in connection with refugee migration was rather restrained last year compared with 2014<sup>7</sup> (the year prior to the rapid acceleration), will this year rise considerably to around ½% of GDP, and will subsequently stabilise at that level until 2018.

<sup>5</sup> According to data provided by the Federal Office for Migration and Refugees, in the year ended 440,000 new applications for asylum were received; these are joined by an additional 300,000 to 400,000 refugees whose applications were not registered by the end of 2015. For that reason, a gross influx of 800,000 refugees is assumed for 2015. Once asylum seekers whose applications have been rejected (but also some recognised refugees) have exited the country, a net influx of 660,000 refugees is likely to be left over.

<sup>6</sup> See Deutsche Bundesbank, The current influx of refugees – projected impact on the labour market and public finances, Monthly Report, December 2015, pp 24-28.

<sup>7</sup> One reason why expenditure over 2015 as a whole was low relative to the numbers of incoming refugees was that the influx only picked up considerably in the second half of the year, which meant that the new arrivals, for the most part, needed support for only a few months.

similar annual growth to real GDP. The temporary pick-up in pace primarily reflects additional spending in connection with refugee migration. Benefit increases brought about by the care reforms of 2015 and 2017 – some of which will only become evident after a time lag – as well as additional healthcare spending and higher personnel expenditure in the areas of childcare, education, police and the military will also boost growth.

*Considerable rise in imports*

Over the projection horizon, imports are likely to reflect developments in final demand, in particular. Moreover, based on the continuing international division of labour, the import share in key expenditure components is expected to continue its moderate increase. With an assumed import share of over 40%, exports and investment in machinery and equipment, in particular, will play a key role here. The acceleration in the growth rates for these components expected over the projection horizon is set to more than offset the dwindling growth in private and government consumption in the next few years. Imports will therefore probably expand more sharply in 2017 and 2018 than in 2016. Owing to a rebound in price competitiveness, exporters from other euro-area countries should benefit more than suppliers from outside the euro area.

*Slight fall in current account surplus*

Germany's trade surplus rose again perceptibly in 2015, mainly due to the price effect caused by lower crude oil prices and the depreciation of the euro.<sup>7</sup> Lower crude oil prices will lead to a strong improvement in the terms of trade this year, too. However, import prices should rise over the rest of the projection horizon if crude oil and commodity prices stabilise as assumed. The positive domestic dynamics and strong import growth are therefore likely to assume an increasingly prominent role, meaning that the trade surplus could narrow somewhat. The current account surplus, too, should therefore fall, albeit slightly. This is due, among other things, to the fact that the surplus for primary income may continue to rise due to the steady increase in external assets.

## ■ Labour market

The labour market performed surprisingly well in the period spanning the fourth quarter of 2015 and first quarter of 2016. Employment rose by 310,000 persons during this time, which was substantially higher than the figure forecast in the December projection, while seasonally adjusted unemployment, defying expectations, fell markedly. Another contributing factor was the fact that, as far as the German labour market is concerned, the composition of migrant inflows was more favourable than assumed in the previous projection. The number of migrants from other EU countries, who integrate comparatively quickly into the labour market, remained very high. By contrast, the level of refugee migration was lower than expected.

In principle, the labour market is likely to remain buoyant in the coming months. Nonetheless, available leading indicators are pointing to a possible slowdown in employment growth. According to the IAB labour market barometer, unemployment could edge upwards over the next few months. This is partly attributable to the number of asylum applications being successfully processed rising and some refugees subsequently registering as job seekers.

Employment is likely to rise further later over the remaining projection horizon, while unemployment will probably remain broadly unchanged at the low level that it has reached. In this context, growing labour market bottlenecks will be mitigated by employment-related migration. This influx of workers, particularly from EU member states, is forecast to slowly fall in net terms from an estimated 440,000 in 2015 to 300,000 in 2018. This is based on the expectation that employment-related migration from eastern EU member states will decel-

*Favourable labour market developments in 2015 Q4 and 2016 Q1 period ...*

*... likely to continue in months to come, albeit at a slightly weakened pace*

*Employment-related migration will mitigate labour market bottlenecks over projection horizon*

<sup>7</sup> See also Deutsche Bundesbank, The impact of the steep fall in oil prices and the euro depreciation on the expansion of Germany's current account surplus in 2014 and 2015, Monthly Report, March 2016, pp 39-41.

erate only gradually.<sup>8</sup> On top of this is refugee migration, which, according to estimates, will expand the labour force by a total of 450,000 persons in the period between 2015 and 2018.

*Demographic trend also counteracted by activating domestic reserves*

In the light of demographic changes, the share of the native-born population that is of working age will contract sharply over the next few years. In addition to recruiting foreign workers, shortages resulting from enterprises' expected persistently high demand for labour can, as a general rule, be counteracted by activating domestic reserves. However, the rise in the participation rate of the native-born population has been stunted in recent years, especially following the introduction of the option to retire on a full pension without actuarial deductions at the age of 63. That said, these braking effects are likely to have largely dissipated in the meantime, with the trend of increasing labour force participation – bolstered by the rise in the statutory retirement age – set to undergo a resurgence.<sup>9</sup>

*Employment growth still strong in 2016 and 2017*

Overall, the labour force is likely to expand by almost 1% in 2016 and again in 2017 due to the expected high level of migration and rising labour force participation. With unemployment falling once again relative to the average in 2015, employment looks set to pick up slightly more strongly still in 2016. However, the further decline in the unemployment rate actually envisaged for next year could be masked by higher unemployment among refugees. Therefore, despite the favourable economic situation, it is possible that employment will rise at a slightly lower rate than the potential labour supply. At the end of the projection period, increasing labour shortages and a perceptible fall-off in employment growth are expected in the face of diminishing migration figures. This is likely to be offset by the fact that increasing capacity utilisation should also raise working hours per employed person.<sup>10</sup> Furthermore, the negative impact of labour market tightness on macroeconomic activity could be curbed by a potentially sharper rise in productivity over the

## Employment indicators for Germany

seasonally adjusted



Sources: Ifo business survey, Institute for Employment Research (IAB). <sup>1</sup> Index values on a scale from 90 (very poor outlook) to 110 (very good outlook).  
 Deutsche Bundesbank

projection horizon thanks to the persistently positive economic backdrop.

## ■ Labour costs and prices

Despite the highly upbeat labour market situation, the pay settlements agreed by management and labour in this year's pay round for central and local government employees as well as in the metal-working and electrical

*Negotiated rates of pay up only moderately in 2016, but rises increasingly sharp in years thereafter*

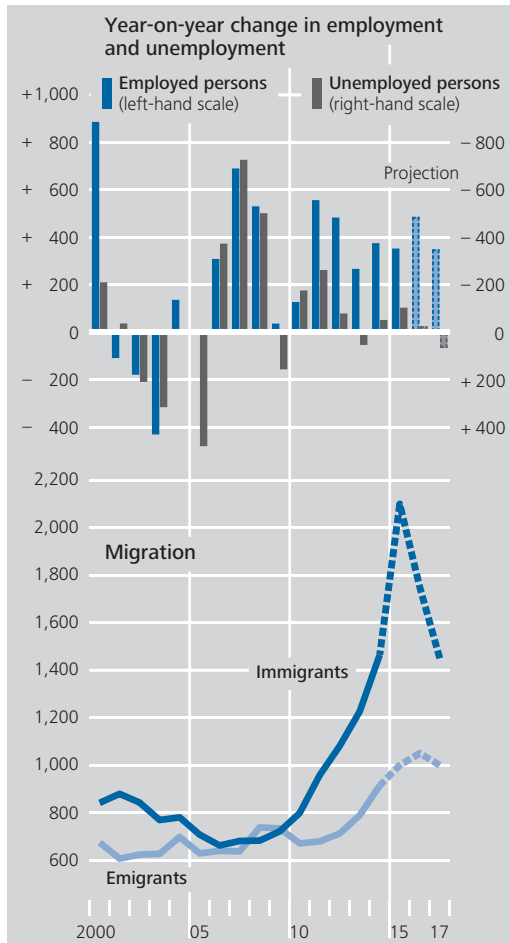
<sup>8</sup> Estimates regarding the inflow of migrants excluding asylum seekers are higher than in the December projection as, contrary to expectations, there does not appear to have been a fall in the number of eastern European migrants in 2015. At the same time, the influx of refugees has plummeted since the start of 2016. In the light of lower refugee migration estimates, it is therefore likely that the partial crowding-out effect on other migration, which had still been assumed in the December projection, will be minimal.

<sup>9</sup> Having initially been held down by the high proportion of inactive refugees, the participation rate for migrants is expected to go back up as recognised refugees are gradually integrated into the labour market as of 2017.

<sup>10</sup> In particular, the average working hours of women in employment are low by international standards, meaning that there is scope here to raise working hours.

## Employment, unemployment and migration

Thousands



Sources: Federal Statistical Office and Federal Employment Agency. Migration in 2015 projected by the Bundesbank based on the flash estimate of migration statistics for foreigners by the Federal Statistical Office. 2016 and 2017 Bundesbank projections.

Deutsche Bundesbank

engineering industries and the main construction sector were moderate and fell short of the rises expected in the December projection. Several collective wage agreements from previous years envisage lower rises in their second stage, which takes effect in 2016, than in their first stage. Zero months without pay increases and negative base effects due to high one-off payments in 2015 will further curb the pick-up in negotiated rates of pay in 2016. Consequently, the rises adopted in this year's pay round (as well as projected increases in the case of pending agreements) will only be fully observable in the average growth rates for 2017.<sup>11</sup> On balance, negotiated rates of pay are set to climb

by 2.1% in 2016 and 2.4% in 2017. In 2018, growing labour market shortages and rising capacity utilisation could lead to a markedly higher increase. From a monetary policy perspective, it is important in this context that the current temporarily subdued level of inflation does not become entrenched via second-round effects.

This year's rise in actual earnings is expected to be only marginally greater than negotiated rates of pay. While there was a distinctly positive wage drift last year, chiefly driven by the introduction of the statutory minimum wage, a comparable stimulating effect is lacking this year. Consistent with above-potential growth in the overall economy and increasing workforce shortages in the labour market, the wage drift is likely to be slightly positive in 2017 as well; in 2018, overtime pay and higher bonuses to employees could then contribute to markedly higher growth in actual earnings. Labour costs as measured by compensation per employee follow a similar pattern. However, the resulting higher cost burden is likely to be largely offset by a simultaneous increase in productivity gains. Following a slight slowdown this year, unit labour costs could therefore continue to rise by around 2% *per annum*, as has been the case since 2013.

*Accelerated rise in wage costs offset by increasing productivity gains*

While it had been expected back in the December projection that consumer price inflation would slowly start to rise as early as at the start of 2016, it fell in the period spanning the fourth quarter of 2015 and first quarter of 2016. As measured by the growth rate of the HICP, average inflation in the first quarter of 2016 recorded a year-on-year rise of +0.1%, deviating from the figure estimated in the projection (+0.9%). This was due primarily to a renewed fall in oil prices. However, even excluding

*Unexpected downturn in crude oil prices in 2015 Q4 and 2016 Q1 period will lower inflation outlook for 2016 ...*

<sup>11</sup> Once they have come to an end, all of the approximately 550 regional, sectoral and company-related pay contracts as well as civil servants' pay rate adjustments and regulations recorded in the Bundesbank's negotiated pay rate statistics are carried forward, taking into account the macroeconomic environment and, in some cases, industry-specific determinants.



energy, actual inflation still fell markedly short of projection expectations. Declining prices of imported industrial goods excluding energy provided noticeable relief and were probably attributable, in part, to the appreciation of the euro. In addition to weaker wage growth, another factor affecting services prices was the fact that the measured rise in rents remained flat. Given the current sharp hikes in housing prices, this is noteworthy and is possibly connected to methodological changes in the sub-index for rents. *Inter alia*, the sample used for this has been gradually adjusted since the start of 2015. At the current juncture, the impact of this changeover on the sub-index for rents is difficult to assess. However it could cause rents as recorded by the Federal Statistical Office to increase at a lower rate than would be expected in view of the situation in the housing market.

*... and might set back expected substantial rise in consumer prices to 2017 and 2018*

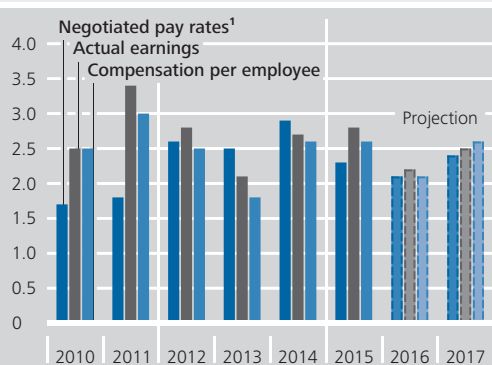
It is anticipated that consumer price inflation will increase markedly through to the end of the projection period. In addition to the dampening effect of the drop in crude oil prices being likely to have largely dissipated by the end of 2016, other commodity prices are set to pick up again, meaning that domestic price pressures arising from robust wage growth and rising capacity utilisation will probably make themselves increasingly felt. Overall, consumer price inflation (as measured by the annual HICP rate) could rise from 0.2% in the current year to 1.5% in 2017 and 1.7% in 2018.

*Energy prices to rise only minimally up to 2018 due to weakly increasing crude oil prices*

This year's projection for energy prices is shaped by the heavily reduced prices of fuel and heating oil at the start of the year. Although crude oil prices have now undergone a marked resurgence and consumer prices for fuel and heating oil are set for a further slight increase as the year progresses, the energy component of the HICP should be significantly lower on average in 2016 than in 2015. Energy prices are likely to go back up over the rest of the projection horizon, but this increase will probably be fairly weak. The prices of mineral oil products, for instance, will probably see just a moderate

### Negotiated pay rates, actual earnings and compensation of employees

Year-on-year percentage change, monthly basis



Sources: Federal Statistical Office. 2016 and 2017 Bundesbank projections. <sup>1</sup> Pursuant to the Bundesbank's negotiated wage index.

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rise owing to the assumed low increase in crude oil prices. Gas and electricity prices could even abate somewhat up to the end of the projection horizon. In the past few years, they have been geared less towards the crude oil prices of the recent past, and more towards their own forward prices at the wholesale level. The latter pointed to falling prices as this projection was finalised. Expected increases in other cost components, such as grid charges, should thus be more than offset.

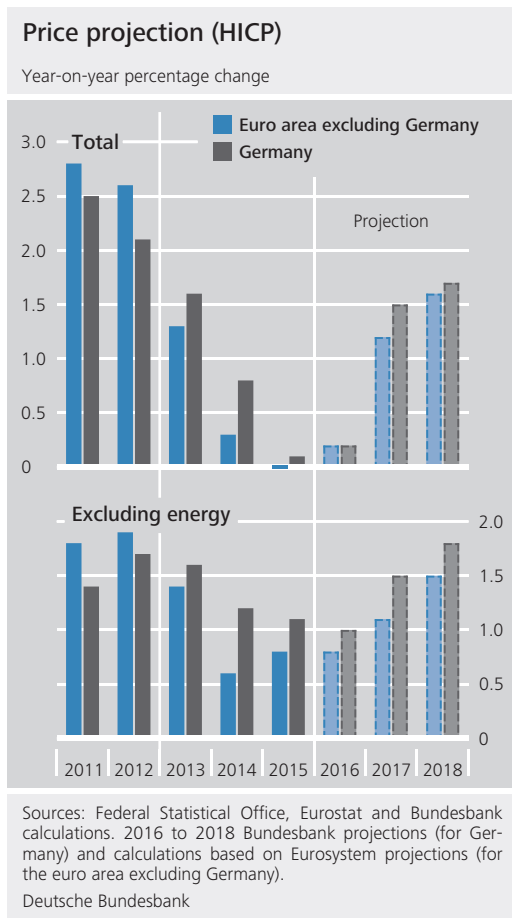
The price rises for other goods and for services in 2016 are likely to be marginally lower than in

### Revisions since the December 2015 projection

Year-on-year percentage change

Item	2015	2016	2017
<b>GDP (real)</b>			
Projection from June 2016	1.7	1.7	1.4
Projection from December 2015	1.7	1.8	1.7
Difference in percentage points	0.0	-0.1	-0.3
<b>Harmonised Index of Consumer Prices</b>			
Projection from June 2016	0.1	0.2	1.5
Projection from December 2015	0.2	1.1	2.0
Difference in percentage points	-0.1	-0.9	-0.5

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*From 2017, domestic price pressure will be manifest in increased non-energy inflation*

the previous year, reflecting the fact that wage costs will rise somewhat more weakly in 2016, probably temporarily. Diminishing import prices as well as steeply reduced prices for some agricultural products owing to global oversupply are also providing relief. From 2017, the dampening effects relating to import prices should cease; according to the assumptions, renewed price rises are also expected for food raw materials from this point. Since the externally induced relief will tail off, non-energy consumer price inflation is likely to approach the inflation rate for domestic value added throughout the projection horizon. For the GDP deflator, an increase of approximately 2% per year, consistent with the growth in unit labour costs, is expected in the projection period, as already in the period from 2013 to 2015; this is because profit margins will probably remain stable for the most part, given an unchanged level of competitive intensity. In the past, easing effects stemming from declining import prices are also likely to have played a role in these stable mar-

gins. Thanks to their improving cyclical position, however, enterprises should be able to largely pass on higher labour costs to the consumer, even if import prices rise again. Annual HICP inflation excluding energy should increase from 1.0% in the current year to 1.8% in 2018. This particular form of inflation would thus be slightly higher in Germany over the entire projection period than in the rest of the euro area, in a likely reflection of the varying cyclical position.

## Public finances

After recording a distinct surplus last year (+0.6% of GDP), the government budget is likely to manage just a slight positive balance this year. As things stand, then, no further major change is anticipated before 2018. On the one hand, the general conditions for public finances, characterised by low interest rates as well as a sound labour market situation and healthy economic growth, should remain favourable. On the other hand, government spending relating to refugee migration is likely to rise, especially in the current year, added to which the budgetary stance will be expansionary over the entire projection horizon.<sup>12</sup>

*Favourable conditions for public finances, but additional expenditure on refugees and expansionary stance*

Specifically,<sup>13</sup> slight budget relief is to be expected this year from both the favourable economic setting and the further decline in interest expenditure. The structural primary balance (that is, the structural balance less interest expenditure) is likely to deteriorate significantly, however, because it is affected by growing expenditure on refugees as well as fiscal policy measures that have a detrimental impact on

*Only a slight surplus in 2016; ...*

<sup>12</sup> This projection was finalised prior to the publication of the May revision to the national accounts figures for 2015; the new information has practically no bearing on the projection, however. Particular uncertainty continues to surround refugee migration. Additional expenditure could also be incurred in connection with the sale and transfer of certain assets belonging to HSH Nordbank, or in the course of phasing out nuclear energy, for instance.

<sup>13</sup> Additional information on the measures included and the additional expenditure related to refugee migration can be found on pp 18-21.

balance. In addition, growth in pension expenditure will remain high, chiefly because of the sharp pension increase around the middle of the year.

*... hardly any changes in 2017 and 2018*

Although in the coming year economic activity will be roughly neutral from a budget perspective, the bulk of the one-off proceeds from the 2015 frequency auction will be recorded then.<sup>14</sup> The decline in interest expenditure is also likely to continue. However, the factors providing relief will be offset by a renewed, albeit more minimal deterioration in the structural primary balance. Given little change in spending relating to refugee migration, the indications here are of a continued slightly expansionary budgetary stance as well as similarly high increases in pension expenditure as in the current year. In 2018, the proceeds from the frequency auction will largely drop off, while the economy will provide somewhat stronger relief for the government budgets. The structural balance, too, would thus hardly change.

*Debt ratio remains on downward path*

Although the debt ratio would drop relatively rapidly under these conditions, it would not yet fall below the 60% limit in 2018 either (end of 2015: 71.2%). Given the prospect of only slight surpluses from 2016, the decline will be chiefly due to nominal GDP growth in the ratio's denominator. Furthermore, the liabilities of government-owned bad banks are likely to be reduced further.

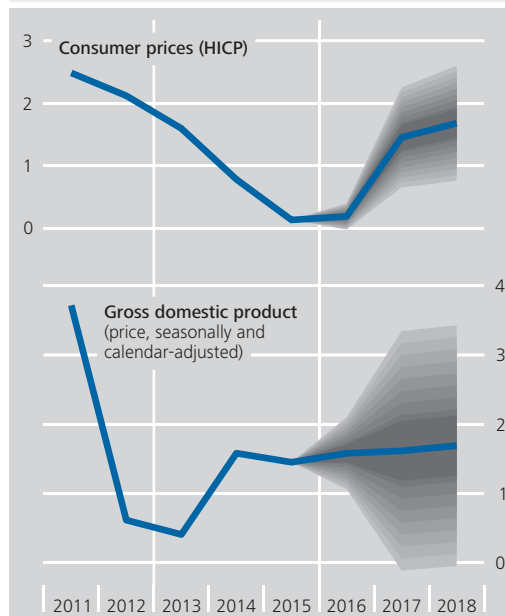
## ■ Risk assessment

*Balanced risks to economic growth, in terms of both the external setting ...*

The risks to economic growth appear to be broadly balanced. Looking at the external setting, the upswing in a number of commodity-exporting EMEs could prove weaker than assumed in this projection, for one thing. There is also a certain risk of growth in China undergoing a stronger slowdown. The underlying pace of economic activity in a number of key advanced economies could also be slightly overstated in the baseline underpinning this projection; in particular, there is a perceived risk

### Baseline and uncertainty margins of the projection\*

Annual data, Year-on-year percentage change



Sources: Federal Statistical Office and Bundesbank calculations. 2016 to 2018 Bundesbank projections. \* Uncertainty margins calculated on the basis of the mean absolute forecast error. The width of the band that is distributed symmetrically around the most probable value equals double the mean absolute forecast error.

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that the referendum on 23 June 2016 could result in the UK voting to leave the EU. Finally, simmering geopolitical tensions could be reignited, dampening the global economy. On the other hand, a cautious assessment was made of the outlook for German exports compared with assumed growth in the sales markets, especially in the current year, with the result that the assumed revival in global economic output could also lead to stronger export growth and thus to greater business investment.

With respect to domestic demand, the risks are similarly more or less balanced. In the event that the assumed decrease in the saving ratio does not materialise, on account of heightened geopolitical tensions for example, private consumption could see somewhat weaker growth.

*... and the domestic economy*

<sup>14</sup> These are recorded in the national accounts on an accrual basis (ie as soon as the acquired frequency bands are available) and as negative spending. This will improve the 2017 balance by €3.8 billion.

By contrast, an even stronger increase in housing construction investment is conceivable. At present, any assessments of the effect on the housing supply of the unusual combination of extremely favourable financing terms and a population that is expanding, chiefly due to high levels of migration, can only be made under conditions of great uncertainty. Moreover, the influx of refugees and the attendant economic implications are subject to major uncertainty, as before.

*Price risks in connection with the assumed crude oil price path are considerable but balanced*

The downward slide in crude oil prices came to a halt at the start of the current year, and prices have risen again somewhat in the intervening period. The risks in relation to the assumed future path of crude oil prices are considerable, but more or less balanced.<sup>15</sup> If price developments were to deviate significantly from the assumptions, this would entail major repercussions for economic growth and for the inflation rate in particular, as in the past.

*Overall price projection risks pointing downwards*

The risks to overall price developments are pointing downwards, by contrast. There is a certain upside risk in the event that the euro were to depreciate on account of growing differences in the monetary policy stance com-

pared with other currency areas. On the other hand, though, the impact of adverse demographic trends in Germany on the labour supply and on the associated wage pressure is uncertain. Higher labour mobility within Europe than previously assumed could counteract the expected supply-related wage pressure in Germany more significantly than predicted. What is more, fiercer competition facing domestic producers, possibly partly as a result of the structural reforms carried out in a number of euro-area countries, could induce German enterprises to pass on a smaller amount of the higher labour costs to consumers and thus to squeeze their profit margins. Finally, another downside risk to the price projection could result from the aforementioned methodological changes in the sub-index for rents, which accounts for a sizeable share of just over 10% in the HICP basket of goods. This could imply a weaker increase in rents than assumed in the current projection baseline.

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<sup>15</sup> The price of crude oil would fall if, for example, Iran were to expand its oil supply even more. On the other hand, unexpectedly severe cutbacks in production owing to lower investment in the crude oil industry would result in higher crude oil prices.

## The macroeconomic impact of quantitative easing in the euro area

*Against the backdrop of subdued inflation prospects and falling market-based inflation expectations at the zero lower bound on interest rates, the ECB Governing Council introduced an asset purchase programme (APP) in March 2015 and has since expanded this on multiple occasions. The declared aim of this programme is a sustained adjustment in the path of inflation towards inflation rates of below, but close to, 2% over the medium term.*

*As the euro area has no experience, to date, with the effectiveness of quantitative easing of this kind on real economic developments and inflation, model-based analyses play an important role in evaluating these non-standard monetary policy measures.*

*The simulations presented in this article show that the various model approaches differ considerably in terms of how they evaluate the effectiveness of quantitative easing on macroeconomic developments and inflation. Nevertheless, they bear out the experience of other currency areas – namely that, all other things being equal, quantitative easing can have an expansionary effect on aggregate demand and inflation.*

*In addition to those effects of quantitative easing intended by the ECB Governing Council, there is, however, also the potential for unwanted side effects. These include an increasing nexus between monetary and fiscal policy, risks relating to the profitability of financial institutions and an excessively high propensity to run risks. The longer the highly accommodative stance remains in place, the more likely its side effects are to deepen. This is why monetary policy, which is currently using expansionary measures in a bid to lift inflation from its very depressed level, must usher in the normalisation of monetary policy once it reaches a price path that is compatible with the Eurosystem's stability target – irrespective of the state of public finances or financial stability.*

## Non-standard Eurosystem measures since mid-2014

*Eurosystem's resolute response to the financial crisis*

Since 2007, the Eurosystem has adopted a range of non-standard measures to counteract the impact of the banking, financial and sovereign debt crisis. Prior to June 2014, its primary objective was to safeguard the functioning of the monetary policy transmission process.<sup>1</sup> The remaining scope for policy rate cuts increasingly became an issue during 2014 (see the chart below)<sup>2</sup> and, with inflation prospects subdued and market-based inflation expectations falling, a series of new non-standard measures was therefore gradually adopted from June 2014 onwards with the aim of achieving a more accommodative monetary policy stance (see the chart on page 31).

*September 2014: ABSPP and CBPP3 launched*

In June 2014, the Eurosystem announced the introduction of targeted longer-term refinancing operations (TLTROs). These allow banks to borrow from the Eurosystem at fixed interest rates for a period of up to four years in a series of eight operations conducted at quarterly intervals starting in September 2014.<sup>3</sup> In September 2014, the Eurosystem also announced the launch of two further asset purchase programmes: the asset-backed securities purchase programme (ABSPP) and the third covered bond purchase programme (CBPP3).

In January 2015, the Eurosystem finally announced the introduction of the expanded asset purchase programme (APP) in order to further loosen its monetary policy stance. The majority of the ECB Governing Council deemed this measure necessary as the inflation forecasts and measures of market participants' long-term inflation expectations had fallen further despite the many measures taken. However, survey-based inflation expectations do not back up this decrease, which can be taken as a sign that the decline in market-based expectation measures could be related to an increasingly negative inflation risk premium (see the chart on page 32).

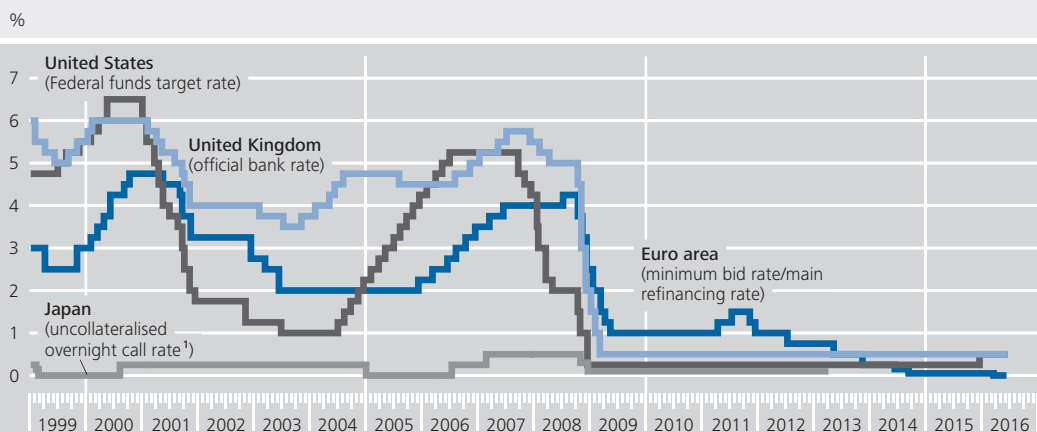
*January 2015: quantitative easing announced (APP launched in March)*

**1** The non-standard measures implemented prior to June 2014 included the following asset purchase programmes: the covered bond purchase programme (CBPP1, July 2009 to June 2010, and CBPP2, November 2011 to October 2012), the securities markets programme (SMP, May 2010 to September 2012) and, lastly, outright monetary transactions (OMT, as of September 2012; no purchases to date).

**2** This applies not only to the euro area but also to other currency areas.

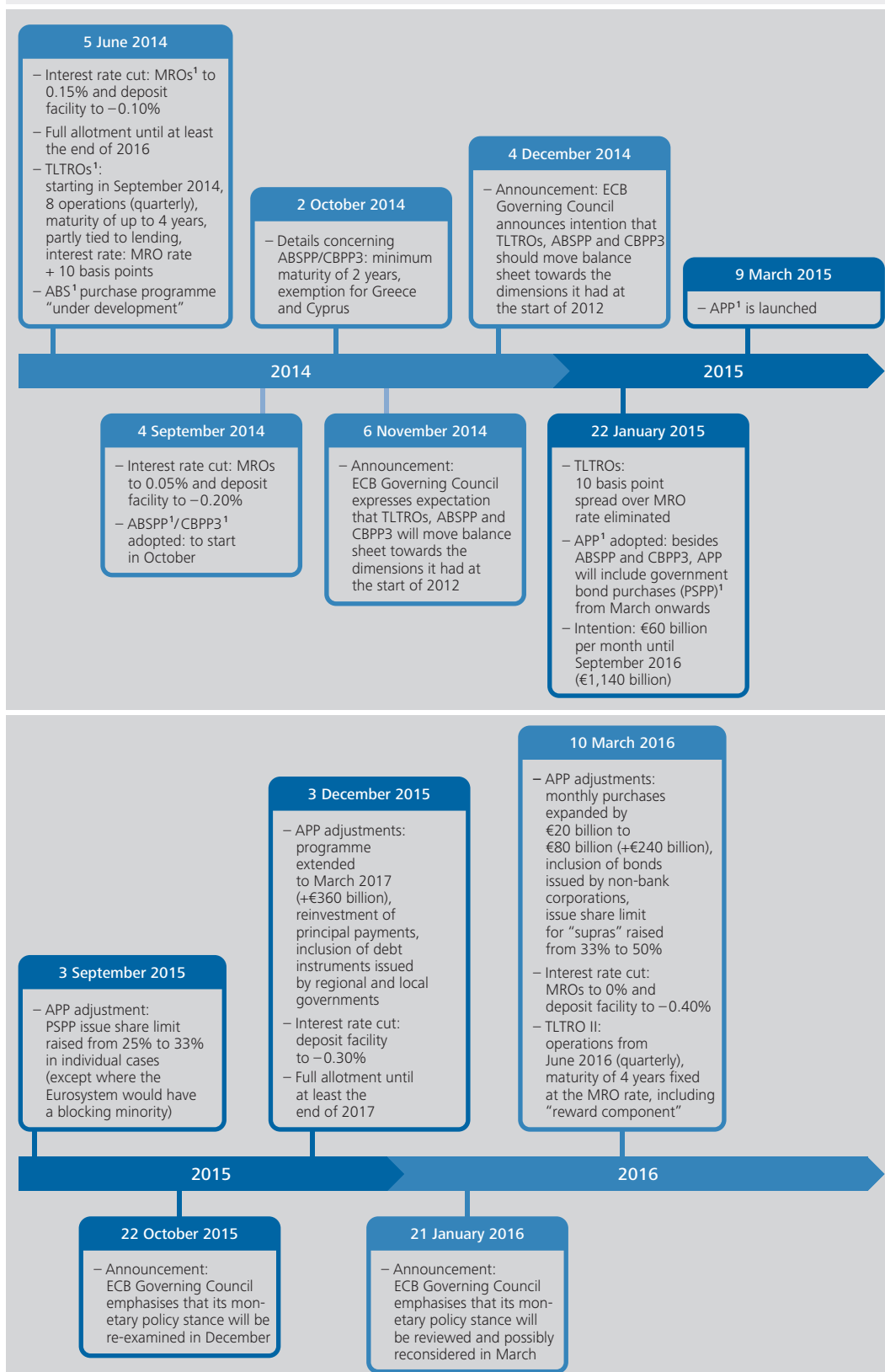
**3** Importantly, the amounts that banks can borrow were linked, for the first two TLTROs, to their stock of eligible loans (loans to euro-area non-financial corporations and households, excluding loans to households for house purchases) as at 30 April 2014, while, for the remaining six operations, the evolution of eligible lending since May 2014 is key. The interest rate on the first two TLTROs was set at a ten basis point spread over the main refinancing rate prevailing at the time when each TLTRO was conducted. This spread was eliminated for the remaining six TLTROs.

### Central bank interest rates



Sources: Respective central banks. **1** Uncollateralised overnight call rate target until 18 March 2001. Overnight call rate determined directly from the outstanding balance of the current accounts at the central bank as an operating target from 19 March 2001 to 8 March 2006 before returning to the overnight call rate target. Reintroduction of monetary base control from 4 April 2013.

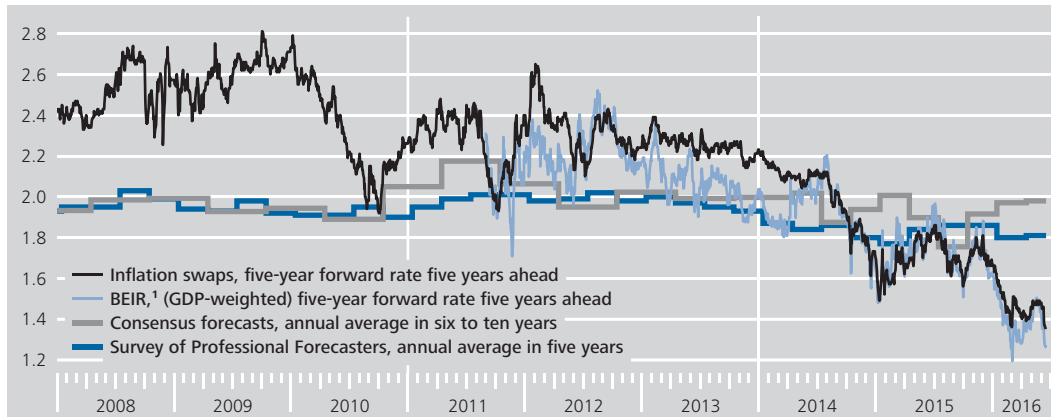
## Chronology of selected Eurosystem monetary policy measures since 2014



<sup>1</sup> MROs: main refinancing operations; TLTROs: targeted longer-term refinancing operations; ABS: asset-backed securities; ABSPP: asset-backed securities purchase programme; CBPP: covered bond purchase programme; and APP: expanded asset purchase programme; PSPP: public sector purchase programme.

### Long-term inflation expectations in the euro area

%, daily data



Sources: ECB, Consensus Economics, Thomson Reuters, EuroMTS and Bundesbank calculations. **1** Breakeven inflation rate (BEIR) = difference between the yield on a nominal bond and the yield on an inflation-linked bond of the same maturity.

Deutsche Bundesbank

The APP marks the start of quantitative easing in the euro area as, in addition to ABSPP and CBPP3, which were introduced prior to this, its chief component is the comprehensive purchase of public sector securities (public sector purchase programme, or PSPP). Initially, total APP purchases were to amount to €60 billion a month until the end of September 2016, or beyond, if necessary, and, in any case, until a sustained adjustment was seen in the path of inflation that is consistent with the aim of achieving inflation rates below, but close to, 2% over the medium term.<sup>4</sup> In the light of forecasts being revised downwards, the ECB Governing Council took the decision in December 2015 to extend the programme until March 2017.<sup>5</sup> This was followed by the decision in March 2016 to increase the volume of monthly purchases by €20 billion to €80 billion from April 2016. As of June 2016, this also includes the purchase of

**4** The individual components of the APP take differing forms with respect to risk-sharing. The ABSPP, CBPP3 and, as of March 2016, the corporate sector purchase programme (CSPP) are subject to full risk-sharing. Under the PSPP, 20% of asset purchases are subject to the principle of risk-sharing. Purchases of assets issued by European institutions – these assets make up 10% of the additional asset purchases under the PSPP and are acquired by the national central banks – are subject to loss-sharing. The ECB holds 10% of the assets purchased additionally under the PSPP. In March 2016, the decision was made to decrease the share of purchases of bonds issued by supranational institutions from 12% to 10% and to raise the share of purchases conducted by the ECB from 8% to 10% – overall, the risk-shared part of the PSPP remains unchanged at 20%. The remaining 80% of asset purchases by the national central banks under the PSPP are not subject to loss-sharing. For more on this, see the ECB press release of 22 January 2015, available at [http://www.ecb.europa.eu/press/pr/date/2015/html/pr150122\\_1.en.html](http://www.ecb.europa.eu/press/pr/date/2015/html/pr150122_1.en.html)

**5** The ECB Governing Council also decided to reinvest the principal payments on the assets purchased under the APP as they mature and to cut the interest rate on the deposit facility to -0.3%. Furthermore, it decided to continue conducting the main refinancing operations as fixed rate tender procedures with full allotment at least until the end of the last reserve maintenance period of 2017 and to include euro-denominated marketable debt instruments issued by regional and local governments located in the euro area in the list of assets that are eligible for regular purchases by the respective national central banks under the PSPP. For more on this, see also the introductory statement to the press conference on the monetary policy decisions of 3 December 2015, available at <http://www.ecb.europa.eu/press/pressconf/2015/html/is151203.en.html>



corporate bonds.<sup>6</sup> The non-standard measures, particularly the PSPP, have, since August 2015, represented the most significant component of Eurosystem liquidity provision (see the adjacent chart).

## Transmission channels of quantitative easing

*Quantitative easing takes effect via various channels ...*

The ultimate goal of quantitative easing is to raise the inflation rate. Much like conventional interest rate policy, quantitative easing also influences macroeconomic developments via various channels. The main way that this works is that asset prices or yields are influenced by purchases of government bonds. It is perhaps somewhat surprising, however, that, in theory, such purchases need not necessarily have an effect on asset prices and yields – and, by extension, on inflation. Therefore, we will first briefly outline the conditions under which any purchases of assets have an impact on macroeconomic developments before moving on to explain individual transmission channels.

## Neutrality of asset purchases for monetary policy purposes?

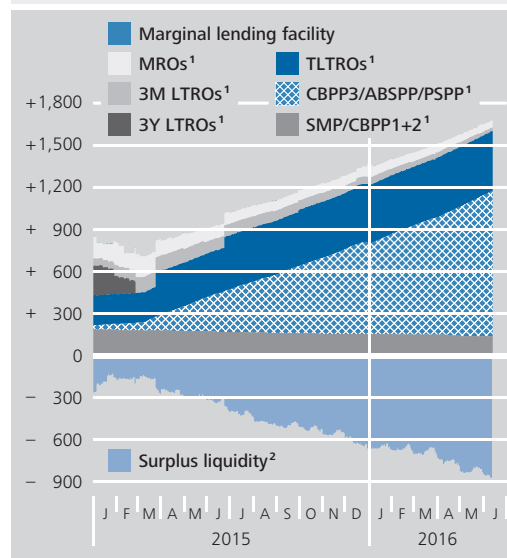
*... but can, under strict conditions, also be neutral; ...*

Traditionally, the “liquidity trap” plays a key role in the economic debate on the effectiveness of quantitative easing. If, at the zero lower bound on interest rates, risk-free, short-term assets (particularly government bonds) and central bank money are largely identical from the banks’ perspective, asset purchases by the central banks will only result in the volume of short-term government bonds held by banks falling and the amount of central bank money hoarded rising correspondingly. Purchases of these assets for monetary policy purposes would then be “neutral” in that they would have no effect on real economic activity and goods prices.

However, the purchase of long-term, possibly risky assets by a central bank can, under certain

### Liquidity management in the Eurosystem

€ billion, daily data



Source: ECB. **1** MROs: main refinancing operations; 3M LTROs: longer-term refinancing operations (with a three-month maturity); 3Y LTROs: special-term refinancing operations (three-year maturity); TLTROs: targeted longer-term refinancing operations; CBPP: covered bond purchase programme (three different programmes); ABSPP: asset-backed securities purchase programme; PSPP: public sector purchase programme; and SMP: securities markets programme. **2** Central bank reserves + deposit facility – minimum reserve requirements. Excess liquidity is shown with an inverted sign.

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conditions, also be neutral in this sense.<sup>7</sup> If the central bank assumes risks by purchasing assets that were initially held in the private sector, the real economic allocation remains unchanged if these risks – should they come to pass – ultimately have to be shouldered again by the pri-

<sup>6</sup> Investment-grade euro-denominated bonds issued by non-bank corporations (ie excluding credit institutions and entities with a parent company that belongs to a banking group, banks and investment firms) established in the euro area were included in the list of assets that are eligible for regular purchases. Furthermore, the ECB Governing Council decided to cut the interest rates for main refinancing operations and the marginal lending facility by a further 0.05 percentage point and that of the deposit facility by a further 0.1 percentage point. It also decided to launch a new series of four targeted longer-term refinancing operations (TLTRO II), each with a four-year maturity. The lowest rate at which counterparties can borrow during these operations is the interest rate on the deposit facility at the time of allotment. For more on this, see also the ECB press release of 10 March 2016, available at <http://www.ecb.europa.eu/press/pr/date/2016/html/pr160310.en.html>

<sup>7</sup> See N Wallace (1981), A Modigliani-Miller theorem for open-market operations, *American Economic Review* 71(3), pp 267-274; and M Woodford, Methods of policy accommodation at the interest-rate lower bound, speech held at the Jackson Hole Symposium, 31 August 2012.

vate sector through (additional) taxation (known as Wallace neutrality).

*... however, Wallace neutrality is difficult to reconcile with monetary policy practice*

However, this postulate of neutrality is based on a series of very strict assumptions (see the box on pages 36 and 37) that are likely too restrictive to apply in monetary policy practice.<sup>8</sup> In particular, it cannot be assumed that the functioning of the financial markets is completely frictionless as the markets are affected, *inter alia*, by liquidity limitations (especially after the onset of the financial crisis), funding constraints and market segmentation. Furthermore, individual investors probably have a preference for certain maturities and asset classes that cannot be attributed to purely pecuniary differences. The conditions under which quantitative easing produces real economic effects that impact aggregate price developments via a multitude of channels are thus fulfilled (see the chart<sup>9</sup> on page 35).

## Portfolio rebalancing channel

*Portfolio rebalancing channel based on imperfect substitutability of assets, ...*

In the absence of Wallace neutrality, quantitative easing causes investors to adjust their portfolios in various ways; this is reflected in relative yield shifts for individual asset classes and, above all, a flattening of the yield curve. This portfolio rebalancing channel is based chiefly on what is referred to as the preferred-habitat theory to explain the yield curve,<sup>10</sup> which combines the liquidity premium and market segmentation theories.<sup>11</sup>

- The liquidity premium theory asserts that long-term assets with a residual maturity that exceeds risk-averse investors' (short) investment horizon are only bought if they promise a premium that grows over the investment horizon (term premium). According to this hypothesis, this term premium (which is constant within each maturity) is always positive.
- According to the market segmentation theory, certain investors have a preference for

specific (residual) maturities (preferred habitat), meaning that the term premium does not necessarily rise monotonously with residual maturity.<sup>12</sup> Market segmentation theory assumes that the bond market comprises individual segments; bonds in these segments are not completely interchangeable, and arbitrage opportunities are limited accordingly. Changes in the supply of and demand for specific bonds may therefore be reflected in a change in the market price of these bonds.

In this environment, the purchase of long-term government bonds influences the yield curve via several channels. On the one hand, purchasing long-term bonds lowers their supply in the market (segment) in which the purchases take place. Market segmentation means that investors with a preference for these bonds will be prepared to pay a higher price.<sup>13</sup> This reduces the yield not only on this bond class but also on close substitutes. If, on the other hand, the central bank purchases very large volumes of long-term bonds, the average maturity of the portfolios held by investors – and therefore

*... with asset purchases resulting in portfolio shifts*

<sup>8</sup> See D Kohn, speech held at the Conference on monetary-fiscal policy interactions, expectations, and dynamics in the current economic crisis, Princeton University, 23 May 2009.

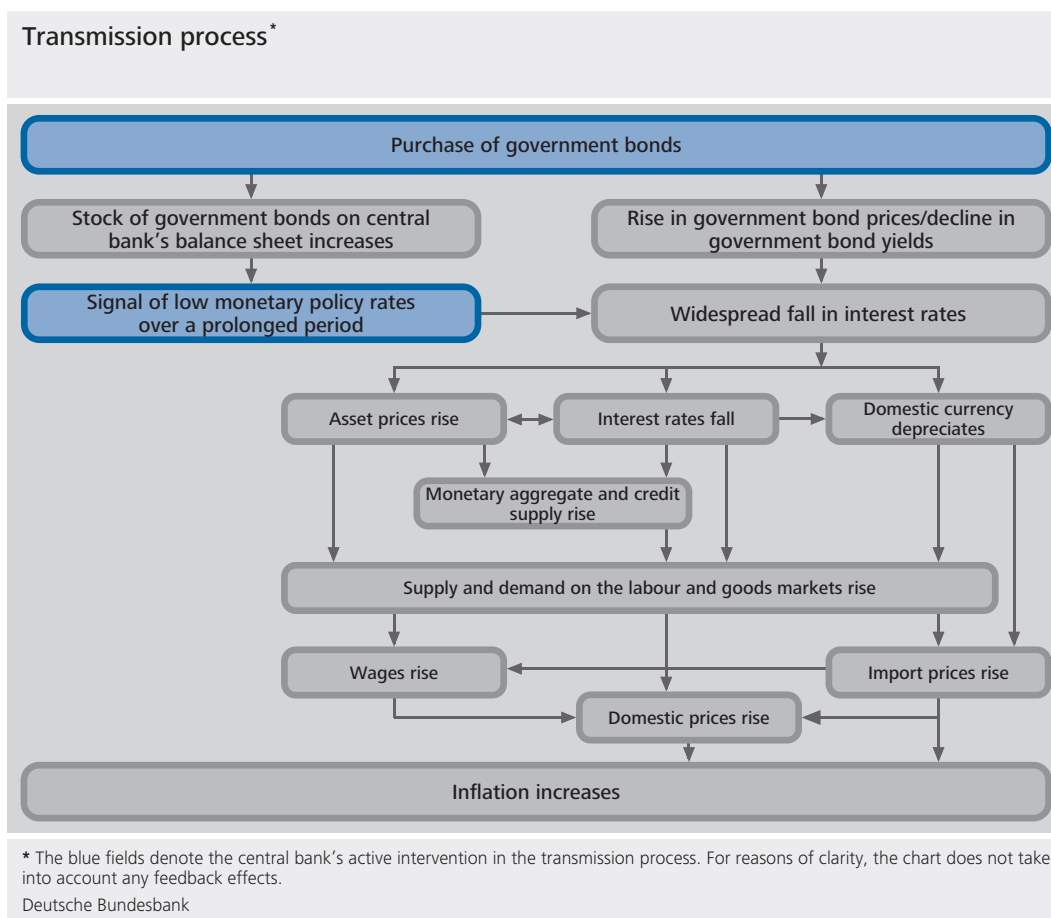
<sup>9</sup> The channels depicted are widely considered the most significant in quantitative terms. A range of other channels can be found in the literature (see A Krishnamurty and A Vissing-Jorgensen (2011), The effects of quantitative easing on interest rates: channels and implications for policy, *Brookings Papers on Economic Activity* 43(2), pp 215-287), but these can be broadly subsumed under the channels presented here (see also S D'Amico, W English, D López-Salido and E Nelson (2012), The Federal Reserve's large-scale asset purchase programmes: rationale and effects, *The Economic Journal* 122(564), pp F415-F446).

<sup>10</sup> See F Modigliani and R Sutch (1966), Innovations in interest rate policy, *American Economic Review* 56, pp 178-197; and D Vayanos and L-J Villa (2009), A preferred-habitat model of the term structure of interest rates, NBER Working Paper Series No 15487.

<sup>11</sup> See also O Issing (2011), *Einführung in die Geldtheorie*, 15th edition, Verlag Franz Vahlen, pp 125 ff.

<sup>12</sup> According to this theory, individual investors have heterogeneous preferences for bonds with different properties (eg a preference for certain maturities due to institutional or regulatory factors, as is the case for pension funds and life insurers) that cannot be attributed to purely pecuniary differences.

<sup>13</sup> They would not be willing to pay a higher price if Wallace neutrality were to hold, but it is violated here due to the relevance of non-pecuniary factors to demand for securities (see the box on pp 36-37).



the aggregate term premium – will fall (duration effect).<sup>14</sup>

wise has a positive impact on aggregate demand and, ultimately, on inflation.

*Excess liquidity can be used by banks to restore their optimal portfolio structure*

Portfolio adjustments and therefore a potential fall in long-term yields can also be triggered in an environment in which negative interest is applied to central bank balances and in which the level of excess liquidity held by commercial banks is high.<sup>15</sup> For example, a (sharp) increase in commercial banks' central bank account balances or the attendant rise in their excess liquidity<sup>16</sup> following asset purchases can – irrespective of the maturity of the assets purchased – lead to a fall in long-term yields. The drop in long-term yields is a result of an increase in demand for long-term bonds on the part of commercial banks that, as part of their portfolio and balance sheet management, are attempting to restore their optimal profitability and risk structure by purchasing long-term bonds with a greater duration. The overall effect that it exerts on the yield curve means that any purchase of government bonds then like-

## Signalling channel

The signalling channel is independent of the Wallace neutrality outlined above and is based on expectations theory, according to which the long-term interest rate is (approximately) equivalent to average short-term interest rate

*Expansion in total assets as a signal of future monetary policy stance*

<sup>14</sup> While the duration effect affects the entire yield curve, the scarcity effect only causes changes in the market segment in which purchases are made.

<sup>15</sup> See J Christensen and S Krogstrup, Transmission of quantitative easing: the role of central bank reserves, FRBSF Working Paper 2014-18.

<sup>16</sup> Excess liquidity can be defined as central bank reserves + deposit facility – minimum reserve requirements. For information on the impact of Eurosystem asset purchases on TARGET2 balances, see Deutsche Bundesbank, German balance of payments in 2015, Monthly Report, March 2016, pp 37-56.

## Wallace neutrality\*

Assuming Wallace's postulate of neutrality holds true, purchases of risk-prone securities by a central bank count as neutral in that they do not engender any macroeconomic consequences. However, the postulate in question rests upon a number of assumptions.

- Any losses incurred by the central bank are offset and financed by private sector taxes.<sup>1</sup>
- No financial frictions or constraints are in place; as many securities as desired can be acquired for the same price.<sup>2</sup> No market segmentation of any kind exists.<sup>3</sup>
- All eligible securities are valued solely on the basis of their pecuniary returns. As such, non-pecuniary factors that could play a role in the holding of certain assets remain disregarded.

Under the assumptions listed above, the private sector sees the value of a given asset as arising from the current value of those uncertain payoffs associated with the asset in question.<sup>4</sup> Any simple reallocation of assets between the central bank and the private sector not resulting in a change in the real quantity of available resources for private consumption in different environments, or "states of the world" as Woodford puts it, then has no effect on the market price of a given asset, nor does it impact the economy as a whole.<sup>5</sup>

This result evidently contradicts the portfolio balance theory, according to which the purchase of risk-prone securities by the central bank gives rise to macroeconomic effects because it adds the risk to its own balance sheet. Conversely, the private sec-

tor may hold debt instruments – in the form of risk-free bonds, for example – which yield the same amount regardless of the state of the world. From the perspective of the private sector, purchases of risk-prone securities by the central bank have reduced the level of risk and changed the real quantity of resources available to the private sector.

In macroeconomic terms, however, this argument falls short of the mark. At the outset, purchases of risk-prone securities will shift the undesirable element of risk from the private to the public sector, which means that any losses that may arise are initially borne by the central bank. Should

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\* The following analysis is based on the speech "Methods of policy accommodation at the interest-rate lower bound", delivered by M Woodford at the Jackson Hole Symposium on 31 August 2012.

<sup>1</sup> See P Benigno and S Nisticò (2015), Non-neutrality of open-market operations, CEPR Discussion Paper, No 10594, p 7. The authors show that purchases remain neutral in character even when government makes no transfers. However, in such instances, the central bank needs to be able to absorb the incurred loss using future retained earnings. Neutrality hinges on the private sector ultimately compensating for the reduced central bank profits (transfers to the finance ministry) by rendering higher taxes. That being said, if the level of losses sustained by the central bank is "too high", the postulate of neutrality ceases to apply.

<sup>2</sup> For instance, the loan-in-advance constraint described by C T Carlstrom, T Fuerst and M Paustian (2014) in Targeting long rates in a model with segmented markets, Federal Reserve Bank of Cleveland Working Paper, pp 14-19.

<sup>3</sup> While the quantitative easing administered by the central bank changes the level of state-dependent taxes, this is not reflected to the same extent in a corresponding change in the portfolio structure of those actors that are not affected by the central bank's purchasing activity (see also Woodford (2012), op cit, p 67).

<sup>4</sup> The current value, for its part, is determined by the stochastic discount factor attached to the investor, which is in turn derived from the marginal utility of the income generated in different states of the world.

<sup>5</sup> If the real available quantity of resources does not change in any specific state of the world, then the marginal utility of income remains unchanged, as does the stochastic discount factor.

the public sector subsequently raise taxes in order to fully absorb the losses incurred by the central bank, real after-tax income generated by the private sector will ultimately remain exposed to the risk in question, albeit only indirectly. Therefore, even in the wake of the central bank's purchasing activity, the private sector cannot consume more than it could previously. In this respect, any such purchases are neutral in nature inasmuch as they have no effect on aggregate demand or on price developments.

The assumptions that were outlined at the beginning of this analysis and that are of pivotal importance to the postulate of neutrality are, however, likely to be too restrictive for use in monetary policy practice. In particular, it can be assumed that different funding restrictions (such as loan-to-value ratios) or market segmentation are at play here. Individual investors may also exhibit a

preference for certain maturities that cannot be attributed to purely pecuniary differences. The conditions under which quantitative easing produces real economic effects that have an impact on aggregate price developments via a multitude of channels are thus fulfilled (see also the chart on page 35).<sup>6</sup>

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<sup>6</sup> The significance of possible financial restrictions and market segmentation is nonetheless not set exogenously but instead depends on the macroeconomic situation. For instance, market participants' risk aversion in times of crisis is likely to be far more pronounced, thus causing market segmentation to play a weightier role. This state dependence is likely to strengthen the impact of quantitative easing. See S Gürkaynak and J H Wright (2012), *Macroeconomics and the term structure*, *Journal of Economic Literature* 50(2), pp 331-367.

expectations.<sup>17</sup> If, in addition to communicating the future evolution of policy rates (forward guidance), the central bank announces that it intends to purchase assets, market participants could interpret this as a further indicator of an expansionary monetary policy stance being maintained for some time to come. This would imply that what is being communicated is backed by concrete measures, supporting market participants in their perception of the future path of policy rates (at the effective lower bound, if applicable). If quantitative easing is interpreted as a signal that policy rates will remain at the effective lower bound for longer than previously expected, long-term interest rates would continue to fall in line with the expectations hypothesis.<sup>18</sup> This would have a positive impact on general financing terms and therefore credit demand, stimulating aggregate demand and increasing inflation.<sup>19</sup>

A change in assets prices and yields through the portfolio rebalancing channel and the sig-

nalling channel creates the conditions under which quantitative easing can be transmitted through other channels.

## Bank capital and balance sheet channel

The bank capital channel attributes special importance to a commercial bank's balance sheet position. If asset prices increase as a result of purchases, the assets of a bank, too, will in-

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<sup>17</sup> According to the expectations theory, an asset investment should generate the same expected yield in a given period of time, irrespective of whether the investment was made in the form of several short-term assets or a one-off longer-term bond. The assets are perfect substitutes for one another, which means that the signalling channel has an equal effect across all interest rates.

<sup>18</sup> The literature also makes reference to what is known as the inflation channel, through which quantitative easing impacts directly on inflation expectations as well as influencing the distribution (ie uncertainty) of inflation expectations (see A Krishnamurty and A Vissing-Jorgensen (2011), *op cit*).

<sup>19</sup> See also M Woodford (2012), *op cit*.

*Bank capital channel: monetary policy transmission through a bank's capital position*

crease. All other things being equal, the resulting profit has the effect of increasing commercial banks' capital. This increase enables commercial banks both to meet the higher capital requirements of a growing loan portfolio and facilitates their access to the funding needed to refinance their loans to enterprises, increasing banks' willingness to provide credit.

*Balance sheet channel: monetary policy transmission via a borrower's net worth*

What is known as the balance sheet channel applies similar reasoning to the borrower's financial situation.<sup>20</sup> The higher a borrower's capital (eg as a result of increasing asset prices induced by quantitative easing), the lower the credit default risk<sup>21</sup> and the smaller the risk premium that lenders will demand to protect themselves against a default.<sup>22</sup> Hence, external financing becomes more affordable for borrowers, making it easier for them to realise investment projects.

## Exchange rate channel

*Quantitative easing may result in exchange rate adjustments*

The exchange rate channel is particularly important for open economies in which foreign trade makes up a notable share of economic activity. If an asset purchase programme causes the yields of assets denominated in domestic currency to fall in relation to those denominated in foreign currency, this will diminish the appeal of domestic bonds for foreign investors, and demand for domestic currency (which would be needed to purchase such bonds) will decline. This creates (at least temporary) downward pressure on the domestic currency.

First, such a depreciation makes exports of domestic goods and services cheaper, which tends to stimulate demand for such products from abroad. Second, foreign goods and services become more expensive for domestic consumers, causing domestic demand to focus increasingly on domestic rather than foreign products. Overall, this creates a positive effect in terms of (domestic) aggregate demand and spurs domestic inflation (due to higher prices for imported products, amongst other things).<sup>23</sup>

## Impact of quantitative easing in the euro area

According to the theoretical considerations, bond purchases should impact on aggregate demand and inflation via changes in financial market variables. Quantitative easing should, all other things being equal, cause long-term interest rates to fall, the euro to depreciate and – potentially with a certain lag – strengthen lending, consumption and investment activity. In a first step, selected financial market indicators are outlined below in order to obtain initial indications of whether their development is largely consistent with theoretical reasoning thus far. However, this anecdotal evidence should not be regarded as a conclusive empirical assessment or even as evidence supporting the theoretical statements. Subsequently, the effects of the APP on macroeconomic developments and inflation are analysed.

*Asset purchases initially impact on financial market prices and later on real economy*

## Developments in selected financial market indicators

Long-term yields in the euro area and the euro's effective exchange rate had fallen perceptibly even before the APP was announced. According to the theoretical considerations

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<sup>20</sup> Against this backdrop, borrowers are required to hold sufficient collateral for the lender to even consider them as potential clients. However, owing to asymmetries of information between the lender and the borrower, the lender is obliged to assess the borrower's collateral and investment project. This entails costs, which the lender offsets by charging an interest rate premium. Moreover, a greater probability of the borrower becoming insolvent results in a higher interest rate premium.

<sup>21</sup> This is because if the borrower is willing to stake a large amount of capital, this suggests a high level of confidence in the investment project on the part of the party with the better information and represents an incentive for the borrower to undertake every effort to make the project a success so as not to forfeit his capital.

<sup>22</sup> See also B S Bernanke, M Gertler and S Gilchrist (1999), The financial accelerator in a quantitative business cycle framework, in J B Taylor and M Woodford (eds), Handbook of macroeconomics 1, chapter 21, pp 1341-1393.

<sup>23</sup> If, in addition to the depreciation, inflation expectations increase (be it due to a higher level of aggregate economic activity or more expensive imports), real interest rates will also fall. However, lower yields in the euro area should induce expectations of an appreciation in the domestic currency through uncovered interest parity.

*Long-term interest rates and effective exchange rate down even before APP purchases*

regarding the signalling channel, expectation effects might have been a factor, given that expectations of a comprehensive Eurosystem purchase programme increased noticeably during the second half of 2014 and at the beginning of 2015. Yet, the monetary policy measures decided before the APP was announced, a less favourable development of the real economy and international influences, too, might have contributed to the decline in long-term interest rates and the depreciation of the euro.<sup>24</sup> Drawing conclusions about the isolated contribution of quantitative easing to the decline in yields is, therefore, difficult.

*Interest rate expectations and term premium responsible for decline in longer-term interest rates*

An analytical decomposition of the change in the ten-year interest rate only allows a distinction to be made between the contribution of interest rate expectations and the term premium (see the chart on page 40).<sup>25</sup> The results suggest that the decline in the ten-year interest rate was attributable to both a lower term premium and declining interest rate expectations, with the term premium initially of greater importance. Recently, however, the declining interest rate expectations have begun to carry more weight. In this context, developments between April and June 2015 were particularly striking when a range of factors temporarily caused longer-term interest rates to rise significantly and volatility in the financial markets was slightly elevated for a short period of time.<sup>26</sup> This example illustrates that changes in interest rate expectations and the term premium can also reflect different economic outlooks for the euro area, global influences and changes in preferences which are empirically difficult to distinguish from the effects of Eurosystem monetary policy measures.

*Interest rates on loans to the non-financial private sector also falling*

Besides the above-mentioned effects on long-term capital market rates, there was a general decline in interest rates on loans to the non-financial private sector in the euro area. Looking at corporate loans, the decline began back in spring 2014 and was particularly pronounced in countries where banks had raised their lend-

ing rates disproportionately strongly during the sovereign debt crisis (see the chart on page 41).

As with capital market yields, the isolated impact of the APP on lending rates cannot be determined *a priori* given that other determinants, including the other monetary policy measures, are likely to have played a role. However, the April 2016 Bank Lending Survey (BLS) provides more concrete indications that the APP may have helped ease lending policies. According to the BLS, the APP had an easing effect on the lending policies of the surveyed euro-area banks in the previous six months. Although the impact of the programme on credit standards for loans to non-financial corporations and households was minor, the questioned banks on balance reported a noticeable easing effect on the terms and conditions for new loans across all business lines.

Taken together, the expansionary monetary policy measures might also have supported credit growth. Annual growth rates of corpor-

*According to BLS, APP has easing effect on lending policies*

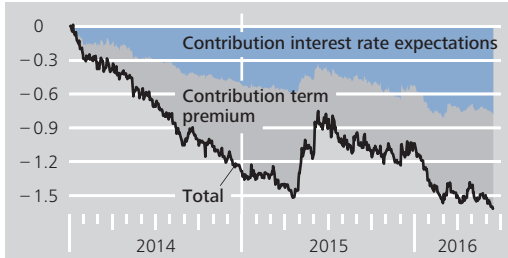
<sup>24</sup> With regard to the APP, an initial event study for the euro area identified a number of events prior to its official announcement which might have influenced market participants' expectations regarding the programmes and impacted on financial market prices. See C Altavilla, G Carboni and R Motto (2015), Asset purchase programmes and financial markets: lessons from the euro area, ECB Working Paper No 1864.

<sup>25</sup> The decomposition is based on the estimation approach by S Joslin, K J Singleton and H Zhu (2011), A new perspective on Gaussian dynamic term structure models, *The Review of Financial Studies* 24(3), pp 926-970. However, particularly in the context of a flattening yield curve and the existence of a potential zero lower bound on interest rates, the results are exposed to high levels of estimation uncertainty. Ten-year interest rates (see chart on p 40) are represented by the overnight index swap (OIS) curve as it does not limit the analysis to national government bond markets in which yields may be influenced by liquidity effects (especially German Federal bonds) or credit risks.

<sup>26</sup> This countermovement can, amongst other things, be attributed to previous exaggerations being corrected, the economic outlook stabilising, low market liquidity and further technical market factors. Against the backdrop of asset purchases conducted by central banks, such an at times perceptible correction in long-term interest rates could be observed not only in the euro area but also in the United States and Japan. See also S Steins Bisschop, M Boermans and J Frost (2016), A shock to the system? Market illiquidity and concentrated holdings in European bond markets, DNB Occasional Studies 14-1; and Deutsche Bundesbank, Financial markets, Monthly Report, August 2015, pp 37-47.

### Cumulative change in the ten-year euro-area interest rate and decomposition into interest rate expectations and term premium

Percentage points, daily data



Sources: Bloomberg and Bundesbank calculations based on the estimation approach by Joslin, Singleton and Zhu (2011). The model was estimated on a monthly basis and, in a next step, adjusted to daily data from the overnight index swap (OIS) curve. Cumulation as from 1 January 2014.

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ate loans in the large euro-area countries reached their lowest point at the end of 2013/ beginning of 2014 and subsequently recovered in line with real economic developments. Individual countries have recorded net inflows again since 2014, although credit growth has remained subdued on the whole (see the chart on page 42).

*Quantifying APP's contribution to developments in individual financial market variables is difficult*

These considerations on developments in selected financial market indicators alone highlight how difficult it is to identify and quantify the effects of quantitative easing in isolation. First, expectation effects make it harder to perform an event date analysis as the impact of the measures are priced in before the actual decision is taken or implemented. Second, developments in the relevant financial market variables are subject to numerous other influences besides quantitative easing, including other Eurosystem monetary policy measures as well as real economic factors and monetary policy decisions outside the euro area.

## The impact of quantitative easing on the real economy and inflation

However, in the end it is not the impact of the APP on individual financial market variables

that is crucial in assessing the effectiveness of quantitative easing but rather a quantification of the programme's effects on macroeconomic developments and inflation. It should be noted in advance that no direct conclusions as to the effectiveness of the APP can be drawn from actual inflation trends in the recent past as hypothetical price developments without the APP cannot be observed. The macroeconomic time series for the euro area currently do not yet have sufficient information to enable an empirical evaluation of the APP's impact on inflation. Macroeconomic model simulations are therefore used below.

However, at the current juncture, no consensus has yet emerged in the literature regarding a universally accepted procedure for simulating the macroeconomic effects of monetary policy asset purchase programmes. Instead, a multitude of approaches is currently being used, which can roughly be divided into two groups.

- In the two-step (indirect) procedure, the impact of quantitative easing on long-term interest rates and other financial market variables is initially estimated using a partial or satellite model. In a second step, this estimation is used to determine the effects on aggregate demand and inflation. Under this approach, it is assumed that, within the relevant macroeconomic model (eg time-series models, traditional macroeconomic but also dynamic stochastic general equilibrium (DSGE) models), long-term interest rates will exogenously diminish by the value determined in the first step. Hence, the impact of quantitative easing on long-term interest rates is not determined within the model when using this procedure.<sup>27</sup>

*Evaluating macroeconomic impact of quantitative easing ...*

*... with the help of a two-step procedure or ...*

<sup>27</sup> See, for example, C Baumeister and L Benati (2013), Unconventional monetary policy and the Great Recession: estimating the macroeconomic effects of a spread compression at the zero lower bound, *International Journal of Central Banking* 9(2), pp 165-212; J Fuhrer and G Olivei (2011), The estimated macroeconomic effects of the Federal Reserve's large-scale Treasury purchase program, Federal Reserve Bank of Boston Public Policy Brief; IMF, Unconventional monetary policies – recent experiences and prospects, IMF Policy Papers, 18 April 2013.



... a one-step direct approach

– By contrast, the one-step (direct) approach, which is always based on DSGE models, simultaneously estimates the impact of quantitative easing on both long-term interest rates and the resulting macroeconomic developments. The effect is thus determined within the model.<sup>28</sup> This procedure thus allows the influence asset purchases have on aggregate demand and inflation to be observed consistently within a single model framework.

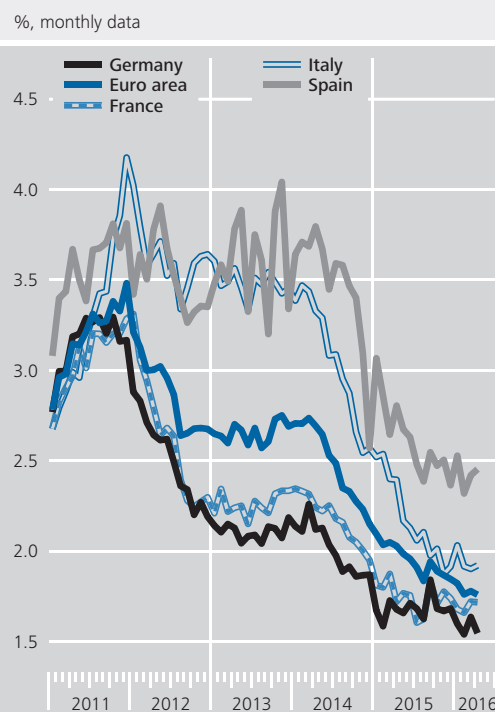
Bundesbank analyses are based on two DSGE models

The Bundesbank's internal analyses of the effects of the APP are primarily based on the direct method (see the chart on page 45). In the estimated DSGE models used here, as usual, conventional monetary policy affects macroeconomic developments owing to nominal rigidities (such as price and wage rigidities). In order for quantitative easing to have any impact on the real economy – ie so that Wallace neutrality (see the box on pages 36 and 37) does not apply –, additional frictions must be assumed. Two modelling approaches that include aspects of the portfolio rebalancing channel are therefore selected.

First modelling approach

The method that is probably the most commonly used is based on a principal-agent problem<sup>29</sup> in which, like in the deliberations involving the bank capital channel, a bank's equity capital plays a crucial role.<sup>30</sup> It assumes that a bank's loan supply is restricted by the amount of its equity capital. If asset prices in the capital markets rise as a result of asset purchases, the value of the assets held by the banks also goes up. The resulting boost to their capital makes it easier for banks to access other sources of funding which they need in order to expand their lending. The increase in the loan supply ultimately leads to growth in aggregate demand for goods. The original framework of the model can be expanded to integrate a further balance sheet restriction on the part of non-financial corporations. This can lead to other feedback effects on capital.<sup>31</sup>

### Average interest rates on corporate loans in selected euro-area countries\*



Source: ECB. \* According to the harmonised euro-area MFI interest rate statistics. New business; interest rate aggregated across volumes and maturities.  
 Deutsche Bundesbank

An alternative method of modelling the portfolio rebalancing effects is based on the idea that other participants are, like banks, also subject to constraints.<sup>32</sup> For example, although banks can choose freely between corporate

Second modelling approach

<sup>28</sup> The strength of DSGE models lies in a microeconomic foundation of dynamic macroeconomic relationships. It is thus possible to analyse the impact of economic policy intervention, taking into account forward-looking expectations. See Deutsche Bundesbank, Development and application of DSGE models for the German economy, Monthly Report, July 2008, pp 31-46 and Deutsche Bundesbank, The importance of macroprudential policy for monetary policy, Monthly Report, March 2015, pp 56-61.

<sup>29</sup> See M Gertler and P Karadi (2013), QE 1 vs. 2 vs. 3 ...: a framework for analyzing large-scale asset purchases as a monetary policy tool, International Journal of Central Banking 9(1), pp 5-53.

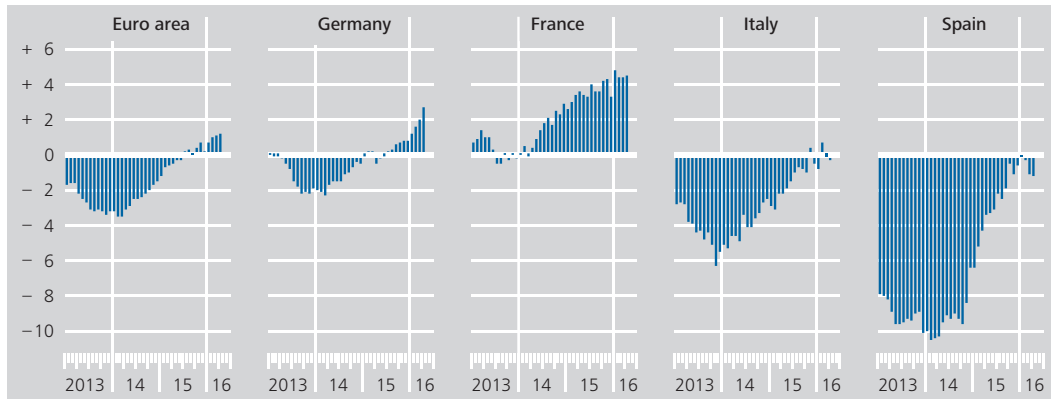
<sup>30</sup> Owing to the asymmetric distribution of information between banks and households, households only entrust a limited proportion of their savings to banks because they fear that banks with insufficient capital will not use deposits solely in the interests of these households.

<sup>31</sup> See M Kühl (2014), Mitigating financial stress in a bank-financed economy: equity injections into banks or purchases of assets?, Deutsche Bundesbank Discussion Paper No 19/2014.

<sup>32</sup> See C Carlstrom, T Fuerst and M Paustian (2014), Targeting long rates in segmented markets, Federal Reserve Bank of Cleveland Working Paper, pp 14-19.

### Loans to non-financial enterprises\*

Adjusted for securitisation, year-on-year percentage change



Sources: ECB and Bundesbank calculations. \* Non-financial corporations. The implementation of ESA 2010 means that, as from December 2014, holding companies of non-financial groups have been reclassified from the non-financial corporations sector to the financial corporations sector in banks' monthly balance sheet statistics.

Deutsche Bundesbank

and government bonds (which banks presumably consider to be perfect substitutes), they are restricted in terms of their funding. In order to receive additional deposits from households, banks must hold more capital. Households, too, are constrained in terms of their investment options because they face funding restrictions.<sup>33</sup> Furthermore, they can only invest their savings with banks, not other assets. By influencing yields on public-sector bonds, government bond purchases by central banks also have an impact on yields on corporate bonds and therefore ultimately on households' funding restriction.<sup>34</sup>

*Results suggest APP has a positive effect, ...*

The results of the Bundesbank's model simulations of the impact of the APP – as announced in January 2015 and launched in March – on real gross domestic product (GDP) and inflation are presented in the chart on page 45. Model 1 in the chart refers to the modified version of the first modelling approach, while Model 2 refers to the second modelling approach. All in all, the estimates for the macroeconomic effects of the APP point to a positive real economic effect accompanied by positive inflationary effects. The macroeconomic effects of the APP as presented in the chart disregard parameter and data uncertainty, which is inevitably associated with the estimations of both models. If these uncertainties, too, were to be mapped

explicitly, the range of results presented in the chart would be much wider. The high level of uncertainty raises the question, in particular, of how statistically significant the results are. Comparable simulation or estimation results are found for the purchase programmes of the US Federal Reserve and the Bank of England (see the box on pages 46 to 50).

The simulations show that, based on the announced purchase path of the APP, the two model types result in fairly different quantita-

**33** In this model, households issue the corporate bonds because they accumulate the physical capital. This assumption is made solely for the purpose of simplification and does not affect the model's key findings.

**34** A third approach focuses exclusively on households. It assumes that not all households are homogeneous, and that only some can invest their savings in the market for longer-term bonds. Although the remaining households can participate in both the market for short-term bonds and in the market for longer-term bonds, unlike the other households, they must pay a premium if they wish to participate in the market for longer-term bonds. The assumed market segmentation means that purchases of (longer-term) government bonds reduce the longer-term yields on the bonds and increase their price and correspondingly the incurred savings, giving the restricted households, in particular, scope for greater consumption. See H Chen, V Cúrdia and A Ferrero (2012), The macroeconomic effects of large-scale asset purchase programmes, *The Economic Journal* 122(564), pp F289-F315.

*... although results of the observed models vary significantly*

tive estimations.<sup>35, 36</sup> For example, the models differ from one another by around 1 percentage point in their assessment of the impact on real economic developments in 2016 and 2017; the differences between the inflation rates according to each model are even larger. As research currently stands, these two model types map the lower and upper bounds for the effectiveness of quantitative easing – at least for the DSGE model category.<sup>37</sup>

As mentioned at the beginning of this article, the ECB Governing Council has decided to expand the asset purchase programme. The additional effect of its decision in December 2015 on the inflation rate in 2016 to 2018 is likely to be between 0.1 and 1.0 percentage point per year.<sup>38</sup>

*Both the design of the analysis ...*

The results of the simulations shown here are heavily dependent on the underlying assumptions. These include, on the one hand, the way in which the expectation formation process is modelled. The better a monetary policy measure is anticipated, the more strongly behaviour is modified in the present (frontloading). In other words, the more transparent the communication surrounding a purchase programme, the larger its macroeconomic impact. On the other hand, assumptions about the form of the purchase path, including the exit strategy from the purchase programme, heavily influence the simulation results.<sup>39</sup>

*... and the choice of model have an impact on the simulation results*

The ceiling that Model 2 represents can be seen as too optimistic because the frictions the model contains may overstate the reality. This model assumes, for instance, that investors' initially binding funding restrictions will continue to be eased for as long as the central bank maintains its quantitative easing programme. In practice, this is not always necessarily the case. For example, funding restrictions might conceivably be eased once a certain purchase volume has been reached, and any additional purchases would therefore have no extra effect on the real economy and inflation.

It must also be remembered that the model simulations disregard any structural breaks that may have taken place since the onset of the financial crisis. They also fail to take into account that aggregate demand has been subject to significant levels of uncertainty in the wake of the financial crisis. Against this backdrop, private consumer demand and aggregate investment could show a comparatively weak response to the Eurosystem's monetary policy measures in the current environment.

All in all, at the current juncture, the analysis of the quantitative effects of monetary policy purchase programmes involves greater uncertainty about the scale of the effects compared with the effects of traditional interest rate policy. Nevertheless, the simulation results presented here bear out the qualitative results of other studies (see the box on pages 46 to 50), namely that, all other things being equal, quantitative easing can have a positive effect on aggregate demand and inflation.

*Results for euro area consistent with estimates for other currency areas*

<sup>35</sup> Nevertheless, both models replicate the stylised facts relating to the quantitative impact of an interest rate policy measure.

<sup>36</sup> There is also considerable variation in the results for the United States and the United Kingdom (see the box on pp 46-50).

<sup>37</sup> Additional estimates relating to the APP by the ECB are within the range described here. See M Draghi (2016), Delivering a symmetric mandate with asymmetric tools: monetary policy in a context of low interest rates, speech held at the Oesterreichische Nationalbank on 2 June 2016. One of the main reasons for the relatively large effects that are observed in the context of Model 2 in comparison to Model 1 is that credit-constrained investment demand is a key restriction and reacts sensitively to the easing of funding restrictions in response to monetary policy. In simple terms, the differences between the models described here are due to the fact that, in the context of the second model, the underlying restrictions are "amplified", whereas in the first model, the opposite is sometimes true for certain restrictions – here, through falling interest rates, purchases of government bonds lead to a decline in banks' profitability. However, this effect does not play a significant role in the second model.

<sup>38</sup> According to rough calculations, the expansion of the APP announced in March 2016 will probably have a slightly smaller impact than the expansion announced in December 2015.

<sup>39</sup> For more information about the underlying models, see M Kühl, The effects of government bond purchases on leverage constraints of banks and non-financial firms, Deutsche Bundesbank Discussion Paper, forthcoming; and R Gerke, S Giesen and D Kienzler (2015), On the effects of the APP in a model with segmented markets, mimeo.

## Potential implications of a prolonged period of expansionary monetary policy

Besides the desired implications, quantitative easing can, however, also entail risks and unwanted side effects.

## Fiscal policy implications of asset purchases

*Governments' financing conditions are becoming decoupled from capital market conditions*

The nexus between monetary and fiscal policy is becoming stronger as a result of the purchase of government bonds in the euro area. The extensive purchase programmes are turning Eurosystem central banks into the biggest creditors of their home governments. For a significant share of sovereign debt, government financing costs are therefore becoming decoupled from capital market conditions.<sup>40</sup> In other words, for government bonds purchased by central banks, interest rates are no longer being differentiated according to the soundness of a country's public finances (which is otherwise a principle of capital market funding). On the whole, this weakens market discipline which would, along with the fiscal rules, help ensure sustainable budgeting in the euro area. There is thus reason to fear that efforts for consolidation in the euro area will wane.<sup>41</sup> The more fiscal policymakers come to rely on the very favourable financing conditions, the more resistant they may subsequently be to normalising monetary policy, should this become necessary in the light of price developments.

## The impact of quantitative easing on banks' profitability

*Impact of the low-interest-rate level on earnings uncertain a priori*

There are recurrent concerns that the prolonged period of low interest rates could seriously impair the earnings position of banks and other financial institutions. Similar fears are being voiced about quantitative easing, which can affect profitability in different ways. For

one thing, quantitative easing leads to a further decline in the general interest rate level (see page 38 et seq). For another, it plays a major role in the flattening of the yield curve.<sup>42</sup> All other things being equal, the zero lower bound on interest rates poses something of an impediment to the drop in deposit funding costs. *A priori*, in an environment of low interest rates, quantitative easing may have both a positive and negative impact on banks' profitability.<sup>43</sup>

All else being equal, a flatter yield curve erodes banks' interest margins and thus reduces the earnings of financial institutions, especially those which rely primarily on classic deposit and lending business. The low lending rates created by monetary policy (implicitly assuming interest rate pass-through) reduce interest income (per individual loan) for banks whose main business is lending. At the same time, the zero lower bound on interest rates hinders deposit funding costs from falling further.<sup>44</sup> The assets and liabilities side of banks' balance sheets consequently adapt asymmetrically to the interest rate floor. The degree to which the compression of the interest margin negatively affects banks' profitability overall thus depends

*Low-interest-rate environment may impair the interest margin, ...*

<sup>40</sup> Since the purchases ultimately increase banks' excess liquidity, the bottom line is that governments are obtaining this share of their funding at the – currently negative – deposit rate.

<sup>41</sup> If cyclical improvements are factored out of the euro-area countries' budget deficits, adjusted for interest expenditure, the relevant primary surpluses have either moved sideways or have even dropped over the past two or three years.

<sup>42</sup> For more information about the effects of low interest rates on the profitability of German banks and life insurers, see Deutsche Bundesbank, Financial Stability Review 2015.

<sup>43</sup> In quantitative terms, the impact of a low-interest-rate policy on the financial industry could differ from the impact of quantitative easing. See M Woodford (2016), Quantitative easing and financial stability, NBER Working Paper No 22285.

<sup>44</sup> There are currently no signs that banks are reducing deposit rates to below zero on a large scale. Their reluctance to charge negative interest rates on deposits, particularly those of retail customers, may be due to fears of a widespread withdrawal of deposits and a loss of customers, which could ultimately jeopardise individual banks' business models.

on factors such as how heavily they rely on deposit funding or other sources of income.<sup>45</sup>

*... nonetheless, positive effects on profitability are possible*

However, the very expansionary monetary policy can also have a positive impact on banks' profitability. First, despite the interest rate floor for deposits, the cost of obtaining funding via the interbank market and the central bank could continue to fall.<sup>46</sup> Second, higher asset prices mean that banks can realise a (one-off) gain by selling some of their holdings (see pages 37

<sup>45</sup> The negative impact on banks whose funding comes primarily from deposits by retail customers and enterprises is expected to be stronger because, unlike for deposit funding conditions, the zero lower bound does not represent the lower limit for financing costs in the capital market. In the short term, the negative impact will also be greater for banks that provide loans at variable rates or that issue a large volume of short-term loans, because, in these cases, interest income reacts more sharply and more rapidly to lower interest rates than at other banks. Furthermore, the interest margin does not have the same degree of influence on overall profitability at all banks. The extent to which shrinking interest margins weigh on banks' profitability therefore ultimately depends on their business model. Profitability depends, among other things on banks' ability to compensate for low interest margins with other sources of income such as commission, fees or gains from capital market exposures. The degree to which this is possible could be limited in a competitive market environment. At present, the margins for consumer credit in Germany are tending to widen, while margins for loans to enterprises are showing a tendency to narrow somewhat. See Deutsche Bundesbank, Indications of portfolio shifts into higher-yielding assets in Germany, Monthly Report, May 2016, pp 34-37.

<sup>46</sup> All other things being equal, a negative interest rate on deposits and excess liquidity impairs banks' profitability. On the other hand, following the ECB Governing Council's monetary policy decisions, as of March 2016, banks (ex post) have been able to obtain liquidity from the Eurosystem at a negative interest rate under certain conditions.

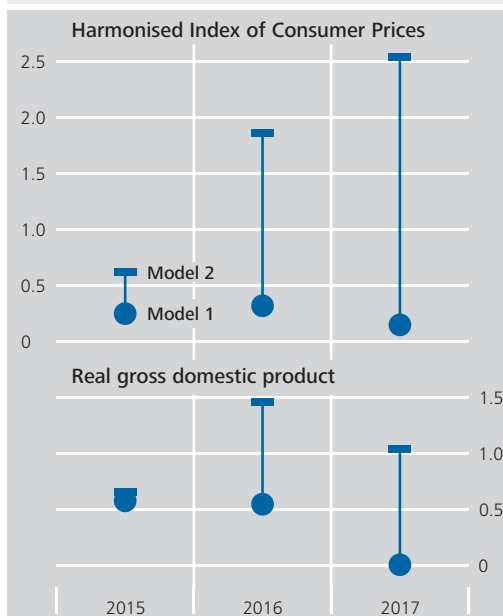
<sup>47</sup> If the effects causing poorer profitability are dominant in relation to those resulting in improved profitability, banks could respond by increasing their lending rates or possibly by reducing risk on their balance sheets. The latter could be achieved either by lowering the volume of new lending or by substituting riskier loans, as they mature, with less risky new loans. On the other hand, banks might see this as an incentive to compensate for any loss of earnings by taking on more risk. If, however, the dominating effects are those which lead to increased profitability, the prolonged period of expansionary monetary policy should have a favourable impact on lending, in turn with positive implications for economic activity and inflation. A positive net effect on profitability could reduce structurally weak banks' motivation to make balance sheet adjustments, though, potentially causing their postponement.

<sup>48</sup> See R Busch and C Memmel (2015), Banks' net interest margin and the level of interest rates, Deutsche Bundesbank Discussion Paper No 16/2015.

<sup>49</sup> See C Borio, L Gambacorta and B Hofmann (2015), The influence of monetary policy on bank profitability, BIS Working Paper No 514.

### Macroeconomic effects of the euro-area asset purchase programme

Percentage points, as of 22 January 2015



Source: Bundesbank calculations. Model 1 is based on M Kühl, The effects of government bond purchases on leverage constraints of banks and non-financial firms, Deutsche Bundesbank Discussion Paper, forthcoming. Results for Model 2 are based on R Gerke, S Giesen and D Kienzler (2015), On the effects of the APP in a model with segmented markets, mimeo. Deutsche Bundesbank

and 38). Finally, inasmuch as the low-interest-rate environment and quantitative easing help the economy to pick up, they can have a positive effect on banks' profitability via macroeconomic "feedback effects": amidst increasing credit demand, the "quantitative effect" could offset the narrow interest margin. Because the creditworthiness of new and existing borrowers also generally increases in the context of improved economic activity, the number of loan defaults tends to fall, which also boosts profits.

Which effects will ultimately dominate, however, cannot be determined on the basis of these theoretical considerations alone.<sup>47</sup> Some empirical studies indicate a positive correlation between the interest rate level and the slope of the yield curve, on the one hand, and banks' profitability, on the other.<sup>48</sup> This therefore means – all other things being equal – that a lower interest rate level and a more gently sloping yield curve impair the banking sector's profitability.<sup>49</sup> However, this is only the case when

*Currently no reliable evidence of deterioration in banks' profitability*

## The effects of quantitative easing in the United States and the United Kingdom

Initial estimates of the effectiveness of asset purchase programmes are available for both the United States and the United Kingdom. For the United States, triggered by the subprime crisis, the Fed has started several successive so-called large-scale asset purchase programmes (LSAP 1 to 3).<sup>1</sup> In the United Kingdom the Bank of England likewise announced a purchase programme, the asset purchase facility (APF),<sup>2</sup> shortly after LSAP 1 had been launched.<sup>3</sup>

Model-free event studies have frequently been run in order to analyse the effects of such purchase programmes on long-term interest rates. Such studies look at changes in yields within a short timeframe surrounding the announcement of a monetary policy measure. These approaches are based on the assumption that, when such an announcement is made, the announcement itself is the primary reason for the main movements in yields. The monetary policy announcement thus dominates all other shocks that typically determine movements in yields. This is why high-frequency data are usually used in such event studies, so that the effect of the announcement of a monetary policy measure can be identified with a certain degree of precision.

However, if monetary policy decisions are taken “in a package”, the main difficulty lies in disentangling the announcement effects of quantitative easing from the other measures in the package.<sup>4</sup> Moreover, the event-study approach has its limitations if the measures have shifted expectations already prior to the announcement.

A second approach to analysing the effects of quantitative easing on long-term interest rates is based on the estimation of dynamic

term structure models. Such models, which depict the cross-sectional and time-series variations of interest rates of different maturities,<sup>5</sup> can be used for purposes such as

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<sup>1</sup> LSAP 1 was announced in November 2008 and reviewed and expanded significantly in March 2009. Under this programme, the Fed announced that it would purchase a total of US\$1,750 billion in financial assets. LSAP 2 was announced in November 2010, with purchases of government bonds coming to a total of US\$600 billion by the end of the second quarter of 2011. LSAP 3 was announced in September 2012, yet without announcing the extent of asset purchases ex ante. Under this programme, the Fed initially purchased a monthly volume of US\$40 billion in mortgage-backed securities (MBS). In December 2012, the Fed decided to purchase an additional US\$45 billion worth of government bonds every month. See Board of Governors of the Federal Reserve System press releases published on 25 November 2008, 18 March 2009, 23 September 2009, 3 November 2010, 13 September 2012 and 12 December 2012 (<http://www.federalreserve.gov/newsevents/press/monetary/2016monetary.htm>).

<sup>2</sup> Under its APF1 programme, the Bank of England purchased a total of £200 billion worth of assets between March 2009 and January 2010 (see Bank of England, Quarterly Bulletin Q3 2011, pp 200-212). The programme was expanded in several steps between October 2011 and July 2012; the total size of purchases under the programme currently stands at £375 billion (around 18% of UK GDP in 2015). See Bank of England, Minutes of the Monetary Policy Committee meeting held on 4 and 5 July 2012. Available at <http://www.bankofengland.co.uk/publications/minutes/Documents/mpc/pdf/2012/mpc1207.pdf>.

<sup>3</sup> The volume of asset purchases announced by the Fed under the various LSAPs is equivalent to around 25% of US GDP in 2015. To put that figure into perspective: asset purchases by the Bank of England represent around 18% of UK GDP, and the announced asset purchase programme (APP) by the Eurosystem corresponds to around 17% of euro-area GDP (likewise using 2015 as the benchmark).

<sup>4</sup> See also D L Thornton, An evaluation of event-study evidence on the effectiveness of the FOMC's LSAP program: are the announcement effects identified? Federal Reserve Bank of St Louis Working Paper 2013-033B.

<sup>5</sup> There are three factors in particular which influence the term structure: (1) market participants' expectations regarding the future movements of short-term interest rates, (2) uncertainty about the expected pattern of interest rates and thus about interest rate risk, and (3) various other factors which impact on securities prices (including the securities' liquidity, institutional and regulatory aspects which could lead to a market segmentation and permit limited arbitrage opportunities between securities with varying residual maturities).

disentangling term premiums and expectation components from yields.<sup>6</sup>

Current studies corroborate for both approaches that quantitative easing reduced both the slope and the level of the yield curve.<sup>7</sup> It is hard to tell, however, which of the transmission channels discussed in the main article assumes a particularly prominent role. Whereas model-free event studies often (but not always) produce indications of the signal channel,<sup>8</sup> term structure models often (but likewise not always) find that the portfolio rebalancing channel is of particular importance.<sup>9</sup> The variety of methods used limits somewhat the comparability of the various studies on the effects of quantitative easing on sovereign bond yields. Differences in the selection of data

<sup>6</sup> Disentangling these quantities and their movement over time before and after the announcement and implementation of quantitative easing provides valuable information that contributes to a better understanding of their transmission. However, the benefits of this procedure are also limited if expectations have already shifted prior to the announcement, or if the idea is to disentangle announced monetary policy measures from other news.

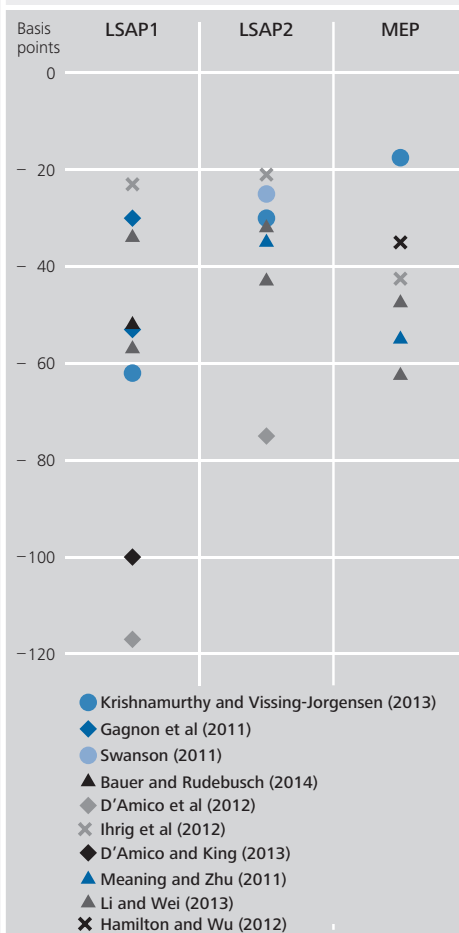
<sup>7</sup> See also S D'Amico, W English, D López-Salido and E Nelson (2012), The Federal Reserve's large-scale asset purchase programmes: rationale and effects, *The Economic Journal* 122(564), pp F415–F446; E T Swanson (2011), Let's twist again: a high-frequency event-study analysis of Operation Twist and its implications for QE2, *Brookings Papers on Economic Activity* 43(1), pp 151–207; J D Hamilton and J C Wu (2012), The effectiveness of alternative monetary policy tools in a zero lower bound environment, *Journal of Money, Credit and Banking* 44(1), pp 3–46; R Greenwood and D Vayanos (2014), Bond supply and excess bond returns, *Review of Financial Studies* 27(3), pp 663–713; M A S Joyce, A Lasaosa, I Stevens and M. Tong (2011), The financial market impact of quantitative easing, *International Journal of Central Banking* 7(3), pp 113–161.

<sup>8</sup> See M D Bauer and G D Rudebusch (2014), The signaling channel for Federal Reserve bond purchases, *International Journal of Central Banking* 10(3), pp 233–289, and A Krishnamurthy and A Vissing-Jorgensen (2011), The effects of quantitative easing on interest rates: channels and implications for policy, *Brookings Papers on Economic Activity* 43(2), pp 215–287.

<sup>9</sup> See S D'Amico et al (2012), op cit, and J Gagnon, M Raskin, J Remache and B Sack (2010), Large-scale asset purchases by the Federal Reserve: did they work? *Federal Reserve Bank of New York Staff Reports* No 441.

### The effects of quantitative easing programmes (LSAP1, LSAP2 and MEP) on 10-year US Treasury yields

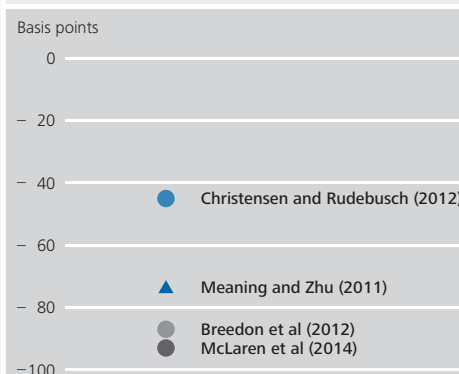
Scaling: purchase volume of US\$1 trillion



Deutsche Bundesbank

### The effects of quantitative easing (AFP1) on UK gilt 10-year yields

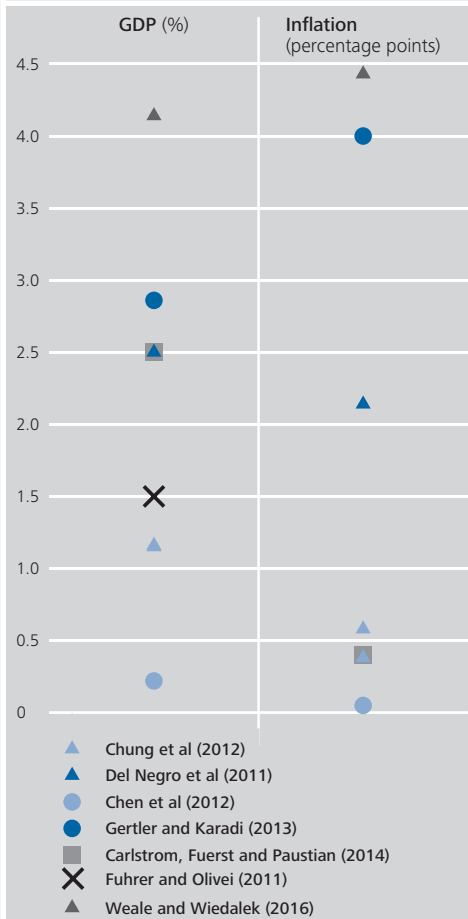
Scaling: purchase volume of £200 billion



Deutsche Bundesbank

### The macroeconomic effects of quantitative easing programmes (LSAP1 and LSAP2) in the United States

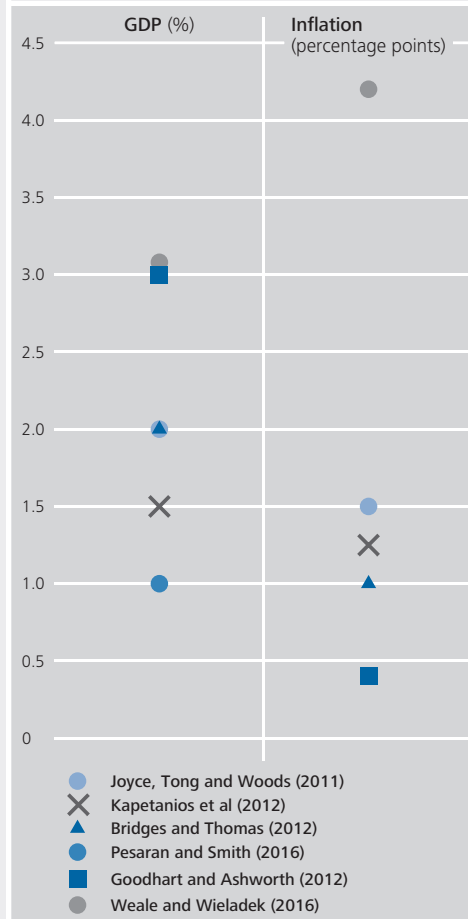
Scaling: purchase volume of US\$1 trillion; highest estimated impact on GDP and inflation levels



Deutsche Bundesbank

### The macroeconomic effects of quantitative easing (APF1) in the United Kingdom

Scaling: purchase volume of £200 billion; highest estimated impact on GDP and inflation levels



Deutsche Bundesbank

and time horizons further limit comparability.<sup>10</sup>

Whereas selected estimates of the effects of LSAP 1 and LSAP 2 on longer-term interest rates are illustrated in the upper chart on page 47, the lower chart on the same page shows the results of the corresponding estimations for APF1. The effects of LSAP 1 and LSAP 2 are largely located in a corridor of between -20 and -60 basis points;<sup>11</sup> those of APF1, within a corridor of around -40 to -90 basis points.<sup>12</sup>

Studies for real GDP and inflation – based on the direct and indirect methods explained

on pages 40 and 41 – find expansionary effects for both the United States and the United Kingdom. For the Federal Reserve programmes the estimated effects on GDP range from around 0.2 to 4.1 percentage points, while the impact on inflation is

<sup>10</sup> Whereas the major part of the literature analyses the effects of quantitative easing on government bond yields, a very few papers also examine the impact on corporate credit. See also S Gilchrist and E Zakrajsek (2012), Credit spreads and business cycle fluctuations, *American Economic Review* 102(4), pp 1692-1720.

<sup>11</sup> In order to be able to compare the analysed Federal Reserve programmes (LSAP 1, LSAP 2 and the Maturity Extension Program (MEP; see Federal Reserve press release of 21 September 2011)), the respective effect was scaled linearly to a size of US\$1 trillion.

<sup>12</sup> The results for the Bank of England's APF were scaled to £200 billion.



located in a band between 0.1 and 4.4 percentage points (see the left-hand chart on page 48).<sup>13</sup> The corresponding results for the Bank of England programme point predominantly to a corridor for GDP of around 1 to 3 percentage points and between around 0.4 and 1.5 percentage points for inflation (see the right-hand chart on page 48).<sup>14</sup>

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<sup>13</sup> The maximum estimated results (ie the "peak effects") in the various studies are reported for both the Federal Reserve's and the Bank of England's programmes.

<sup>14</sup> It must be noted here that the estimates on the real economic effects of quantitative easing are fraught with considerable uncertainty. As a case in point, the results neglect, for one thing, uncertainty about the individual estimates within the reported studies (which is often considerable); moreover, although the studied purchase programmes are scaled to a uniform size, the comparability of the results is impaired as the results reported here are, in part, based on differing assumptions – especially regarding the path of the monetary policy lending rate while the purchase programme is being implemented.

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looked at in isolation – ie for given macroeconomic conditions; this means that none of the positive effects of expansionary monetary policy, brought about by increased economic activity as well as all resulting positive effects on banks' profitability, are taken into account. Currently, however, there is little evidence to suggest that the contractionary effects of the present low-interest-rate environment are dominant in terms of the macroeconomic effects. For example, German banks' interest income as a source of earnings did not decline last year, and German credit institutions' risk provisioning is at a very low level.<sup>50</sup>

*Results of survey on German credit institutions' profitability*

However, the survey conducted in mid-2015 by the Bundesbank and the Federal Financial Supervisory Authority (BaFin) on the profitability and resilience of German credit institutions in a low-interest-rate environment has revealed that the profitability of small and medium-sized German credit institutions will, based on the institutions' own targets and projections, come

under pressure.<sup>51</sup> Participating banks stated that the low-interest-rate environment is forcing them to replace higher-yielding credit and securities transactions, as they mature, with new positions that generate a lower rate of return. As explained above, funding costs are diminishing at the same time, but credit institutions need to keep deposit rates in positive territory for business policy and competitive reasons. Looking ahead, these developments will squeeze margins in banking business considerably, although the currently positive economic

<sup>50</sup> In 2014, no significantly negative effects of the low-interest-rate environment on profitability could yet be detected for the German banking sector. See Deutsche Bundesbank, Risks in the German banking sector, Financial Stability Review 2015, pp 29-40.

<sup>51</sup> In addition to their target scenario, the banks had to prepare projections on further pre-defined interest rate scenarios. The outlook is poor, especially in the scenarios in which the interest rate level shifts down by 100 basis points, where the banks are expecting net interest income to fall by around 32% over the forecast period to 2019.

situation is shoring up the business performance and plans of German credit institutions.<sup>52</sup>

## Increased risk propensity in low-interest-rate environment?

*Expansionary monetary policy stance can contribute to excessive risk-taking*

The risk-taking channel describes how an expansionary monetary policy stance – brought about, for example, by quantitative easing – creates an incentive to take on greater risks.<sup>53</sup> Here, an expansionary monetary policy leads not only to growth in bank lending – as is generally described in the context of other monetary policy transmission channels – but can also lead to higher-risk lending overall. If, all in all, “too many” risky projects are being funded, the likelihood of a future financial crisis can increase.

*This can occur in various ways ...*

Thus, the risk-taking channel describes how monetary policy measures, especially a change in the policy rate or the interest rate path, alter perception of risk and/or risk tolerance.<sup>54</sup> The risk-taking channel therefore encompasses the impact of monetary policy measures on the perceived or measured risk of investment portfolios, asset valuation and funding costs.<sup>55</sup> Unlike other monetary policy transmission channels, such as the interest rate channel or exchange rate channel, the risk-taking channel is less tightly circumscribed; rather, it comprises a range of mechanisms.<sup>56</sup> It can exert its influence in various ways.<sup>57</sup>

*... via the “search for yield” or ...*

First of all, a search for yield can increase the propensity to run risks. An expansionary monetary policy stance – brought about, for example, by quantitative easing – normally leads to a reduction in nominal yields. Those financial market participants whose long-term liabilities are nominally fixed owing to contractual or statutory obligations are then potentially prepared to make riskier investment decisions with higher expected returns in order to meet their profit targets. For example, instead of comparatively safe government bonds, financial market participants could invest in higher-

interest-bearing securities which, however, typically come with higher risks.<sup>58</sup>

In addition, an expansionary monetary policy normally has the effect of raising asset prices, which lead to increased lending via the balance sheet channel and are ultimately reflected in higher aggregate income streams. An economic stimulus induced in this way, however, is likely to influence financial market participants’

*... through rising asset prices and income streams*

<sup>52</sup> Given the improvement in their capital base over the past few years, the resilience of the German banks is nevertheless considered strong overall. See A Dombret (2015), The impact of low interest rates – results of a survey among German banks, Statement for a media briefing on the low-interest-rate survey conducted by the Bundesbank and BaFin, 18 September 2015.

<sup>53</sup> It should be remembered here that a low policy rate in itself does not necessarily imply an expansionary monetary policy stance. That depends in decisive measure on the level of the “natural rate of interest”, ie on the interest rate which is compatible with price stability.

<sup>54</sup> 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(4), pp 236-251.

<sup>55</sup> G Dell’Ariccia, L Laeven and R Marquez (2014), Real interest rates, leverage, and bank risk-taking, *Journal of Economic Theory* 149, pp 65-99 develop a microeconomic partial equilibrium model for which two assumptions essentially suffice for the existence of a risk-taking channel. The first of these is the assumption of limited liability and commercial banks’ possibility to choose the riskiness of their portfolios by themselves. However, since the portfolio’s risk is not directly observable to creditors, the commercial bank’s capital structure plays a decisive role. The second assumption is that commercial banks’ financing costs are a function of the level of a risk-free reference rate. On the basis of these assumptions, risk-taking is determined largely by three partly conflicting forces or aspects: a pass-through effect, a risk-shifting effect and the degree of leverage. The authors find that a reduction in the risk-free interest rate generally leads to increased risk-taking. See also I Angeloni and E Faia (2013), Capital regulation and monetary policy with fragile banks, *Journal of Monetary Economics* 60, pp 311-324; and A Abbate and D Thaler (2015), Monetary policy and the asset risk-taking channel, Deutsche Bundesbank Discussion Paper No 48/2015.

<sup>56</sup> See M Apel and C Claussen (2012), Monetary policy, interest rates and risk-taking, *Sveriges Riksbank Economic Review* 2, pp 68-83.

<sup>57</sup> See L Gambacorta, Monetary policy and the risk-taking channel, *BIS Quarterly Review*, December 2009, pp 43-53.

<sup>58</sup> See R Rajan (2005), Has financial development made the world riskier? *Economic Policy Symposium Proceedings – Jackson Hole*, Federal Reserve Bank of Kansas City; and P Abbassi, R Iyer, J-L Peydró and F R Tous, Securities trading by banks and credit supply: micro-evidence from the crisis, *Journal of Financial Economics*, forthcoming.

risk perception.<sup>59</sup> For example, with rising asset prices and higher income streams, financial market participants will typically reckon with fewer defaults and sinking asset price volatility, which could, in turn, encourage them to take on additional risks.

*Quantitative significance of risk-taking channel unclear, ...*

Empirical studies confirm the existence of the risk-taking channel. For instance, in both Europe and the United States, there is evidence of a positive correlation between falling short-term interest rates and the granting of bank loans to borrowers with lower credit ratings.<sup>60</sup> Indications of this can also be seen outside of the banking sector. For the United States, for example, it could be shown that both money market funds and pension funds added riskier assets to their portfolios during periods of low interest and following the implementation of non-standard monetary policy measures; in other words, they intensified their “search for yield”.<sup>61, 62</sup> However, the results of these studies differ with respect to the strength of the risk-taking channel, meaning that no reliable assessment can currently be made to quantify the significance of this channel for monetary policy.

*... potentially depends on interest rate environment*

Finally, it should be noted that the specific form of the risk-taking channel is likely to depend on the monetary policy regime. If the central bank is operating in a “normal” interest rate environment, a monetary policy-induced interest rate cut is usually associated with a steepening of the yield curve, since short-term interest rates typically have a stronger reaction to rate cuts than long-term interest rates. This tends to have a positive effect on expected earnings and thus on banks’ perceived resilience.

By contrast, if the central bank wants to make its monetary policy more expansionary at the zero lower bound and, for example, wishes to reduce long-term interest rates through bond purchases, this tends to have a flattening effect on the yield curve. A “search for yield” is then more likely to contribute to the risk-taking channel. Amongst other things, this could be reflected in investors not only opting for riskier

financial instruments but also switching to other forms of investment such as property. This potential dependence on the interest rate environment makes it even more difficult to gauge the current significance of the risk-taking channel, since the end of the observation period of many empirical studies was either prior to or coincided with the onset of the financial crisis in 2007-08. Thus, these studies do not cover the period after the zero lower bound on interest rates was reached and the asset purchase programmes were launched.

## ■ Summary and outlook

Against the backdrop of subdued inflation prospects and falling market-based inflation expectations at the zero lower bound on interest rates, quantitative easing measures were introduced in the euro area with the objective of bringing about a sustained adjustment to the

*Model-based analyses indicate positive impact of APP, ...*

<sup>59</sup> This aspect of the risk-taking channel bears a certain resemblance to the “financial accelerator” in that, due to credit market imperfections, a reduction in the monetary policy rate will ultimately lead to an increase in borrowing and in aggregate demand, therefore amplifying the original monetary policy stimulus through feedback effects. See B Bernanke et al (1999), op cit.

<sup>60</sup> See G Jiménez, S Ongena, J-L Peydró and J Saurina (2015), Hazardous times for monetary policy: what do twenty-three million bank loans say about the effects of monetary policy on credit risk-taking?, *Econometrica* 82(2), pp 463-505 for Spain; G Dell’Ariccia, L Laeven and G Suarez (2016), Bank leverage and monetary policy’s risk-taking channel: evidence from the United States, CEPR Discussion Paper 11230 and C M Buch, S Eickmeier and E Prieto (2014), In search for yield? Survey-based evidence on bank risk taking, *Journal of Economic Dynamics and Control* 43, pp 12-30 for the United States; and Y Altunbas, L Gambacorta and D Marques-Ibanez (2014), Does monetary policy affect bank risk?, *International Journal of Central Banking* 10(1), pp 95-135 for several European countries and the United States.

<sup>61</sup> See G Chodorow-Reich (2014), Effects of unconventional monetary policy on financial institutions, *Brookings Papers on Economic Activity* 48(1), pp 155-204 for money market funds and pension funds; and M Di Maggio and M T Kacperczyk (2016), The unintended consequences of the zero lower bound policy, *Journal of Financial Economics*, forthcoming, for money market funds.

<sup>62</sup> German households showed signs of “searching for yield” for the first time in 2015 inasmuch as portfolios shifted towards higher-yielding forms of investment. Previously, this pattern had only been identified in the financial corporations sector; see Deutsche Bundesbank, Indications of portfolio shifts into higher-yielding assets in Germany, *Monthly Report*, May 2016, pp 34-37.

path of inflation in line with the goal of achieving inflation rates below, but close to, 2% over the medium term. As the euro area has had no experience with quantitative easing to date, model-based analyses play a major role in evaluating these non-standard monetary policy measures. The estimates presented in this article show, in particular, that the various model approaches differ considerably in terms of how they evaluate the effectiveness of quantitative easing on macroeconomic developments and inflation, and that there is great uncertainty surrounding its effects. These models demonstrate, all other things being equal, that quantitative easing can have an expansionary effect on aggregate demand and inflation.

In addition to the risk of an increasing nexus between monetary and fiscal policy, possible side effects of quantitative easing in a low-

interest-rate environment include risks to financial institutions' profitability and a heightened propensity to run risks. These side effects and the realisation of the risks associated with the ultra-expansionary monetary policy may, in turn, affect price behaviour and monetary policymakers' ability to maintain price stability. Monetary policymakers should therefore not lose sight of these effects of their policies. The longer the highly accommodative stance remains in place, the more likely its side effects are to deepen. This is why monetary policy, which is currently using expansionary measures in a bid to lift inflation from its very depressed level, must usher in the normalisation of monetary policy once it reaches a price path that is compatible with the Eurosystem's stability target – irrespective of the state of public finances or financial stability.

*... but quantitative easing can also entail risks and unwanted side effects*



## Structure and dynamics of manufacturing production depth as reflected in the financial statements of German enterprises

*In the discussion about Germany's position as an industrial location and the establishment of new production strategies in connection with the increasing international division of labour, the value added of the non-financial corporate sector is often the focus of interest in the sphere of economic policy. Empirical analyses of this key reference variable for the productive activity and economic output of industries and sectors are based almost exclusively on national accounts data.*

*This study enhances this approach by drawing on data from the Bundesbank's corporate financial statements statistics, the aggregated variables of which move virtually in parallel with the national accounts data. By incorporating the microdata on enterprises' balance sheets and income statements which underlie these statistics, it can be shown that a strong relationship exists between the various business models and the degree of production depth.*

*The aggregated results clearly show that the value added increase in the manufacturing industry during the period between 1997 and 2012 did not keep pace with the expansion in output. Rather, intermediate consumption is gaining ever more in importance owing to the growing propensity to outsource and shift corporate activities, with the result that the production depth has declined on a permanent basis. Nevertheless, the contribution of industry to the total value added of all non-financial corporations in Germany has changed only insignificantly, although major differences can be seen at the sectoral level.*

*The analysis of the microdata shows that around one-quarter of enterprises generate more than half of their output internally and, contrary to the overall economic trend, have, in some cases, even increased the depth of their production. These enterprises, which mainly operate as very flexible small companies in regional markets with made-to-order or small-batch production processes or which are found in the SME sector of the specialised capital goods industry, achieve a very high return on sales with predominantly in-house production; this, however, is associated with perceptibly slower growth dynamics. Their business model is subject to special conditions, which do not apply to the majority of enterprises in the manufacturing industry.*

## Value added and production depth as approaches for measuring and modelling the economic structure

*Production depth – central indicator of production structure*

Production depth – the ratio of value added to gross revenue – is a key reference variable for macroeconomic structural analyses of industries or economic sectors. This ratio, which is derived from the output approach of the national accounts, quantifies in-house production as a share of total output and reflects the degree of vertical integration in production processes.<sup>1</sup> Given the growing international division of labour and the associated modernisation strategies of the industry, questions such as these are increasingly the main focus of economic policy analyses at present.<sup>2</sup>

*A priority issue of strategic corporate planning*

From a business perspective as well, the choice between producing products and services internally or procuring them externally (“make-or-buy” decision) is a key issue within the framework of strategic corporate planning and supply chain management. The last decade, especially, has seen a systematic management of the production depth and a continuous shift of operational activities in value-added chains and networks in the manufacturing industry. A study recently published by the Eurosystem’s Competitiveness Research Network (CompNet) clearly shows that the division of labour in the production of goods and services in the form of global value-added chains and networks has, in many areas, now emerged as the predominant production strategy worldwide.<sup>3</sup> Here, the spectrum stretches from more hierarchy-driven to more market-related forms of coordination, ranging from a shift of production activities to subsidiaries and associated companies, the establishment of joint ventures and networks, to the outsourcing of production to third-party companies. In doing so, enterprises can make use of production capacities and production locations both domestically (nearshoring) and abroad (offshoring).<sup>4</sup>

National and international studies alike on this topic typically draw on national accounts results. However, these data provide an insufficient basis for more nuanced structural analyses as it is not only a sector-specific differentiation of the results that is required, but also breakdowns by corporate characteristic, such as size and legal form. The relationships between business models, the organisation of production and the resulting impact they have on the various balance sheet and income statement ratios of manufacturing enterprises in Germany are also of central importance in this context. Such questions can be extensively analysed using the Bundesbank’s microdata, which are also used as the underlying data basis for this study.<sup>5</sup>

## Factors determining the depth of production

From a production theory perspective, determining the optimal production depth is primarily a cost-based decision, although the definition and substance of the expense items in question can differ significantly. If the question of the optimal production depth is boiled down to a straightforward outsourcing decision, ie the choice between external procurement and complete in-house production, the difference between internal production cost and external market prices constitutes the relevant decision-making parameter. Viewed from this angle,

*Cost as a relevant decision-making parameter in optimising the degree of production depth ...*

<sup>1</sup> By the same token, it also provides information on the level of externally procured intermediate consumption in relation to gross revenue.

<sup>2</sup> 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.

<sup>3</sup> See F di Mauro and M Ronchi, Assessing European competitiveness: the contribution of CompNet research, CompNet Report, June 2015, pp 24 ff.

<sup>4</sup> General information on this topic can be found in R Coase (1937), The nature of the firm, *Economica*, Vol 4, pp 386 ff; O E Williamson (1992), Markets, hierarchies, and the modern cooperation. An unfolding perspective, *Journal of Economic Behaviour and Organization*, Vol 17, pp 335 ff.

<sup>5</sup> The essence of the definition of business models focuses on the organisational design of production processes and is often described using the term “organisation of value added”. See, for example, A Osterwalder and Y Pigneur (2010), Business model generation, pp 14 ff.



outsourcing production activities to third parties will always be the more favourable option if, in the short view, the market price demanded in the procurement markets is lower than the variable cost of in-house production or, from a long-term perspective, if the outsourcing costs are lower than the total cost of in-house production.<sup>6</sup>

*... and generic competitive advantages*

These considerations can be linked up to the accumulation of generic competitive advantages, which can be achieved mainly through cost leadership and by focusing on the core business.<sup>7</sup> By specifically harnessing the advantages of specialisation and the cost-cutting potential offered by economies of scale, economies of scope and learning curve effects, businesses strive to achieve the biggest possible cost advantage over the competition and to consequently strategically secure their market position, as a low unit cost provides particularly effective protection against rivals. As far as managing the production depth is concerned, this results in the systematic outsourcing of those product areas which are not top performers and which are suboptimal from a production cost and competitive perspective.

*Transaction cost as well as ...*

Instead of the straightforward, dichotomous choice to either “make or buy”, the decision-making problem can, however, also culminate in setting different degrees of vertical integration and thus creating intermediary forms of organisation between market- and hierarchy-driven arrangements. Here, the main focus is on the transaction cost resulting from the transfer of rights of disposal and activities between enterprises. These comprise initiation cost, agreement cost, settlement cost, monitoring cost as well as adjustment cost and are the outcome of imperfect markets in which agents operate with bounded rationality and opportunistic and supposedly risk-neutral behaviour.<sup>8</sup> Given that exogenous environmental factors and conduct risk among market players give rise to transaction-related uncertainty and that cost-reducing effects, economies of scale and synergy effects can be realised with a

growing number of identical transactions, the minimisation of transaction cost plays a decisive role when determining the degree of vertical integration.

Another point that can be included in such optimisation considerations is that the existence of imperfect factor markets means that tangible and intangible resources are distributed heterogeneously across enterprises and therefore constitute, primarily in the form of knowledge-based core competences, the pivotal basis for realising comparative competitive advantages and sustainable revenue surpluses.<sup>9</sup> Such strategically distinctive resources are characterised by the fact that they are seen by customers as adding value, but also as being difficult to imitate, hard to substitute and scarce. All areas of activity must therefore be checked during production planning to see whether they contain any strategic resources. Insofar as the latter are used during production, external procurement measures would run up a high opportunity cost by neutralising competitive advantages. Hence, only those products and services whose production does not require any such core competences should be outsourced. Joint ventures, meanwhile, come into play as intermediary solutions whenever an enterprise’s own pool of resources is outdated and they open up an opportunity to acquire new core competences from competitors, or if the resources necessary to overcome barriers to

*... resource-based cost*

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<sup>6</sup> When operating at full capacity, the opportunity costs must also be factored into this costing model in the form of the contribution margin lost as a result of other production activities not being carried out.

<sup>7</sup> See M E Porter (2000), *The competitive advantage: creating and sustaining superior performance*, sixth edition, pp 99 ff. Another generic strategy is to differentiate along other dimensions to achieve a unique selling point.

<sup>8</sup> See A Picot (1991), *Ein neuer Ansatz zur Gestaltung der Leistungstiefe*, *Zeitschrift für betriebswirtschaftliche Forschung*, Vol 43, No 4, p 344.

<sup>9</sup> See J B Barney (1991), *Firm resources and sustained competitive advantage*, *Journal of Management*, Vol 17, pp 99-120; B Wernerfeldt (1984), *A resource-based view of strategy*, *Strategic Management Journal*, Vol 5, pp 171-180.

market entry are lacking when tapping new markets.<sup>10</sup>

It is to be assumed that in the business operations of globally active enterprises, all the theoretical explanatory factors will ultimately play a more or less important role in determining the production depth. However, the respective weight of these factors is likely to be influenced by economic dynamics and the attendant adjustments that need to be made in a highly competitive global environment.

## ■ Data and study design

The present study is based on data taken from the Bundesbank's corporate financial statement statistics for manufacturing enterprises for the period from 1997 to 2012.<sup>11</sup> This comprehensive stock of single-entity financial statements can be used to representatively model the situation in manufacturing by extrapolating distributions and to drill down the national account aggregates to the firm level.<sup>12</sup> The following will first examine whether the national account aggregates can be coherently modelled with the results of the corporate financial statement statistics, which is a prerequisite for carrying out further structural studies with the microdata. Based on extrapolated corporate financial statement data, an analysis will then be made of the longer-term developments and the distribution of value added and production depth by sector. The second part of the study focuses on factors determining value added and production depth at the enterprise level. For this purpose, enterprises are grouped by degree of production depth so that a comparison can be made between the extrapolated ratios of the group of enterprises with high production depth and those of the remaining enterprises. This study also looks into the question of what bearing the diverging business models of enterprises with different degrees of production depth have on the balance sheet and income statement. The study concludes by analysing developments in the results of oper-

ations and net assets of these two groups over the last 15 years.

## ■ Developments in industrial value added and production depth in the corporate financial statement statistics

Our analysis starts out by comparing developments in the gross and net value added aggregates taken from the national accounts with the extrapolated results from the Bundesbank's corporate financial statement statistics for the manufacturing industry in the period between 1997 and 2012. The gross value added series show an almost identical pattern, albeit only from 2000 and only up to 2011.<sup>13</sup> The observed deviation in annual results remains at less than 2%. Net value added moved in a similarly synchronous fashion, but with levels diverging by just over 10% per year, the gap over the period as a whole is far wider. These stronger deviations in the net variables are due primarily to differences in the statistical recording of depreciation in the Federal Statistical Office's structural surveys and the corporate financial state-

*National accounts and financial statement aggregates show similar underlying pattern*

*Empirical analysis – approaches and objectives*

<sup>10</sup> See, for example, T Rautenstrauch, L Generotzky and T Bigalke (2003), *Kooperationen und Netzwerke: Grundlagen und empirische Ergebnisse*, pp 36 ff.

<sup>11</sup> 1997 was the starting date for the Bundesbank's data pool. It provides a consistently coherent data history because it not only has a uniform classification scheme but also ensures that the information has a high level of completeness.

<sup>12</sup> The statistical data for the manufacturing industry extrapolated for the population are based on around 23,000 financial statements per year. The individual dataset for the 2012 financial year contains financial statements from almost 21,000 manufacturing enterprises. The data are extrapolated using the expansion by ratio estimate broken down by sector, legal form and size category on the basis of sales figures from the company register. It is inevitable that the variance of the extrapolated aggregates will tend to be understated, as only group arithmetic means are weighted and not the firm-level data. For more information on the extrapolation procedure see Deutsche Bundesbank, *The methodological basis of the Deutsche Bundesbank's corporate balance sheet statistics*, Monthly Report, October 1998, pp 49-64.

<sup>13</sup> The even sharper divergence in the series from 1997 to 1999 is likely to be due to the build-up phase for the data pool, while the discrepancy last year is a result of the data in the Bundesbank's corporate financial statement statistics still being incomplete at the current end.

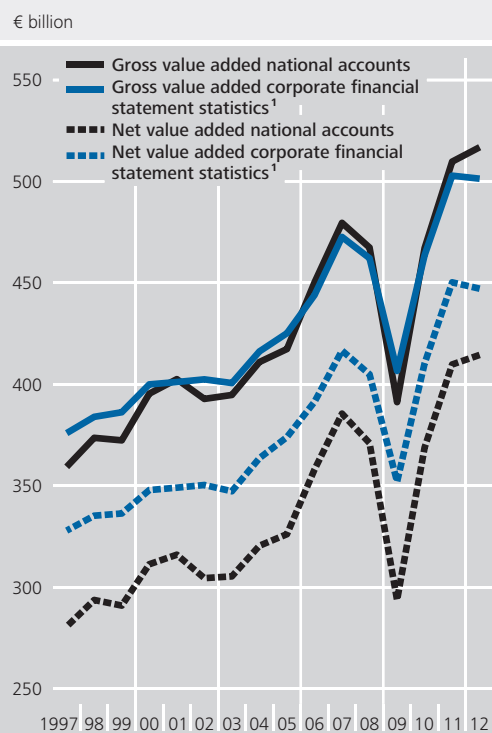
ment statistics.<sup>14</sup> For all the methodological discrepancies, a comparison of the results as a whole shows that the dynamics are strongly aligned, even in different phases of the economic cycle. This finding is a major precondition for investigating value added aggregates at a more disaggregated level based on financial statement data and for calculating indicators derived therefrom that shed light on structural changes in the German economy.

According to the extrapolated results of the Bundesbank's corporate financial statement statistics, gross and net value added in manufacturing rose by just over one-third on average across all areas of activity in absolute terms in the 1997-2012 period under review (see the table on page 60). They thus increased only around half as strongly as output or gross revenue plus other operating income. Growth in value added variables was far weaker because intermediate consumption has become increasingly important, both in the form of raw materials, consumables and supplies and services purchased. Intermediate consumption roughly doubled in value in the period under review. This is because enterprises have increasingly outsourced functional areas of operational activities to third parties or shifted them into value chains and networks.

*Trend towards lower production depth*

On balance, manufacturing industry is showing a sustained trend toward lower production depth. The period under review saw this indicator fall by 6 percentage points from 29.3% to 23.3% in gross-value-added terms.<sup>15</sup> The importance of intermediate consumption purchased for output has increased steadily in all areas of economic activity to the extent that in 2012 only a quarter of the enterprises analysed were still generating at least half of their output internally. This is a pervasive structural pattern, irrespective of the legal form and firm size under analysis and whether activities are more likely to rank among the winners or losers of structural change in industry. Ultimately, these truly far-reaching shifts in the production structure mean that, for many enterprises and parts

### Comparison of value added calculations for manufacturing\*



\* Based on the national accounts and corporate financial statement statistics. <sup>1</sup> Extrapolated results.  
 Deutsche Bundesbank

of industry, production and manufacturing activities which, by rights, are typical hallmarks of this sector, are increasingly playing second fiddle; this is also making it more and more difficult to categorise them in the industry standard classification system.

The other areas of the non-financial corporate sector are also moving in this direction, with the result that the relative share of manufacturing in the value added of non-financial enter-

*Share of manufacturing in total value added unchanged*

<sup>14</sup> The Federal Statistical Office notes in this regard that it is practically impossible to record depreciation for the national accounts data using a uniform measurement approach and figures therefore have to be estimated, at least in part. See O Hennchen (2006), Strukturdaten zum Verarbeitenden Gewerbe. Methoden und Ergebnisse der Strukturhebungen 2004, Wirtschaft und Statistik, No 7, p 738. The figures for the corporate financial statement statistics are collected on the basis of largely uniform depreciation rules under tax law which are also likely to be utilised given that such write-downs are tax deductible.

<sup>15</sup> Studies on international competitiveness primarily use gross value added, as does the present study, as it means that the aggregates calculated using both counting methods have the closest match.

### Developments in value added broken down by sector of manufacturing industry from 1997 to 2012

Economic activity	Gross value added			Net value added		
	€ billion		Per-centage change	€ billion		Per-centage change
	1997	2012		1997	2012	
Manufacturing	376.0	501.4	33.4	328.0	447.2	36.3
<i>of which</i>						
Manufacture of food products, beverages and tobacco products	30.9	36.7	18.8	25.5	31.7	24.3
Manufacture of textiles, apparel, leather, leather goods and shoes	9.1	6.5	-28.6	8.2	6.0	-26.8
Manufacture of wood and paper products and printing	27.7	23.8	-14.1	23.6	20.3	-14.0
Manufacture of chemicals and pharmaceuticals	42.8	50.1	17.1	35.9	43.6	21.4
Manufacture of rubber and plastic products, glass and glass products and other non-metallic mineral products	31.0	37.3	20.3	26.2	33.2	26.7
Manufacture of basic metals and fabricated metal products	51.0	67.5	32.4	45.0	60.3	34.0
Manufacture of computer, electronic and optical products and electrical equipment	47.7	70.0	46.8	42.9	64.2	49.7
Manufacture of machinery and equipment	55.7	78.6	41.1	51.4	73.5	43.0
Manufacture of transport equipment	54.5	92.7	70.1	46.7	80.0	71.3

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prises in Germany as a whole – in both gross and net terms – has shown only minor changes throughout the period under review. The share in 2011 was even unchanged against the starting year at 40.5%; there was a difference of only ½ percentage point in net terms. The corporate financial statement data therefore provide no empirical evidence to indicate a significant structural shift in the German economy towards the services sector.<sup>16</sup>

*Structural change clearly intra-industrial rather than inter-industrial ...*

However, this overall picture of German industry suggesting a relatively stable underlying pattern turns out to be far more nuanced and much more dynamic in a sector-based analysis.<sup>17</sup> Above-average growth in both gross and net value added can be ascertained for the manufacture of transport equipment, machinery and equipment, and computer, electronic and optical products and electrical equipment; this is associated with a perceptible increase in these sectors' shares in the total value added of manufacturing (from 1 to 4 percentage points).

Developments moved in the opposite direction in the manufacture of textiles, apparel, leather, leather goods and shoes and of wood and paper products and printing. In the period under review, these sectors saw a distinct decline in value added, both gross and net, in absolute terms, which resulted in a substantial fall in their contribution to total value added in manufacturing. Although below-average, the

*... mostly to the detriment of durable goods and non-durable goods industries*

<sup>16</sup> However, such studies based on a sector classification also do not show the actual extent of the increase in production-related services which are included in both intermediate consumption and in-house production.

<sup>17</sup> Note, however, that the problem of the growing share of services in industrial output is barely visible in the corporate financial statement statistics because much of the service-related intermediate consumption is impossible to isolate as a component of other operating expenses. Moreover, information on services purchased as a sub-item of cost of materials is not consistently available for all financial statements. According to the data extrapolated for manufacturing, they only amounted to around 10% overall and grew in proportion with the cost of materials, which is not consistent with the results of other empirical studies. See, for example, A Eickelpasch (2014), Funktionaler Strukturwandel in der Industrie: Bedeutung produktionsnaher Dienste nimmt zu, DIW Wochenbericht, No 33, pp 759-70.

### Developments in the structure of value added broken down by sector of manufacturing industry from 1997 to 2012

Item	Gross value added			Net value added		
	%		Change in percentage points	%		Change in percentage points
	1997	2012		1997	2012	
Manufacturing as a share of the non-financial corporate sector	40.7	39.5	- 1.2	41.3	39.6	- 1.7
Share of manufacturing by activity						
Manufacture of food products, beverages and tobacco products	8.2	7.3	- 0.9	7.8	7.1	- 0.7
Manufacture of textiles, apparel, leather, leather goods and shoes	2.4	1.3	- 1.1	2.5	1.3	- 1.2
Manufacture of wood and paper products and printing	7.4	4.7	- 2.7	7.2	4.5	- 2.7
Manufacture of chemicals and pharmaceuticals	11.4	10.0	- 1.4	11.0	9.7	- 1.3
Manufacture of rubber and plastic products, glass and glass products and other non-metallic mineral products	8.2	7.4	- 0.8	8.0	7.4	- 0.6
Manufacture of basic metals and fabricated metal products	13.6	13.5	- 0.1	13.7	13.5	- 0.2
Manufacture of computer, electronic and optical products and electrical equipment	12.7	14.0	1.3	13.1	14.4	1.3
Manufacture of machinery and equipment	14.8	15.7	0.9	15.7	16.4	0.7
Manufacture of transport equipment	14.5	18.5	4.0	14.2	17.9	3.7

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development of value added is at least still positive in absolute terms in other parts of manufacturing.<sup>18</sup> Measured in terms of their share of value added, the importance of these sectors, which in any case represent only a small section of German industry, has diminished again somewhat, with the gross and net ratios dipping by as much as 1 percentage point. The metal-working industry is something of an exception; it managed to broadly maintain its position in the sector comparison, and its value added is in line with the manufacturing average. One reason for this is that although output in this industry showed a strong increase, the positive effect was slightly overshadowed by the marginally sharper growth in intermediate consumption.

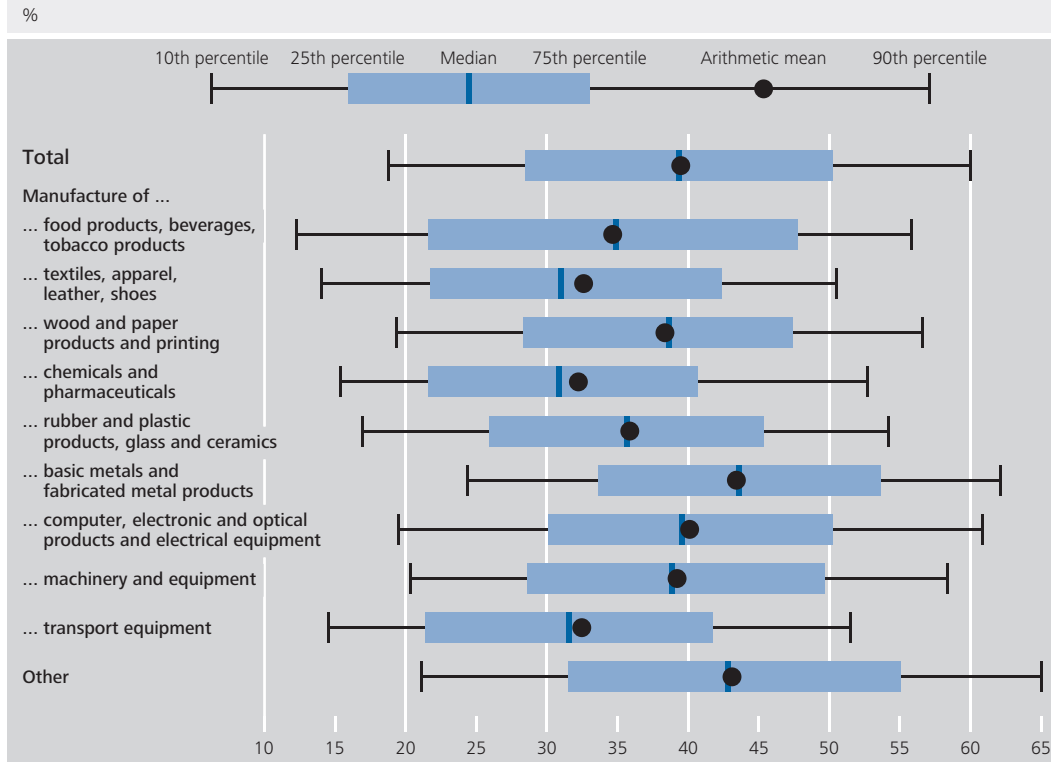
the wood, paper and printing industry, for example, below-average output growth has coincided with a noticeable rise in the intensity of intermediate consumption, while the textiles and leather industry has even seen further rises in the intensity of intermediate consumption in conjunction with an absolute fall in the output volume. The structural change at the sectoral level sketched out in this article thus follows a pattern commonly seen in advanced economies, with the focus of production shifting ever further away from commodity-, labour- and capital-thirsty activities towards knowledge-intensive and technology-driven manufacturing structures, which are a major feature of the capital goods industry in particular.

*Various patterns to the fall in production depth*

The findings show that the reduction in production depth, which has seen individual sectors experience a fall in their share of value added in the wake of intra-industrial structural change, differs from one sector to another. In

<sup>18</sup> These are the manufacture of food products, beverages and tobacco products; the manufacture of chemicals and pharmaceuticals; the manufacture of rubber and plastic products, glass and glass products and other non-metallic mineral products.

### Extrapolated distribution of production depth broken down by sector of manufacturing industry for 2012



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*Some significant sector-specific differences*

The textiles, apparel, leather and shoes sector, the chemicals and pharmaceuticals industry, and the transport equipment manufacturing sector all have a low production depth, albeit for different reasons. In Germany's textiles industry, cost considerations have pushed much of production – with the exception of technical textiles – to low-wage countries since the 1970s.<sup>19</sup> By contrast, the situation in the chemicals and pharmaceuticals industry is largely the result of the particular production conditions required for the manufacture of industrial and base chemicals, the need for large quantities of commodities meaning that this sector has no more than a very low value added share. As for the transport equipment manufacturing sector, production depth is mainly low here because this sector has been a frontrunner in the creation of global value added chains and networks for many years, primarily with the aim of tapping new markets, optimising production, and increasing competitiveness.<sup>20</sup>

Production depth is higher for the manufacture of machinery and equipment, the manufacture of basic metals and fabricated metal products, the manufacture of computer, electronic and optical products and electrical equipment, the manufacture of wood and paper products and printing, and for the manufacturing sectors grouped under the heading "other" as well.<sup>21</sup> The main reason for this is likely to be their special production conditions. Indeed, customer-specific production, small lot sizes and particularly stringent quality and availability require-

<sup>19</sup> See IMU Institut (2009), Branchenanalyse Textilindustrie. Untersuchungen zur Situation und Entwicklung der Branchen „Textilgewerbe“ (WZ 17), pp 5 ff.

<sup>20</sup> Many car manufacturers and suppliers spun off entire development functions and components plants to subsidiaries or associated companies, transferred responsibility for supplying production facilities to logistics service providers, handed over model development to engineering partners and relocated the production of niche models to affiliated enterprises at home or abroad.

<sup>21</sup> This category comprises the manufacture of coke oven products and mineral oil, furniture, other goods and the repair and installation of machinery and equipment. Owing to poor representability, these figures are added together.

ments probably call for a high level of in-house production in these sectors.

*Relevance of transaction cost and factor specificity as explanatory factors*

The differences in the sector-specific arithmetic means for production depth suggest that the theoretically derived factors “transaction cost” and “specificity of factor use” can go a long way towards explaining production depth. Since sector, as a characteristic, is very highly correlated with production technology and research and knowledge intensity, it is possible to clearly separate individual sectors where the use of advanced technologies, a high degree of technological specialisation, and research- and knowledge-intensive production play an especially important role. This is particularly the case in the manufacturing industry (above all the manufacture of machinery and equipment, the manufacture of computer, electronic and optical products and electrical equipment, and the manufacture of basic metals and fabricated metal products).<sup>22</sup>

## Comparison of enterprises with varying degrees of production depth

*Grouping by production depth reveals diverging enterprise types ...*

Structural differences exposed by the sectoral breakdown can be analysed in an even more nuanced fashion by grouping the manufacturing enterprises contained in the Bundesbank’s data pool for the 2012 financial year by production depth and then comparing them. These data are likewise extrapolated to achieve the most representative results possible. This comparison places the focus, above all, on those enterprises that buck the general trend by continuing to operate with a very high production depth. To isolate these particular enterprises, the extrapolated distribution is divided into quartiles, with the top 25% of enterprises, accounting for just under 29,500 of the almost 118,000 manufacturing firms, being assigned to the group with a high degree of production depth, ie over 50% in-house production. The remaining enterprises, numbering just over 88,000, are represented by the control group

of enterprises with a low or medium level of production depth (ranging from more than 6% to 50%).

As expected, the sector-specific differences in the distribution of production depth are also reflected in the structural profile of the extrapolated sectoral composition of the groups of enterprises with a high and low value added level. Sectors with an, on average, low share of in-house production are far less common in the group of manufacturing-intensive enterprises than those with high levels of in-house production. This can be seen clearly with the sectors that manufacture textiles, apparel, leather and shoes, and transport equipment, where the share in the control group is nearly three times as high as that of enterprises with a high degree of production depth. The metal-working industry and the residual group of enterprises are significantly overrepresented in this latter category, with the sector for the manufacture of computer, electronic and optical products and electrical equipment also being slightly overrepresented.

*... with the expected sector-specific differences ...*

Clearly, production depth also varies with enterprise size. 96.1% of enterprises with a high degree of manufacturing intensity belong to the category of smaller enterprises with sales of less than €10 million, just 2.9% are medium-sized enterprises (sales from €10 million to less than €50 million), and only 0.7% are large enterprises (sales from €50 million and more). In the control group, meanwhile, only 82.9% are small enterprises, 12.0% are medium-sized enterprises and no less than 5.1% are large enterprises. The breakdown of production depth by legal form correlates with that by size category. Thus, the share of non-corporations

*... and large disparities depending on size and legal form*

<sup>22</sup> Although the dispersion is quite similar in the sector comparison, with highly symmetrical curves, it must not be forgotten that the high degree of aggregation in the double-digit economic activities in no way implies the grouping-together of uniform production structures. A more nuanced view ought to be taken here, but the available data do not allow this. Moreover, as already mentioned, the extrapolation procedure systematically causes an underestimation of variance.

### Distribution of enterprises\* with varying degrees of production depth by sector, size category, legal form and group affiliation

% of enterprises

Characteristic	Enterprises grouped by degree of production depth <sup>1</sup>	
	1st to 3rd quartile	4th quartile
<b>Sector</b>		
Manufacture of food products, beverages and tobacco products	11.3	9.2
Manufacture of textiles, apparel, leather, leather goods and shoes	3.2	1.1
Manufacture of wood and paper products and printing	13.2	9.6
Manufacture of chemicals and pharmaceuticals	2.9	1.2
Manufacture of rubber and plastic products, glass and glass products and other non-metallic mineral products	10.7	6.2
Manufacture of basic metals and fabricated metal products	21.4	30.9
Manufacture of computer, electronic and optical products and electrical equipment	9.9	10.1
Manufacture of machinery and equipment	11.2	10.4
Manufacture of transport equipment	2.7	1.1
Other	13.6	20.1
<b>Size category</b>		
Sales less than €2 million	54.7	76.8
Sales from €2 million to less than €10 million	28.2	19.6
Sales from €10 million to less than €50 million	12.0	2.9
Sales of €50 million and more	5.1	0.7
<b>Legal form</b>		
Corporation	60.2	53.0
Non-corporation	39.8	47.0
<b>Group affiliation</b>		
Group enterprise	70.9	60.7
Standalone enterprise	29.1	39.3

\* Extrapolated results for the 2012 financial year. <sup>1</sup> Gross value added in relation to the sum of gross revenue and other operating income. The threshold to the 4th quartile is 50.25%.

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among manufacturing-intensive enterprises is around 7 percentage points higher than for the control group, with the exact inverse being true for corporations. This is consistent with the finding that standalone enterprises make up just over 10 percentage points more of the group of manufacturing-intensive enterprises than of those which generate less than half of their output internally.

A comparison of selected balance sheet and income statement ratios reveals just how fundamentally the business models of enterprises with a high degree of production depth differ from those for which intermediate consump-

tion accounts for the bulk of their gross revenue. Looking at the assets side there is, as might be expected, a sizeable difference in the deployed capital stock. Investment in fixed capital by enterprises with overwhelmingly in-house production amounts, on average, to 38.3% of total assets, which is 11 percentage points higher than in the control group of enterprises with a low or medium level of production depth. The latter only have a tangible fixed asset ratio of 27.3%, which shows that substantial in-house manufacturing operations call for a corresponding capital stock. This also explains the large differences in the depreciation ratios of both groups, the figure of 5.3% for the manufacturing-intensive enterprises being nearly twice that of the other enterprises.

Similarly striking differences can also be seen in inventory levels. The inventories-to-total-assets ratio for enterprises with a high level of in-house production stands at 15.1%, which is just over half that of companies that largely outsource production (27.0%). The higher proportion of capital tied up in the form of inventories is due, above all, to large buffer stocks of work in progress, finished goods and merchandise. These enterprises hold large-scale inventories with a view to cushioning production risks and maintaining a strong capacity to deliver goods to downstream buyers in the process chain. A likely factor here is that the ability to optimise logistics management in the form of flexible order contracts or just-in-time deliveries, and in doing so, to shift inventory risk to suppliers tends to be largely the preserve of particularly large enterprises and powerful players in the procurement market.<sup>23</sup> As is to be expected, trade receivables at enterprises with a high degree of intermediate consumption is likewise perceptibly higher than for the group of enterprises with a low level of outsourced production. Businesses that focus on in-house production would appear to need higher liquidity levels to cover peaks in funding requirements

*... in other asset and liability positions*

*Fundamental differences in business models reflected in capital stock, ...*

<sup>23</sup> See H Müller (2013), *Erfolgreich am Markt: Strategien und Wege für den Mittelstand*, p 145.



and unforeseeable expenses, which is reflected in a cash-to-total-assets ratio that is about one-quarter higher. Various empirical studies have found clear evidence that there is an exchange relationship of a kind between maintaining such a liquidity buffer and drawing on short-term liabilities.<sup>24</sup>

... and in financing

While the manufacturing-intensive firms can generally be expected to have a markedly higher equity capital ratio than the others (because they also strive for a certain degree of financial autonomy), the difference is not that great, as these enterprises also take up external funds on a considerable scale, particularly in the form of bank liabilities. Liable capital makes up 30.3% of the total assets of manufacturing-intensive firms, which is only 4 percentage points higher than the corresponding figure for the other enterprises (26.3%). Bank liabilities account for 33.5%, constituting a gap of almost 7 percentage points, with differences in both short-term and long-term liabilities being recorded. This suggests that the higher level of bank borrowing is partly attributable to less recourse being made to trade credit and intra-group financing. In the case of trade payables, the ratio of the enterprises in the fourth quartile (11.5%) is only about half as high as that for the other manufacturing enterprises. For group liabilities, the latter are almost 4 percentage points ahead. It therefore also appears plausible that firms in the first to third quartiles – which are integrated to a greater extent in group structures and can also cover their funding requirements via intra-group sources – are less inclined to cultivate their equity capital because, if need be, a group financing vehicle or the group parent will raise the external funds and cover the loans with their liable capital.

Strongly divergent performance due to ...

The manufacturing-intensive enterprises fare much better in terms of the performance measures derived from the income statement.<sup>25</sup> At 9.5%, their return on sales was more than three times as high as that of the control group. This reflects the fact that, at an arithmetic mean of 61.7%, the manufacturing-intensive

### Selected key balance sheet and income statement figures of enterprises\* with varying degrees of production depth (arithmetic means)

Item	Enterprises grouped by degree of production depth <sup>1</sup>	
	1st to 3rd quartile	4th quartile
	As a percentage of total assets	
Tangible fixed assets	27.3	38.3
Inventories	27.0	15.1
Receivables	30.5	29.1
from trade	19.0	17.5
from affiliated companies	6.1	6.1
Cash	9.5	12.4
Equity	26.3	30.3
Liabilities	77.4	71.8
to credit institutions	26.9	33.5
of which short-term	14.7	16.4
from trade	22.8	11.5
to affiliated companies	14.6	10.8
	As a percentage of gross revenue <sup>2</sup>	
Gross income	50.3	78.4
Gross value added	33.7	61.7
Cost of materials	49.7	21.6
Personnel expenses	26.1	44.1
Depreciation	3.0	5.3
Operating result	30.6	56.5
Annual result after taxes	3.0	9.5

\* Extrapolated results for the 2012 financial year. <sup>1</sup> Gross value added in relation to the sum of gross revenue and other operating income. The threshold to the 4th quartile is 50.25%. <sup>2</sup> Sales and changes in stocks of finished goods and work in progress.

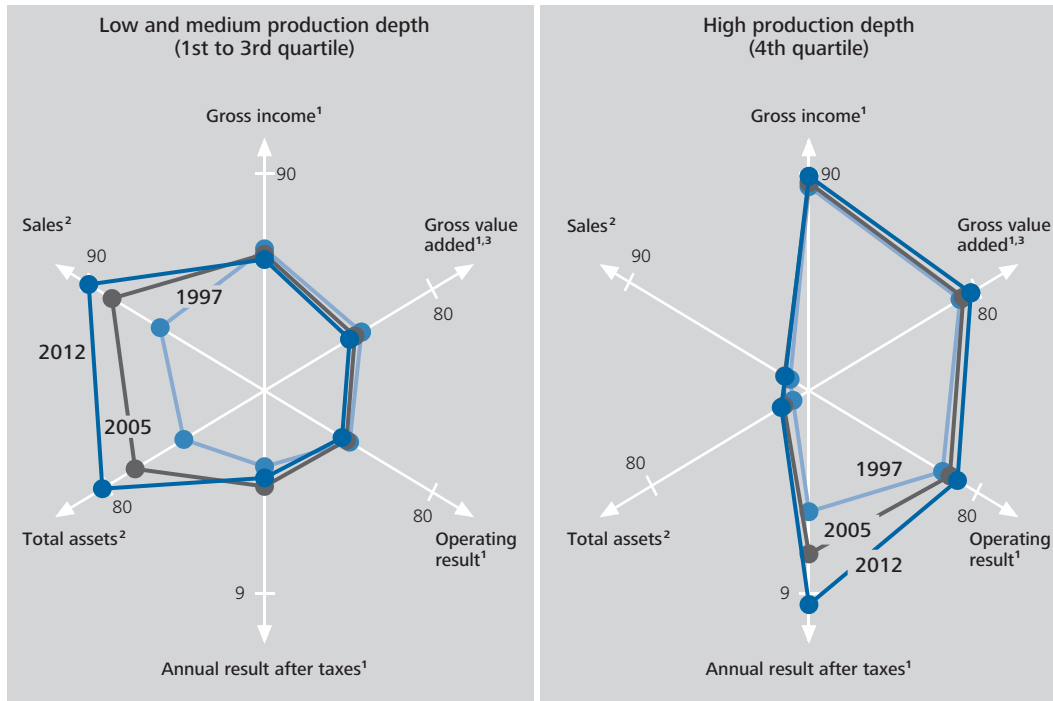
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firms' gross value added ratio is almost twice as high as that of enterprises with a high level of intermediate consumption (33.7%), which, of course, also has something to do with grouping the enterprises according to production depth. A key determinant of the differences in the returns on sales is the considerably lower cost of materials, which, at 21.6%, is just over 28 percentage points below the comparative value for firms with a high level of intermediate

<sup>24</sup> This relationship is very clear in international comparisons. See, for example, H Friderichs, Ergebnisse vergleichbarer Bilanzanalysen für französische und deutsche Unternehmen, KfW-Research Mittelstands- und Strukturpolitik, Issue 23, June 2001, pp 54 f.

<sup>25</sup> These major differences are not primarily caused by the divergent composition of the two groups, consisting of corporations and non-corporations, and thus by the imputed entrepreneur's remuneration that is to be taken into account for the latter. The arguments put forward against this are that there is only a 6 percentage point difference in the shares of non-corporations in the two groups and the gap between the respective annual result before taxes is just as marked. Furthermore, even if the corporations and non-corporations are viewed in isolation, there are still large differences in the returns of the manufacturing-intensive enterprises and the other enterprises.

Development of selected key figures of enterprises\*  
 grouped by degree of production depth



\* Arithmetic means of an extrapolated balanced sample of manufacturing enterprises for the 1997, 2005 and 2012 financial years.  
 1 As a percentage of gross revenue. 2 In € million. 3 Gross income plus other operating income less other operating expenses.  
 Deutsche Bundesbank

... different cost  
 and revenue  
 structures

consumption (49.7%). A low production depth results *per se* in a significantly lower return on sales, but this should not necessarily be taken as indicating that the return on equity is correspondingly poor. The fact that the ratio of net income for the year to gross revenue for enterprises with a large production depth is particularly high is primarily due to an overall more favourable cost structure, which can be seen in the operating result with a gap of almost 26 percentage points. The very significant differences in production cost are mainly down to comparatively low personnel expenses, which, in the case of manufacturing-intensive enterprises, do not fully offset the cost advantages of sourcing less intermediate consumption. For enterprises with a high production depth, the ratio of personnel expenses to gross revenue comes to 44.1%, while the cost-of-materials ratio is only 21.6%. By contrast, firms that predominantly procure products and services externally and thus have a very high material cost (49.7%), record a disproportionately lower

comparative value of 26.1% for personnel expenses. Overall, this means that these two expense items amount to 65.7% of gross revenue for manufacturing-intensive enterprises, while for the other enterprises they make up a considerably greater share of 75.8%. This impacts in full on returns and explains why the return on sales after taxes of the manufacturing enterprises under review in the fourth quartile is more than three times as high.

Judging by the empirical findings presented earlier in this article, one could be led to conclude that the increased division of labour as well as the close-knit German economy, with the associated high degree of specialisation and attendant outsourcing of production, are down to a lack of competitiveness and a poor performance by domestic industry. That line of thinking is put forward, for instance, in studies on the import content of German exports,

*Performance of  
 both groups  
 over time*

which sometimes depict the German economy as a type of bazaar economy.<sup>26</sup>

However, a longer-term comparison of developments in value added, output and earnings of the two groups of enterprises under review over the course of the last 15 years shows that the economic reality is more complex and considerably more nuanced. As was made clear by the study results presented above, the enterprises with a high degree of production depth that the study focuses on are primarily small enterprises which operate very successfully, generally in regional markets, using production strategies based on “made to order” or small-batch manufacturing. However, there is also a group of larger medium-sized manufacturing firms which have succeeded in carving out an excellent market position and sustainably improving their performance, also on a longer-term basis, by intensifying their in-house production in research- and knowledge-intensive as well as technologically specialised niche sectors. These enterprises were able to further increase their gross income, value added and operating result from an already very high level by around 4 percentage points during the period under review, and thus to almost double their return on sales on a sustainable basis – measured in terms of the annual result after taxes – compared with the start of the observation period in 1997.<sup>27</sup> However, this strong earnings performance goes hand in hand with fairly moderate growth in the business volume (+26%) and the company size or total assets (+73.8%) during the 15 years under review. By contrast, enterprises with a low or medium production depth saw reductions of between 3 and 4 percentage points in their gross income, value added and operating result and were only able to marginally improve their profitability from 2.7% to 3.1%. However, these comparatively unfavourable developments in the cost and earnings structure of these firms were accompanied by significantly more dynamic growth in the business volume and total assets. While sales went up by 69%, total assets saw as much as a two-fold rise.

*Increase in return on sales versus ...*

*... growth in business volume*

In summary, based on these findings, the conclusion can be drawn that the reduction in production depth caused by the changes in the global division of labour and new global production strategies has tended to weigh on the earnings structure of the majority of manufacturing enterprises in Germany. By contrast, however, these firms have reaped even greater benefits from international trade and growth in the global economy by breaking into new sales markets and gaining new customers. This had a lasting positive impact on the long-term growth trend of German industry, as clearly illustrated by a recent Bundesbank study of value added flows.<sup>28</sup> In this respect, opening up German industry to a more international division of labour was a very suitable strategy for success in a globalised economy.

## ■ Conclusion

Changes in the global economic setting have brought about lasting structural change in the manufacturing industry over the last 15 years. While the industry’s overall contribution to gross domestic product has remained broadly stable, the weightings of individual sectors of this key area of the German economy have shifted considerably, with the capital goods sector benefiting from a marked process of intra-industry structural change.

*Structural change towards capital goods producers*

Microdata analysis has shown that the production strategies and the associated business models are sometimes very different even within individual sectors. On the one hand, alongside the bulk of typical small enterprises with manufacturing-intensive “made to order” and small-batch manufacturing, the manufacturing industry also comprises very successful,

*Successful specialised SMEs*

<sup>26</sup> For more information, see, for example, R Aichele, G Felbermayr and I Heiland (2013), Neues aus der Basarökonomie, ifo Schnelldienst, No 66, pp 17 ff.

<sup>27</sup> The calculations for the dynamic analysis are based on an extrapolated balanced sample which represents around 15,000 manufacturing enterprises and thus inevitably deviates from the results of the first section.

<sup>28</sup> See Deutsche Bundesbank (2014), op cit, pp 28 ff.

more medium-sized enterprises in highly specialised, research- and knowledge-intensive high-tech areas, sometimes with a niche character. Both groups of enterprises have a relatively high value added combined with a higher production depth and, thanks to their strong market position, are able to generate returns on sales that far eclipse the averages. However, this comes at the price of below-average sales growth.

*Production shift  
drives group  
formation*

By contrast, for the vast majority of industrial enterprises operating internationally, opening up the industry to a more global division of labour and less favourable cost and earnings structures was a recipe for success in a globalised world economy and an effective way of participating in full in global growth. The associated growing decline in production depth also seems to have driven the increased group formation observed in Germany, as the outsourcing of production and services requires

subsidiaries and joint ventures to be set up or shareholdings to be acquired.<sup>29</sup> In the single-entity financial statements, this phenomenon is reflected in a massive upturn in businesses interlinking their production and financing operations. The efficient management of this mounting complexity and the increased mutual dependencies is a key reason for the economic strength of German industry. Modelling these multifaceted sectoral developments in the non-financial corporate sector precisely and reliably presents an entirely new set of statistical challenges, particularly with regard to the provision of integrated macro and micro information.<sup>30</sup>

*Resulting  
statistical  
challenges*

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<sup>29</sup> It can be assumed that the observed differences in returns will decrease, at least in part, if group entities are looked at, although this cannot be clarified using the available data.

<sup>30</sup> At the European level, the Figaro Project (Full International and Global Accounts for Research in Input-Output Analysis) and the DMES Task Force on Global Production and Integrated Global Accounts were set up for this purpose.

# Statistical Section

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## II Overall monetary survey in the euro area

### 1 The money stock and its counterparts \* (a) Euro area

€ billion

Period	I Lending to non-banks (non-MFIs) in the euro area					II Net claims on non-euro-area residents			III Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
	Total	Enterprises and households		General government		Total	Claims on non-euro-area residents	Liabilities to non-euro-area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) <sup>2</sup>	Capital and reserves <sup>3</sup>
		Total	of which Securities	Total	of which Securities								
2014 Sep	34.8	26.2	- 14.5	8.6	9.2	- 25.0	- 17.7	7.3	- 6.0	- 16.5	0.3	- 12.0	22.1
Oct	5.0	- 24.0	- 9.0	29.0	23.1	10.4	- 4.0	- 14.4	- 37.0	- 13.9	- 0.2	- 26.5	3.6
Nov	33.7	25.6	5.5	8.1	5.2	60.2	76.5	16.3	- 13.3	1.1	- 0.4	- 13.1	- 0.9
Dec	- 45.0	- 9.1	- 12.2	- 35.9	- 43.7	- 10.0	- 115.3	- 105.4	- 29.4	- 2.9	2.3	- 30.9	2.2
2015 Jan	93.9	19.2	5.1	74.7	52.5	- 14.6	196.7	211.2	- 1.9	- 12.3	0.5	- 9.0	18.9
Feb	11.0	21.3	2.4	- 10.3	- 0.5	- 23.6	- 18.7	4.9	- 14.6	- 8.8	- 1.4	- 9.8	5.3
Mar	77.5	44.5	- 1.1	33.0	29.8	10.5	- 29.0	- 39.5	- 20.5	- 12.4	- 1.3	- 26.2	19.4
Apr	53.8	17.0	16.9	36.8	32.5	- 58.5	37.4	95.9	- 48.1	- 18.8	- 2.1	- 15.8	- 11.3
May	24.6	8.1	- 0.8	16.4	31.2	25.2	- 56.2	- 81.4	- 21.3	- 8.3	- 1.7	- 23.5	12.1
June	8.9	- 14.3	- 28.2	23.2	24.5	55.8	- 86.8	- 142.6	- 21.5	- 13.9	- 1.2	- 12.9	6.5
July	59.9	56.1	50.8	3.7	4.0	- 64.9	- 0.5	64.5	- 5.1	10.4	- 0.9	- 21.4	6.8
Aug	11.0	- 27.5	6.9	38.6	47.5	- 22.9	10.1	33.0	- 10.3	- 2.4	- 1.4	- 9.3	2.9
Sep	29.5	- 9.9	- 8.8	39.4	45.7	- 7.7	- 94.9	- 87.2	- 20.9	- 3.2	- 0.7	- 26.1	9.2
Oct	26.4	4.2	- 15.4	22.2	18.6	9.5	24.1	14.7	- 39.7	- 25.3	- 1.1	- 17.1	3.8
Nov	87.2	48.1	2.0	39.1	47.1	3.6	- 15.3	- 18.8	- 6.5	- 13.5	- 1.7	- 4.8	13.5
Dec	- 113.1	- 74.2	- 2.2	- 38.9	- 33.8	- 10.6	- 196.2	- 185.6	- 8.9	4.1	- 0.6	- 26.5	14.1
2016 Jan	158.1	47.8	5.3	110.3	95.3	- 39.9	127.3	167.1	- 27.9	- 8.8	- 0.4	- 19.1	0.4
Feb	88.8	47.6	1.1	41.2	50.1	- 82.0	31.6	113.6	- 14.8	12.1	- 1.2	- 24.7	- 1.0
Mar	60.1	24.0	- 3.2	36.0	39.5	21.3	- 86.0	- 107.3	- 16.7	- 6.5	- 0.9	0.1	- 9.5
Apr	97.0	44.5	24.3	52.5	44.7	- 52.0	118.7	170.7	- 6.8	- 5.1	- 1.9	- 0.7	0.8

### (b) German contribution

Period	I Lending to non-banks (non-MFIs) in the euro area					II Net claims on non-euro-area residents			III Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
	Total	Enterprises and households		General government		Total	Claims on non-euro-area residents	Liabilities to non-euro-area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) <sup>2</sup>	Capital and reserves <sup>3</sup>
		Total	of which Securities	Total	of which Securities								
2014 Sep	10.2	6.2	2.1	4.0	4.8	- 16.6	- 14.1	2.5	- 3.2	- 0.7	0.5	- 4.5	1.5
Oct	5.3	- 4.2	- 4.5	9.5	2.4	16.5	10.9	- 5.6	- 1.7	- 2.8	- 0.2	1.2	0.1
Nov	14.1	15.3	6.0	- 1.2	1.9	12.8	30.9	18.1	0.1	- 2.7	- 0.4	1.5	1.8
Dec	- 15.5	1.5	5.4	- 17.1	- 10.0	- 5.7	- 33.1	- 27.4	- 17.5	- 7.3	0.2	- 8.1	- 2.2
2015 Jan	28.5	13.0	7.0	15.4	6.5	- 57.6	52.2	109.8	- 0.8	- 3.4	- 0.0	1.8	0.8
Feb	9.4	4.6	- 1.1	4.8	1.7	2.9	- 11.1	- 13.9	1.8	- 1.5	- 1.3	2.3	2.3
Mar	15.2	9.7	8.4	5.6	7.2	- 12.1	- 19.0	- 6.9	- 15.3	- 4.8	- 1.3	- 9.1	- 0.1
Apr	17.3	3.3	0.7	14.0	4.9	7.7	33.9	26.2	- 13.2	- 10.0	- 2.2	- 0.6	- 0.4
May	- 3.5	4.5	- 4.8	- 8.0	4.4	1.1	- 11.7	- 12.8	- 14.6	- 1.6	- 1.6	- 11.7	0.4
June	- 0.9	- 2.7	- 5.7	1.7	5.1	16.2	- 25.0	- 41.1	0.4	- 3.8	- 1.4	1.8	3.7
July	31.5	22.9	21.3	8.6	6.4	- 27.6	- 8.7	19.0	12.5	16.5	- 1.5	- 0.6	- 1.9
Aug	12.9	7.2	- 1.5	5.7	9.0	- 20.7	- 0.9	19.9	- 6.5	0.5	- 1.5	- 4.5	- 1.0
Sep	11.5	4.1	- 2.6	7.3	8.7	15.9	- 2.0	- 17.9	- 11.7	- 2.5	- 1.4	- 7.4	- 0.4
Oct	3.4	- 3.8	- 9.4	7.1	3.5	- 8.5	- 13.1	- 4.6	- 10.7	- 9.0	- 1.3	0.7	- 1.1
Nov	27.3	21.3	7.8	6.0	10.6	- 13.0	- 35.7	- 22.7	- 12.8	- 3.6	- 1.2	- 3.9	- 4.1
Dec	- 19.9	- 11.6	- 5.8	- 8.2	- 2.8	5.2	- 52.1	- 57.3	- 24.0	- 3.9	- 0.9	- 22.1	2.9
2016 Jan	19.7	5.7	- 3.0	14.0	10.4	- 21.1	24.7	45.8	- 1.2	- 1.5	- 1.3	2.8	- 1.2
Feb	15.6	10.9	- 4.2	4.7	4.8	- 29.2	7.3	36.5	- 11.8	- 1.8	- 1.3	- 7.7	- 1.0
Mar	12.3	4.4	0.6	7.8	8.2	7.3	- 22.6	- 29.8	0.9	- 0.0	- 1.1	2.4	- 0.4
Apr	22.8	12.3	0.7	10.6	5.9	- 40.2	13.5	53.7	- 2.1	- 3.3	- 1.1	1.9	0.4

\* 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			VI Money stock M3 (balance I plus II less III less IV less V)										Period
	Total 4	of which Intra-Eurosystem liability/claim related to banknote issue	Total	Money stock M2						Repo transactions	Money market fund shares (net) 2,7,8	Debt securities with maturities of up to 2 years (incl money market paper) (net) 2,7		
				Total	Money stock M1			Deposits with an agreed maturity of up to 2 years 5	Deposits at agreed notice of up to 3 months 5,6					
					Total	Currency in circulation	Overnight deposits 5							
- 6.1	22.8	-	- 0.8	14.7	33.4	0.3	33.1	- 12.8	- 5.8	- 18.3	- 11.6	6.0	2014 Sep	
- 6.5	33.8	-	25.2	8.8	38.3	3.5	34.8	- 20.6	- 8.9	25.6	14.6	- 4.3	Oct	
25.9	- 11.4	-	92.7	90.5	100.6	6.2	94.4	- 14.5	4.4	- 2.7	5.6	0.6	Nov	
- 50.1	- 0.1	-	24.6	36.3	52.7	23.8	28.9	- 12.7	- 3.7	- 13.4	- 17.7	19.5	Dec	
80.8	- 45.4	-	45.8	25.1	54.4	- 2.7	57.1	- 37.0	7.7	23.7	20.2	- 4.3	2015 Jan	
- 28.6	- 15.5	-	46.0	21.5	28.4	4.1	24.3	- 8.6	1.6	38.0	8.7	2.4	Feb	
22.6	53.0	-	32.9	57.2	54.6	7.7	46.9	- 5.4	7.9	1.8	- 10.0	- 7.4	Mar	
- 43.3	- 25.3	-	112.0	76.9	90.6	8.8	81.8	- 15.5	1.8	- 17.5	21.9	6.3	Apr	
44.1	- 0.6	-	27.6	61.4	91.9	6.7	85.2	- 35.2	4.8	- 6.8	- 9.1	- 6.8	May	
14.0	64.9	-	7.2	40.4	65.9	10.7	55.2	- 25.5	0.0	- 22.6	- 17.1	8.2	June	
- 42.3	- 29.6	-	71.9	40.9	40.0	14.2	25.8	1.4	- 0.6	1.5	24.4	- 12.2	July	
- 14.8	- 1.6	-	14.8	10.7	12.5	- 1.9	14.4	- 5.4	3.6	- 2.8	11.0	- 4.5	Aug	
28.7	33.9	-	- 20.0	7.2	24.0	- 2.8	26.8	- 8.4	- 8.5	- 4.2	- 15.7	- 0.8	Sep	
33.0	- 60.0	-	102.5	68.5	83.5	2.2	81.2	- 10.1	- 4.8	- 6.1	21.8	0.9	Oct	
- 17.2	61.2	-	53.3	54.6	58.7	5.7	53.0	- 2.0	- 2.2	4.0	15.1	1.0	Nov	
- 72.3	- 42.3	-	- 0.2	53.9	45.2	14.4	30.8	7.8	0.9	- 31.1	- 23.9	- 10.8	Dec	
87.7	- 17.9	-	76.4	37.4	36.2	- 11.4	47.6	- 9.2	10.4	22.5	17.6	8.0	2016 Jan	
- 14.1	4.6	-	31.1	14.5	21.2	1.3	19.9	- 11.9	5.2	43.2	- 1.2	6.2	Feb	
31.8	28.7	-	37.6	55.0	43.0	3.5	39.5	9.7	2.3	- 5.6	- 12.2	1.1	Mar	
- 35.9	- 17.7	-	105.5	75.3	92.7	4.7	88.0	- 17.2	- 0.3	- 2.6	19.0	3.7	Apr	

(b) German contribution

IV Deposits of central governments	V Other factors			VI Money stock M3 (balance I plus II less III less IV less V) 10										Period
	Total	of which Intra-Eurosystem liability/claim related to banknote issue 9,11	Currency in circulation	Total	Components of the money stock						Debt securities with maturities of up to 2 years (incl money market paper)(net) 7			
					Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits at agreed notice of up to 3 months 6	Repo transactions	Money market fund shares (net) 7,8					
1.5	- 4.0	3.8	0.3	- 0.7	6.1	- 4.8	0.1	- 2.7	0.0	0.6	2014 Sep			
- 1.3	6.5	3.2	0.8	18.2	25.6	- 9.3	- 0.3	1.8	- 0.0	0.4	Oct			
- 0.3	0.8	2.5	1.2	26.2	26.6	0.3	- 0.4	0.4	- 0.0	- 0.8	Nov			
- 1.3	12.2	3.6	5.0	- 14.6	- 18.1	8.2	2.2	- 6.2	- 0.1	- 0.6	Dec			
6.3	- 59.5	2.4	- 0.8	24.9	26.3	- 5.1	- 1.1	3.4	0.0	1.4	2015 Jan			
- 6.7	- 11.4	2.1	0.8	28.6	23.5	0.7	0.9	1.2	0.0	2.3	Feb			
2.9	10.3	2.3	2.2	5.2	5.5	0.3	- 0.9	- 0.4	- 0.0	0.8	Mar			
- 2.7	5.0	2.2	1.8	35.9	29.6	- 1.2	- 0.2	3.8	- 0.1	4.1	Apr			
1.4	- 4.8	2.4	1.1	15.5	28.1	- 3.3	0.2	- 6.4	0.1	- 3.1	May			
2.2	12.7	0.9	3.5	- 0.1	5.6	- 3.5	- 0.3	- 1.6	0.1	- 0.3	June			
- 3.2	- 18.6	4.7	3.3	13.1	12.9	- 0.0	- 0.4	1.2	0.0	0.6	July			
- 0.3	- 13.1	2.4	- 0.5	12.1	14.7	- 3.8	0.3	2.0	0.1	- 1.2	Aug			
1.8	16.8	2.8	- 0.8	20.5	14.4	- 3.4	0.8	0.5	0.5	7.8	Sep			
- 0.6	- 25.3	3.0	- 0.3	31.4	30.7	- 3.8	1.3	- 0.5	- 0.0	3.7	Oct			
- 1.2	- 15.2	2.0	1.8	43.4	34.3	6.8	0.9	- 0.5	- 0.1	2.1	Nov			
10.3	15.2	2.6	2.3	- 16.2	- 21.3	6.3	3.0	- 3.6	- 0.4	- 0.2	Dec			
- 0.8	- 24.2	- 0.7	- 1.9	24.7	27.8	- 5.5	0.9	0.3	0.3	0.9	2016 Jan			
7.1	- 24.1	0.6	0.4	15.3	13.3	- 1.9	1.6	1.4	- 0.1	1.0	Feb			
21.0	3.1	2.1	0.6	- 5.5	- 12.5	10.9	- 0.8	- 0.9	- 0.2	- 2.0	Mar			
- 17.4	- 20.9	1.2	1.0	23.1	24.1	- 1.1	- 0.7	0.5	- 0.5	0.7	Apr			

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).















### III Consolidated financial statement of the Eurosystem

#### 1 Assets \*

€ billion

On reporting date/ End of month <sup>1</sup>	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
<b>Eurosystem <sup>2</sup></b>									
2015 Oct	2,626.8	348.8	287.9	78.9	209.0	41.0	21.5	21.5	–
9	2,632.3	348.8	288.4	78.8	209.5	39.5	19.9	19.9	–
16	2,640.6	348.8	286.4	78.6	207.8	41.8	19.2	19.2	–
23	2,653.2	348.8	287.3	78.6	208.7	41.5	19.4	19.4	–
30	2,665.0	348.9	289.9	78.8	211.1	38.9	20.2	20.2	–
Nov	2,668.9	348.9	288.4	78.6	209.8	42.2	20.7	20.7	–
13	2,682.4	348.9	290.6	78.6	212.0	40.3	20.4	20.4	–
20	2,692.4	348.9	292.3	78.6	213.7	38.4	20.7	20.7	–
27	2,706.7	348.9	292.1	78.7	213.4	38.2	20.5	20.5	–
Dec	2,718.7	348.9	294.5	78.7	215.8	36.3	19.8	19.8	–
11	2,731.9	348.9	296.2	78.7	217.5	33.9	19.6	19.6	–
18	2,759.3	348.9	295.4	79.0	216.4	35.4	19.7	19.7	–
25	2,767.8	348.9	298.2	79.1	219.1	32.2	20.5	20.5	–
2016 Jan	2,781.1	338.7	307.1	80.4	226.7	31.1	20.2	20.2	–
8	2,766.9	338.7	308.8	80.4	228.4	29.2	19.9	19.9	–
15	2,778.3	338.7	308.4	80.4	228.0	29.9	21.5	21.5	–
22	2,794.5	338.7	308.0	80.4	227.6	31.8	21.6	21.6	–
29	2,808.3	338.7	305.5	80.5	225.0	33.3	22.4	22.4	–
Feb	2,811.9	338.7	304.8	79.3	225.5	31.9	22.7	22.7	–
12	2,827.6	338.7	304.5	78.6	225.9	32.0	22.3	22.3	–
19	2,837.6	338.7	305.1	78.1	227.0	31.0	21.3	21.3	–
26	2,850.3	338.7	307.3	79.7	227.6	31.5	21.6	21.6	–
2016 Mar	2,859.8	338.7	306.9	79.7	227.2	32.6	21.8	21.8	–
11	2,872.3	338.7	306.9	79.7	227.3	32.2	22.1	22.1	–
18	2,886.2	338.7	307.9	79.7	228.2	29.5	21.4	21.4	–
25	2,897.7	338.7	309.2	79.7	229.5	27.9	21.8	21.8	–
Apr	2,941.8	377.3	297.5	77.4	220.1	29.2	20.9	20.9	–
8	2,953.1	377.3	296.1	77.4	218.6	30.5	19.4	19.4	–
15	2,966.1	377.3	295.5	77.4	218.0	31.7	18.5	18.5	–
22	2,983.2	377.3	294.8	77.4	217.4	31.9	18.2	18.2	–
29	3,000.8	377.3	296.5	77.2	219.4	32.3	18.0	18.0	–
May	3,017.8	377.3	298.2	77.0	221.1	29.0	17.5	17.5	–
13	3,032.8	377.3	298.7	77.0	221.8	29.7	17.6	17.6	–
20	3,054.1	377.3	297.6	76.8	220.8	30.9	18.0	18.0	–
27	3,067.5	377.3	299.0	76.8	222.2	30.4	18.4	18.4	–
June	3,078.6	377.3	300.6	76.8	223.7	30.1	18.6	18.6	–
<b>Deutsche Bundesbank</b>									
2014 July	697.1	104.6	48.8	20.9	27.9	0.1	–	–	–
Aug	712.0	104.6	49.0	20.8	28.2	0.1	–	–	–
Sep	738.3	104.6	51.7	21.9	29.9	–	–	–	–
Oct	736.9	104.6	51.9	21.7	30.2	–	–	–	–
Nov	734.0	104.6	52.0	21.6	30.3	–	–	–	–
Dec	771.0	107.5	51.3	20.6	30.6	–	–	–	–
2015 Jan	805.7	107.5	51.6	20.4	31.2	–	–	–	–
Feb	800.2	107.5	51.9	20.3	31.6	–	–	–	–
Mar	847.9	120.0	56.9	21.3	35.7	–	–	–	–
Apr	856.5	120.0	56.9	21.2	35.6	0.0	–	–	–
May	860.3	120.0	56.8	21.1	35.7	0.0	–	–	–
June	880.1	113.8	54.5	20.6	33.8	–	–	–	–
July	903.5	113.8	53.3	19.9	33.4	–	–	–	–
Aug	930.8	113.8	53.1	20.2	32.9	–	–	–	–
Sep	936.9	109.0	53.0	20.1	32.8	–	–	–	–
Oct	956.3	109.0	53.1	20.1	33.0	–	–	–	–
Nov	1 002.6	109.0	52.6	20.0	32.6	0.0	–	–	–
Dec	1 011.5	105.8	53.7	20.3	33.4	–	0.0	0.0	–
2016 Jan	1 018.5	105.8	53.6	20.4	33.2	0.0	–	–	–
Feb	1 043.7	105.8	55.0	22.0	33.0	0.0	–	–	–
Mar	1 077.6	117.8	53.4	21.5	32.0	0.0	–	–	–
Apr	1 112.7	117.8	54.1	21.5	32.7	0.0	0.0	0.0	–
May	1 159.5	117.8	54.9	21.5	33.4	0.0	–	–	–

\* 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

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 <sup>3</sup>	Intra-Eurosystem liability related to euro banknote issue <sup>2</sup>	Revaluation accounts	Capital and reserves	On reporting date/ End of month <sup>1</sup>
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
<b>Eurosystem <sup>4</sup></b>										
47.3	2.0	4.3	4.3	-	59.2	217.4	-	350.7	97.2	2015 Oct 2
39.6	2.0	4.0	4.0	-	59.2	212.5	-	350.7	97.2	9
39.8	2.0	4.2	4.2	-	59.2	212.0	-	350.7	97.2	16
38.3	2.1	4.9	4.9	-	59.2	215.0	-	350.7	97.2	23
43.0	2.2	5.0	5.0	-	59.2	216.9	-	350.7	97.2	30
41.5	2.1	6.6	6.6	-	59.2	217.6	-	350.7	97.2	Nov 6
41.3	2.0	6.4	6.4	-	59.2	216.5	-	350.7	97.2	13
42.1	2.3	5.6	5.6	-	59.2	216.8	-	350.7	97.2	20
41.0	2.2	5.1	5.1	-	59.2	219.0	-	350.7	97.2	27
39.4	2.1	5.3	5.3	-	59.2	218.0	-	350.7	97.2	Dec 4
37.1	2.0	4.8	4.8	-	59.2	217.7	-	350.7	97.2	11
37.2	2.0	4.3	4.3	-	59.2	217.1	-	350.7	97.2	18
40.8	2.8	4.1	4.1	-	58.2	216.2	-	350.7	97.2	25
54.5	2.8	3.7	3.7	-	59.2	218.6	-	346.2	97.2	2016 Jan 1
38.9	2.8	5.1	5.1	-	59.2	215.6	-	346.2	97.2	8
38.2	4.5	4.2	4.2	-	59.2	215.9	-	346.2	97.6	15
39.1	6.3	3.7	3.7	-	59.2	213.9	-	346.2	97.6	22
40.5	5.8	3.1	3.1	-	59.2	214.1	-	346.2	97.6	29
46.5	4.8	3.8	3.8	-	59.2	214.9	-	346.2	97.7	Feb 5
52.3	3.6	4.3	4.3	-	59.2	216.7	-	346.2	98.2	12
49.9	3.9	4.5	4.5	-	59.2	212.8	-	346.2	98.2	19
52.3	5.3	5.0	5.0	-	59.2	210.2	-	346.2	98.2	26
54.5	7.2	4.1	4.1	-	59.2	209.4	-	346.2	98.2	2016 Mar 4
55.7	6.8	4.6	4.6	-	59.2	210.4	-	346.2	98.2	11
58.7	5.7	4.9	4.9	-	59.2	212.1	-	346.2	98.2	18
56.7	4.6	4.7	4.7	-	59.2	211.9	-	346.2	98.5	25
53.2	4.5	3.6	3.6	-	57.5	208.4	-	376.0	98.7	Apr 1
47.6	4.3	4.0	4.0	-	57.5	205.9	-	376.0	98.7	8
51.9	3.8	4.0	4.0	-	57.5	204.4	-	376.0	98.7	15
55.0	3.2	4.2	4.2	-	57.5	205.2	-	376.0	98.7	22
67.4	4.0	4.3	4.3	-	57.5	205.2	-	376.0	98.7	29
57.0	2.8	4.2	4.2	-	57.5	208.5	-	376.0	99.0	May 6
59.0	2.8	4.9	4.9	-	57.5	206.7	-	376.0	99.1	13
62.2	3.3	5.1	5.1	-	57.5	211.9	-	376.0	99.0	20
58.5	2.9	5.7	5.7	-	57.5	203.9	-	376.0	99.0	27
56.1	3.2	6.3	6.3	-	57.5	203.5	-	376.0	99.0	June 3
<b>Deutsche Bundesbank</b>										
3.4	0.0	1.0	1.0	-	13.7	24.5	251.2	98.3	5.0	2014 July
2.7	0.0	1.4	1.4	-	13.7	24.6	254.8	98.3	5.0	Aug
3.6	0.0	1.1	1.1	-	14.2	25.0	258.7	100.8	5.0	Sep
3.6	0.0	1.4	1.4	-	14.2	25.2	261.8	100.8	5.0	Oct
2.9	0.0	1.6	1.6	-	14.2	25.2	264.4	100.8	5.0	Nov
12.3	0.0	0.8	0.8	-	14.4	25.5	267.9	104.5	5.0	Dec
54.0	0.0	1.3	1.3	-	14.4	25.0	270.3	104.5	5.0	2015 Jan
33.9	0.0	1.9	1.9	-	14.4	25.2	272.4	104.5	5.0	Feb
17.1	0.0	2.1	2.1	-	15.5	23.0	274.7	121.0	5.0	Mar
12.9	0.0	2.1	2.1	-	15.5	23.1	276.9	121.0	5.0	Apr
7.2	0.0	2.2	2.2	-	15.5	23.2	279.3	121.0	5.0	May
9.2	0.0	1.3	1.3	-	15.2	23.5	280.2	113.1	5.0	June
12.1	0.0	0.9	0.9	-	15.2	23.6	284.9	113.1	5.0	July
10.0	0.0	0.5	0.5	-	15.2	23.7	287.3	113.1	5.0	Aug
16.2	0.0	0.5	0.5	-	15.1	24.0	290.1	108.2	5.0	Sep
12.4	0.0	0.8	0.8	-	15.1	24.1	293.1	108.2	5.0	Oct
13.9	0.0	0.4	0.4	-	15.1	24.2	295.2	108.2	5.0	Nov
27.2	0.0	0.6	0.6	-	15.3	24.4	297.8	105.7	5.0	Dec
16.0	0.0	0.1	0.1	-	15.3	25.0	297.1	105.7	5.0	2016 Jan
28.0	0.0	0.2	0.2	-	15.3	22.0	297.7	105.7	5.0	Feb
30.5	0.0	0.3	0.3	-	14.9	22.8	299.8	116.2	5.0	Mar
30.7	0.0	0.8	0.8	-	14.9	22.9	300.9	116.2	5.0	Apr
27.2	0.0	1.4	1.4	-	14.9	23.1	303.9	116.2	5.0	May

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". <sup>3</sup> For the Deutsche Bundesbank: including DM banknotes still in circulation. <sup>4</sup> Source: ECB.











## IV Banks

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

€ billion

End of month	Number of reporting institutions	Balance sheet total <sup>1</sup>	Cash in hand and credit balances with central banks	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)					Participating interests	Other assets <sup>1</sup>	
				Total	of which		Total	of which						
					Balances and loans	Securities issued by banks		Loans	Bills	Securities issued by non-banks	for up to and including 1 year			for more than 1 year
<b>All categories of banks</b>														
2015 Nov	1,776	7,987.6	183.9	2,551.3	1,995.7	550.2	4,033.8	366.2	2,858.7	0.6	800.4	127.1	1,091.4	
Dec	1,775	7,708.3	186.6	2,413.4	1,893.2	517.3	3,985.4	338.1	2,849.9	0.7	788.6	120.4	1,002.5	
2016 Jan	1,773	7,866.1	198.6	2,449.2	1,930.9	514.3	4,005.4	358.8	2,852.0	0.7	784.2	119.9	1,093.0	
Feb	1,772	7,955.7	192.3	2,475.1	1,952.8	517.5	4,013.8	366.8	2,859.7	0.7	775.0	119.1	1,155.3	
Mar	1,771	7,826.0	194.6	2,415.9	1,892.9	518.0	4,001.6	357.4	2,855.3	0.7	777.9	119.4	1,094.5	
Apr	1,769	7,849.9	207.7	2,456.6	1,934.4	516.7	4,023.1	371.8	2,866.2	0.7	773.7	119.0	1,043.6	
<b>Commercial banks<sup>6</sup></b>														
2016 Mar	270	3,081.3	115.5	957.6	872.9	84.4	1,141.0	180.9	720.5	0.4	231.6	57.3	809.9	
Apr	269	3,111.0	123.6	998.2	913.9	84.1	1,155.5	194.8	724.8	0.4	227.6	56.7	777.1	
<b>Big banks<sup>7</sup></b>														
2016 Mar	4	1,877.3	43.6	544.0	506.5	37.5	463.9	96.6	255.3	0.1	105.0	50.7	775.1	
Apr	4	1,878.2	51.5	560.0	522.3	37.6	473.5	107.6	257.5	0.2	101.1	50.3	742.8	
<b>Regional banks and other commercial banks</b>														
2016 Mar	160	895.5	36.1	224.9	182.3	42.4	600.8	60.7	424.8	0.2	114.7	5.5	28.3	
Apr	160	907.7	38.8	231.2	189.3	41.8	604.8	63.5	426.8	0.2	114.0	5.4	27.6	
<b>Branches of foreign banks</b>														
2016 Mar	106	308.5	35.8	188.8	184.2	4.6	76.3	23.6	40.5	0.0	12.0	1.1	6.5	
Apr	105	325.1	33.2	207.0	202.3	4.7	77.2	23.8	40.6	0.0	12.6	0.9	6.7	
<b>Landesbanken</b>														
2016 Mar	9	961.7	13.7	289.0	211.7	76.4	515.9	52.9	365.0	0.1	96.9	10.9	132.3	
Apr	9	937.8	11.9	281.8	205.3	75.7	516.4	56.0	363.9	0.1	95.3	11.0	116.8	
<b>Savings banks</b>														
2016 Mar	413	1,142.0	19.1	188.9	68.4	120.1	903.8	50.9	699.4	0.1	153.3	14.4	15.8	
Apr	412	1,149.2	22.2	190.0	69.4	120.2	907.1	49.6	703.4	0.1	153.9	14.4	15.6	
<b>Regional institutions of credit cooperatives</b>														
2016 Mar	2	297.0	2.0	166.7	137.3	29.4	68.0	12.8	24.0	0.1	31.0	13.2	47.1	
Apr	2	296.5	2.9	169.0	140.2	28.8	66.7	11.8	24.2	0.1	30.4	13.2	44.6	
<b>Credit cooperatives</b>														
2016 Mar	1,021	818.3	13.1	164.5	57.9	106.2	607.7	33.3	475.8	0.0	98.4	14.9	18.1	
Apr	1,021	823.8	12.5	168.4	61.6	106.3	609.7	32.1	478.3	0.1	99.1	14.9	18.2	
<b>Mortgage banks</b>														
2016 Mar	16	346.4	1.0	71.9	51.3	20.3	262.1	7.0	195.2	-	60.0	0.2	11.2	
Apr	16	345.6	2.1	70.1	50.0	19.8	261.7	7.1	195.0	-	59.6	0.2	11.6	
<b>Building and loan associations</b>														
2016 Mar	21	213.1	0.1	59.0	41.4	17.7	149.4	1.4	126.0	.	22.0	0.3	4.3	
Apr	21	213.1	0.1	59.0	41.2	17.8	149.5	1.4	125.8	.	22.2	0.3	4.1	
<b>Special purpose banks</b>														
2016 Mar	19	966.0	30.1	518.3	452.0	63.5	353.7	18.2	249.4	-	84.8	8.2	55.8	
Apr	19	973.1	32.5	520.2	452.8	64.1	356.5	18.9	250.8	-	85.4	8.2	55.6	
<b>Memo item: Foreign banks<sup>8</sup></b>														
2016 Mar	140	983.4	55.0	370.1	328.7	41.4	451.2	67.3	269.7	0.3	111.7	4.4	102.7	
Apr	139	1,005.4	56.3	394.0	353.0	40.9	452.8	67.9	271.5	0.3	110.7	4.3	98.1	
<b>of which: Banks majority-owned by foreign banks<sup>9</sup></b>														
2016 Mar	34	674.9	19.2	181.4	144.6	36.8	374.8	43.7	229.2	0.2	99.7	3.3	96.2	
Apr	34	680.3	23.1	187.0	150.7	36.2	375.6	44.1	231.0	0.3	98.2	3.3	91.3	

\* 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. <sup>1</sup> Owing to the Act Modernising Accounting Law (Gesetz zur Modernisierung des Bilanzrechts) of 25 May 2009, derivative financial instruments in the trading portfolio (trading portfolio derivatives) within the

meaning of section 340e (3) sentence 1 of the German Commercial Code (Handels-gesetzbuch) read in conjunction with section 35 (1) No 1a of the Credit Institution 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. <sup>2</sup> For building and















IV Banks

lending													Period
prises and households					to general government								
Loans			Securities	Memo item Fiduciary loans	Total	Loans			Securities 1	Equalisation claims 2	Memo item Fiduciary loans		
Total	Medium-term	Long-term				Total	Medium-term	Long-term					
<b>End of year or month *</b>													
1,972.7	194.5	1,778.1	209.1	48.2	515.8	358.4	31.7	326.6	157.4	-	4.8	2006	
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	
2,175.1	252.6	1,922.5	200.5	24.3	537.7	280.1	33.8	246.3	257.6	-	2.1	2014 Nov	
2,172.7	251.7	1,921.0	204.2	24.4	532.9	283.1	33.5	249.6	249.8	-	2.1	Dec	
2,175.2	252.5	1,922.7	213.2	24.0	535.3	284.0	32.7	251.3	251.3	-	2.1	2015 Jan	
2,179.6	251.4	1,928.1	212.0	24.1	537.7	283.1	32.7	250.4	254.6	-	2.1	Feb	
2,180.6	251.7	1,928.9	218.6	23.8	534.8	281.9	32.3	249.5	252.9	-	2.1	Mar	
2,182.1	250.5	1,931.7	221.3	23.7	533.7	280.8	29.5	251.3	252.9	-	2.1	Apr	
2,192.6	253.2	1,939.4	214.5	23.6	528.4	280.4	29.5	250.9	248.0	-	2.1	May	
2,190.5	251.5	1,939.0	206.5	23.3	524.2	278.3	28.7	249.5	246.0	-	2.0	June	
2,201.5	250.8	1,950.6	228.7	23.0	525.5	276.6	28.5	248.2	248.9	-	2.0	July	
2,208.2	251.0	1,957.2	224.4	22.9	528.9	275.7	28.2	247.6	253.1	-	2.0	Aug	
2,208.7	251.2	1,957.4	219.7	22.9	530.6	277.5	29.3	248.2	253.1	-	2.0	Sep	
2,220.0	253.2	1,966.8	213.8	22.7	530.2	278.5	29.3	249.2	251.8	-	2.0	Oct	
2,233.7	256.1	1,977.6	217.4	22.5	533.8	278.6	28.1	250.5	255.1	-	2.0	Nov	
2,232.4	256.0	1,976.3	219.0	18.3	527.0	277.0	27.9	249.0	250.0	-	2.1	Dec	
2,235.3	257.1	1,978.3	217.2	18.2	527.2	277.8	27.7	250.1	249.4	-	2.1	2016 Jan	
2,240.2	257.4	1,982.8	215.9	18.0	525.6	276.8	27.7	249.1	248.8	-	2.1	Feb	
2,240.5	257.3	1,983.2	213.5	17.9	521.8	275.6	27.5	248.1	246.2	-	2.0	Mar	
2,250.0	258.6	1,991.4	216.6	17.8	520.1	276.1	27.5	248.7	244.0	-	2.0	Apr	
<b>Changes *</b>													
+ 9.6	+ 10.1	- 0.6	- 16.7	- 2.2	- 36.3	- 25.8	+ 0.1	- 26.0	- 10.5	-	- 0.1	2007	
+ 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	
+ 8.1	+ 0.8	+ 7.2	+ 2.6	- 0.1	- 0.9	- 0.6	- 0.7	+ 0.1	- 0.2	-	+ 0.0	2014 Nov	
+ 1.4	- 0.7	+ 2.1	+ 3.7	+ 0.1	- 8.7	- 0.9	- 0.4	- 0.5	- 7.8	-	- 0.0	Dec	
+ 4.8	+ 1.6	+ 3.2	+ 9.1	- 0.4	+ 1.8	+ 0.4	- 0.9	+ 1.2	+ 1.5	-	- 0.0	2015 Jan	
+ 4.4	- 1.1	+ 5.4	- 1.2	+ 0.1	+ 2.4	- 0.9	- 0.0	- 0.9	+ 3.4	-	-	Feb	
+ 1.0	+ 0.2	+ 0.8	+ 6.6	- 0.2	- 2.9	- 1.2	- 0.3	- 0.9	- 1.7	-	- 0.0	Mar	
+ 1.6	- 1.2	+ 2.8	+ 2.7	- 0.1	- 1.0	- 1.1	- 1.8	+ 0.7	+ 0.0	-	- 0.0	Apr	
+ 10.6	+ 2.8	+ 7.8	- 6.8	- 0.1	- 5.5	- 0.5	- 0.1	- 0.5	- 4.9	-	- 0.0	May	
- 2.1	- 1.7	- 0.4	- 8.0	- 0.3	- 4.2	- 2.1	- 0.7	- 1.4	- 2.0	-	- 0.1	June	
+ 9.7	- 0.7	+ 10.4	+ 22.2	- 0.3	+ 2.5	- 0.4	- 0.2	- 0.2	+ 2.9	-	- 0.0	July	
+ 6.9	+ 0.1	+ 6.8	- 4.3	- 0.1	+ 3.1	- 1.1	- 0.3	- 0.8	+ 4.3	-	- 0.0	Aug	
+ 1.3	+ 0.6	+ 0.7	- 4.7	- 0.1	+ 1.0	+ 1.0	+ 0.9	+ 0.2	- 0.1	-	- 0.0	Sep	
+ 11.6	+ 1.9	+ 9.7	- 5.9	- 0.1	- 0.7	+ 0.6	- 0.1	+ 0.7	- 1.3	-	- 0.0	Oct	
+ 10.5	+ 2.0	+ 8.6	+ 3.6	- 0.2	+ 3.5	+ 0.2	- 1.1	+ 1.3	+ 3.4	-	-	Nov	
- 1.3	- 0.1	- 1.2	+ 1.6	- 0.2	- 6.8	- 1.7	- 0.2	- 1.5	- 5.1	-	+ 0.1	Dec	
+ 3.0	+ 0.4	+ 2.5	- 1.8	- 0.1	+ 0.2	+ 0.9	- 0.2	+ 1.1	- 0.6	-	+ 0.0	2016 Jan	
+ 4.8	+ 1.0	+ 3.7	- 1.1	- 0.1	- 1.7	- 1.1	- 0.0	- 1.0	- 0.6	-	+ 0.0	Feb	
+ 0.2	- 0.1	+ 0.2	- 2.4	- 0.2	- 3.8	- 1.2	- 0.2	- 1.0	- 2.6	-	- 0.1	Mar	
+ 9.4	+ 1.3	+ 8.1	+ 3.0	- 0.0	- 1.6	+ 0.6	- 0.0	+ 0.6	- 2.2	-	- 0.0	Apr	



IV Banks

													Lending to employees and other individuals				Lending to non-profit institutions		Period
Services sector (including the professions)				Memo items		Total	Housing loans	Other lending			Total	of which Housing loans							
of which		Holding companies	Other real estate activities	Lending to self-employed persons <sup>2</sup>	Lending to craft enterprises			Total	of which				Debit balances on wage, salary and pension accounts						
Total	Housing enterprises					Total	Instalment loans <sup>3</sup>		Total	of which Housing loans									
<b>End of year or quarter *</b>														<b>Lending, total</b>					
644.1	188.1	33.9	173.8	389.8	47.9	1,078.6	856.6	222.0	150.0	10.7	14.5	3.8	2014						
645.3	188.6	33.8	173.5	390.9	48.2	1,080.0	858.2	221.8	150.0	11.3	14.4	3.9	2015 Mar						
650.7	190.9	34.8	174.6	393.1	48.1	1,089.6	866.8	222.8	151.6	11.0	14.1	3.5	June						
649.0	191.5	32.0	175.9	394.7	47.7	1,103.0	878.4	224.6	153.6	11.0	14.2	3.6	Sep						
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	Dec						
660.2	194.8	34.4	177.4	397.2	47.1	1,115.9	889.2	226.6	156.8	10.3	14.1	3.4	2016 Mar						
												Short-term lending							
52.9	8.5	6.1	11.8	26.6	6.2	34.2	3.7	30.5	1.9	10.7	0.7	0.0	2014						
52.6	8.3	5.9	11.1	27.2	6.6	34.4	3.8	30.6	2.1	11.3	0.7	0.0	2015 Mar						
54.9	8.6	6.9	10.9	27.0	6.6	33.7	4.1	29.5	1.9	11.0	0.6	0.0	June						
51.0	8.6	6.2	10.4	26.1	6.3	33.8	4.2	29.6	1.7	11.0	0.6	0.0	Sep						
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	Dec						
50.3	8.1	6.5	10.5	25.6	6.2	32.4	3.7	28.7	1.8	10.3	0.5	0.0	2016 Mar						
												Medium-term lending							
68.2	9.4	7.0	19.8	32.0	3.5	72.8	22.4	50.4	45.2	-	0.5	0.0	2014						
67.6	9.7	7.2	19.1	31.9	3.5	72.1	22.1	50.1	45.0	-	0.5	0.0	2015 Mar						
66.9	9.9	7.0	19.4	32.1	3.6	73.2	22.0	51.2	46.2	-	0.5	0.0	June						
66.5	9.9	7.0	19.5	32.3	3.5	73.9	22.1	51.9	46.9	-	0.5	0.0	Sep						
68.4	10.1	7.3	19.3	32.4	3.5	74.2	21.9	52.3	47.4	-	0.6	0.0	Dec						
69.1	10.1	7.2	19.4	32.7	3.5	74.9	21.5	53.3	48.1	-	0.6	0.0	2016 Mar						
												Long-term lending							
523.0	170.2	20.9	142.2	331.2	38.2	971.6	830.5	141.1	102.8	-	13.4	3.7	2014						
525.1	170.5	20.7	143.3	331.8	38.1	973.5	832.3	141.2	102.9	-	13.2	3.9	2015 Mar						
528.8	172.4	20.8	144.3	333.9	37.9	982.7	840.6	142.1	103.6	-	13.0	3.5	June						
531.5	173.0	18.8	146.0	336.3	37.9	995.3	852.1	143.2	105.0	-	13.2	3.6	Sep						
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	Dec						
540.8	176.7	20.7	147.6	338.9	37.4	1,008.6	864.0	144.6	106.9	-	13.0	3.4	2016 Mar						
<b>Change during quarter *</b>														<b>Lending, total</b>					
+ 2.5	+ 0.4	+ 0.1	- 0.2	+ 1.2	+ 0.3	+ 2.5	+ 1.6	+ 0.9	+ 1.1	+ 0.5	- 0.2	+ 0.1	2015 Q1						
+ 4.9	+ 2.0	+ 1.0	+ 0.9	+ 2.3	- 0.1	+ 9.6	+ 8.6	+ 1.0	+ 1.7	- 0.3	- 0.3	- 0.3	Q2						
- 1.1	+ 0.6	- 1.1	+ 1.4	+ 1.9	- 0.3	+ 13.5	+ 11.5	+ 2.0	+ 1.9	+ 0.0	+ 0.3	+ 0.1	Q3						
+ 4.6	+ 2.0	+ 0.3	+ 0.6	+ 0.8	- 0.9	+ 9.0	+ 8.5	+ 0.6	+ 1.0	- 0.9	- 0.3	- 0.1	Q4						
+ 6.1	+ 1.8	+ 1.8	+ 0.9	+ 1.1	+ 0.6	+ 4.4	+ 2.6	+ 1.7	+ 1.9	+ 0.2	- 0.0	- 0.0	2016 Q1						
												Short-term lending							
+ 0.0	- 0.2	- 0.1	- 0.8	+ 0.6	+ 0.5	+ 0.2	+ 0.1	+ 0.1	+ 0.1	+ 0.5	+ 0.0	+ 0.0	2015 Q1						
+ 2.4	+ 0.3	+ 1.0	- 0.1	- 0.1	- 0.1	- 0.5	+ 0.3	- 0.9	- 0.2	- 0.3	- 0.1	- 0.0	Q2						
- 3.7	+ 0.1	- 0.7	- 0.4	- 1.0	- 0.2	+ 0.1	+ 0.1	+ 0.0	- 0.1	+ 0.0	- 0.0	+ 0.0	Q3						
- 1.6	+ 0.1	- 1.1	+ 0.4	- 0.9	- 0.8	+ 0.0	+ 0.0	- 0.0	+ 0.1	- 0.9	- 0.0	+ 0.0	Q4						
+ 2.1	- 0.4	+ 1.7	- 0.2	+ 0.2	+ 0.6	- 0.8	- 0.2	- 0.7	+ 0.1	+ 0.2	- 0.0	+ 0.0	2016 Q1						
												Medium-term lending							
+ 0.1	+ 0.3	+ 0.2	- 0.7	- 0.0	- 0.0	- 0.5	- 0.3	- 0.2	- 0.1	-	- 0.0	+ 0.0	2015 Q1						
- 0.6	+ 0.2	- 0.2	+ 0.3	+ 0.2	+ 0.1	+ 1.1	- 0.1	+ 1.1	+ 1.2	-	+ 0.0	- 0.0	Q2						
- 0.3	- 0.0	+ 0.1	+ 0.1	+ 0.1	- 0.1	+ 0.7	+ 0.1	+ 0.7	+ 0.7	-	+ 0.0	+ 0.0	Q3						
+ 1.3	+ 0.1	+ 0.3	- 0.2	+ 0.1	- 0.0	+ 0.4	- 0.2	+ 0.6	+ 0.5	-	-	+ 0.0	Q4						
+ 0.8	- 0.0	- 0.2	+ 0.1	+ 0.1	+ 0.1	+ 0.8	- 0.3	+ 1.1	+ 0.7	-	+ 0.0	+ 0.0	2016 Q1						
												Long-term lending							
+ 2.4	+ 0.4	- 0.0	+ 1.2	+ 0.6	- 0.2	+ 2.8	+ 1.8	+ 1.0	+ 1.1	-	- 0.2	+ 0.1	2015 Q1						
+ 3.2	+ 1.5	+ 0.2	+ 0.7	+ 2.3	- 0.1	+ 9.1	+ 8.3	+ 0.8	+ 0.7	-	- 0.2	- 0.3	Q2						
+ 2.9	+ 0.5	- 0.5	+ 1.7	+ 2.8	- 0.0	+ 12.7	+ 11.4	+ 1.3	+ 1.4	-	+ 0.3	+ 0.1	Q3						
+ 5.0	+ 1.7	+ 1.0	+ 0.5	+ 1.5	- 0.2	+ 8.6	+ 8.6	+ 0.0	+ 0.4	-	- 0.2	- 0.1	Q4						
+ 3.2	+ 2.2	+ 0.3	+ 1.0	+ 0.8	- 0.1	+ 4.4	+ 3.1	+ 1.3	+ 1.1	-	+ 0.0	- 0.0	2016 Q1						

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





#### IV Banks

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

€ billion

Period	Sight deposits						Time deposits <sup>1,2</sup>					
	Total	by creditor group				Domestic non-profit institutions	Total	by creditor group				
		Domestic households						Domestic households				
		Total	Self-employed persons	Employees	Other individuals		Total	Self-employed persons	Employees	Other individuals		
		<b>End of year or month*</b>										
2013	1,854.4	932.5	906.3	161.3	613.0	132.0	26.2	262.8	247.2	16.5	215.1	15.6
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
2015 Nov	1,990.4	1,109.7	1,078.0	188.2	746.5	143.2	31.7	257.7	244.6	24.9	178.6	41.1
2015 Dec	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 Jan	2,003.3	1,120.2	1,087.7	192.1	751.6	144.1	32.5	259.9	247.0	25.2	180.4	41.4
Feb	2,007.8	1,125.4	1,091.4	192.6	754.6	144.1	34.0	259.1	246.6	24.8	180.2	41.6
Mar	2,003.0	1,122.1	1,088.6	188.6	756.1	143.9	33.5	259.7	247.0	24.8	180.6	41.7
Apr	2,021.5	1,142.1	1,108.3	193.2	769.7	145.5	33.8	260.7	247.7	25.1	180.7	41.9
		<b>Changes*</b>										
2014	+ 72.3	+ 77.2	+ 74.0	+ 11.7	+ 57.1	+ 5.3	+ 3.2	+ 8.1	+ 7.6	+ 1.9	+ 6.4	- 0.6
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
2015 Nov	+ 16.1	+ 17.5	+ 18.3	+ 1.4	+ 15.5	+ 1.3	- 0.8	- 0.5	- 0.4	- 0.1	- 0.2	- 0.1
2015 Dec	+ 7.1	+ 3.6	+ 3.2	+ 0.7	+ 2.0	+ 0.5	+ 0.4	+ 1.6	+ 1.6	+ 0.0	+ 1.1	+ 0.5
2016 Jan	+ 5.7	+ 6.7	+ 6.3	+ 3.1	+ 2.9	+ 0.4	+ 0.4	- 0.1	+ 0.2	+ 0.3	+ 0.1	- 0.3
Feb	+ 4.7	+ 5.2	+ 3.6	+ 0.5	+ 3.0	+ 0.1	+ 1.5	- 0.6	- 0.5	- 0.4	- 0.2	+ 0.2
Mar	- 4.8	- 3.3	- 2.7	- 4.0	+ 1.5	- 0.2	- 0.5	+ 0.6	+ 0.5	- 0.1	+ 0.4	+ 0.1
Apr	+ 18.5	+ 20.0	+ 19.7	+ 4.6	+ 13.5	+ 1.6	+ 0.3	+ 0.9	+ 0.7	+ 0.4	+ 0.1	+ 0.2

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

revisions, which appear in the following Monthly Report, are not specially marked. <sup>1</sup> 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 <sup>1</sup>						State governments					
		Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds <sup>2</sup>	Memo item Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds <sup>2</sup>	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			
		<b>End of year or month*</b>											
2013	183.0	16.0	2.9	7.7	5.3	0.1	15.7	43.6	10.2	10.1	23.0	0.2	14.6
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
2015 Nov	200.5	7.8	2.5	2.6	2.7	0.1	14.4	49.6	12.7	19.7	16.3	0.9	13.4
2015 Dec	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 Jan	193.0	8.4	2.7	3.0	2.6	0.1	14.1	45.9	13.5	15.0	16.5	0.9	13.5
Feb	194.5	8.5	2.8	2.9	2.7	0.1	14.1	46.9	15.0	14.7	16.3	0.9	13.5
Mar	198.3	8.3	3.3	2.3	2.6	0.1	14.0	51.4	15.3	19.2	16.0	0.9	13.3
Apr	196.0	7.9	3.2	2.0	2.6	0.1	14.0	49.3	14.5	16.9	17.0	0.9	13.2
		<b>Changes*</b>											
2014	- 1.2	- 3.3	- 0.3	- 2.9	- 0.1	+ 0.0	- 1.0	- 3.7	+ 2.8	+ 0.4	- 7.2	+ 0.4	- 0.5
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
2015 Nov	+ 8.8	- 0.9	- 0.8	+ 0.1	- 0.1	-	+ 0.0	+ 0.5	- 2.0	+ 2.5	+ 0.0	+ 0.0	- 0.1
2015 Dec	- 3.0	+ 1.8	+ 0.6	+ 1.3	- 0.1	+ 0.0	- 0.3	- 5.3	+ 0.5	- 6.0	+ 0.2	+ 0.0	+ 0.1
2016 Jan	- 4.5	- 1.3	- 0.4	- 0.9	+ 0.0	-	+ 0.0	+ 1.6	+ 0.3	+ 1.3	+ 0.0	+ 0.0	+ 0.0
Feb	+ 3.0	+ 0.1	+ 0.0	- 0.0	+ 0.1	-	+ 0.0	+ 1.4	+ 1.5	+ 0.1	- 0.2	- 0.0	- 0.1
Mar	+ 3.8	+ 0.4	+ 0.6	- 0.1	- 0.0	-	- 0.0	+ 4.4	+ 0.3	+ 4.5	- 0.4	+ 0.0	- 0.1
Apr	- 2.3	- 0.5	- 0.1	- 0.4	+ 0.0	- 0.0	+ 0.0	- 2.0	- 0.9	- 2.2	+ 1.0	+ 0.0	- 0.1

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

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



IV Banks

					Savings deposits <sup>3</sup>			Memo item				
by maturity					Total	Domestic households	Domestic non-profit institutions	Bank savings bonds <sup>4</sup>	Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities) <sup>5</sup>	Liabilities arising from repos	Period
Domestic non-profit institutions	up to and including 1 year	more than 1 year <sup>2</sup>										
		Total	of which									
				up to and including 2 years	more than 2 years							
<b>End of year or month*</b>												
15.6	68.1	194.7	14.0	180.7	599.3	589.6	9.7	59.8	0.0	7.0	–	2013
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
13.1	56.3	201.4	12.2	189.2	583.5	574.5	9.0	39.4	0.0	3.9	–	2015 Nov
13.1	55.5	203.9	12.7	191.1	585.6	576.6	9.0	39.2	0.0	3.8	–	Dec
12.8	54.9	205.0	13.1	191.9	585.2	576.2	9.0	37.9	0.0	3.7	–	2016 Jan
12.6	54.1	205.0	13.2	191.8	585.5	576.5	9.0	37.7	0.1	3.5	–	Feb
12.7	54.2	205.5	13.4	192.1	583.6	574.6	9.0	37.6	0.1	3.4	–	Mar
13.0	54.7	206.0	13.8	192.2	581.8	572.7	9.0	37.1	0.1	3.4	–	Apr
<b>Changes*</b>												
+ 0.5	+ 1.0	+ 7.1	– 2.0	+ 9.0	– 2.1	– 1.9	– 0.3	– 10.9	+ 0.0	– 1.9	–	2014
– 1.8	– 12.8	+ 2.9	+ 1.4	+ 1.4	– 11.5	– 11.1	– 0.5	– 9.8	+ 0.0	– 1.2	–	2015
– 0.1	– 0.8	+ 0.2	+ 0.2	+ 0.1	– 0.3	– 0.0	– 0.2	– 0.6	+ 0.0	– 0.1	–	2015 Nov
+ 0.0	– 0.8	+ 2.4	+ 0.5	+ 1.9	+ 2.1	+ 2.1	– 0.1	– 0.2	+ 0.0	– 0.1	–	Dec
– 0.3	– 0.7	+ 0.6	+ 0.4	+ 0.3	– 0.4	– 0.4	+ 0.0	– 0.6	+ 0.0	– 0.2	–	2016 Jan
– 0.1	– 0.7	+ 0.2	+ 0.2	– 0.0	+ 0.3	+ 0.3	+ 0.0	– 0.2	+ 0.0	– 0.1	–	Feb
+ 0.1	+ 0.1	+ 0.5	+ 0.2	+ 0.3	– 1.9	– 1.9	+ 0.0	– 0.2	+ 0.0	– 0.1	–	Mar
+ 0.3	+ 0.4	+ 0.5	+ 0.4	+ 0.1	– 1.9	– 1.9	– 0.0	– 0.5	+ 0.0	– 0.1	–	Apr

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

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

Local government and local government associations (including municipal special-purpose associations)						Social security funds						
Total	Sight deposits	Time deposits <sup>3</sup>		Savings deposits and bank savings bonds <sup>2,4</sup>	Memo Item Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds <sup>2</sup>	Memo item Fiduciary loans	Period
		for up to and including 1 year	for more than 1 year					for up to and including 1 year	for more than 1 year			
<b>End of year or month*</b>												
44.9	23.5	10.7	6.6	4.1	0.4	78.7	11.6	52.7	13.5	0.9	0.0	2013
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
51.5	27.9	10.1	8.3	5.2	0.4	91.5	15.4	58.3	16.7	1.1	–	2015 Nov
52.4	29.2	9.6	8.3	5.2	0.4	91.2	12.1	60.5	17.5	1.1	–	Dec
46.9	24.3	9.0	8.4	5.2	0.4	91.9	16.1	57.0	17.8	1.1	–	2016 Jan
50.0	27.3	9.0	8.5	5.2	0.4	89.1	16.3	53.7	18.1	1.0	–	Feb
48.8	25.8	9.2	8.6	5.3	0.4	89.8	16.1	53.5	19.2	1.1	–	Mar
49.0	26.1	9.0	8.7	5.3	0.4	89.8	17.1	52.0	19.6	1.1	–	Apr
<b>Changes*</b>												
+ 2.9	+ 1.8	+ 0.4	+ 0.3	+ 0.4	– 0.0	+ 2.9	– 2.4	+ 4.6	+ 0.6	– 0.0	– 0.0	2014
+ 4.1	+ 3.8	– 1.5	+ 1.1	+ 0.7	+ 0.0	+ 4.0	+ 1.2	+ 0.6	+ 1.9	+ 0.2	–	2015
+ 3.3	+ 3.0	+ 0.0	+ 0.2	+ 0.0	–	+ 5.9	– 0.5	+ 6.7	– 0.3	+ 0.0	–	2015 Nov
+ 0.8	+ 1.3	– 0.5	– 0.0	+ 0.0	+ 0.0	– 0.3	– 3.3	+ 2.2	+ 0.8	– 0.0	–	Dec
– 5.5	– 4.9	– 0.6	+ 0.1	– 0.0	–	+ 0.6	+ 4.0	– 3.6	+ 0.3	– 0.0	–	2016 Jan
+ 3.2	+ 3.0	+ 0.1	+ 0.1	+ 0.0	–	– 1.8	+ 0.2	– 2.5	+ 0.6	– 0.0	–	Feb
– 1.2	– 1.6	+ 0.2	+ 0.2	+ 0.1	– 0.0	+ 0.1	– 0.2	– 0.7	+ 1.0	+ 0.0	–	Mar
+ 0.2	+ 0.3	– 0.2	+ 0.0	+ 0.0	–	+ 0.0	+ 1.1	– 1.5	+ 0.4	+ 0.1	–	Apr

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

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

## IV Banks

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

€ billion

Period	Savings deposits 1								Memo item Interest credited on savings deposits	Bank savings bonds 3 , sold to			
	of residents				of non-residents					non-banks, total	domestic non-banks		foreign non-banks
	Total	Total	at three months' notice		at more than three months' notice		Total	of which At three months' notice			Total	of which With maturities of more than 2 years	
			Total	of which Special savings facilities 2	Total	of which Special savings facilities 2							
<b>End of year or month*</b>													
2013	620.0	610.1	532.4	413.5	77.8	65.2	9.9	7.9	7.5	92.2	76.6	59.3	15.6
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
2015 Dec	605.4	596.5	534.6	379.7	61.9	48.0	8.9	7.4	2.3	64.9	56.1	41.0	8.7
2016 Jan	605.0	596.1	535.5	378.0	60.6	46.9	8.9	7.4	0.2	63.5	54.8	39.9	8.7
Feb	605.2	596.4	537.1	377.5	59.3	45.5	8.8	7.4	0.2	63.3	54.6	39.7	8.7
Mar	603.2	594.5	536.3	375.6	58.2	44.4	8.7	7.3	0.1	63.0	54.4	39.3	8.5
Apr	601.4	592.7	535.6	373.4	57.1	43.3	8.6	7.3	0.1	62.4	54.0	38.9	8.4
<b>Changes*</b>													
2014	- 3.0	- 2.4	- 2.4	- 13.0	+ 0.0	- 1.0	- 0.6	- 0.5	.	- 12.3	- 10.6	- 7.8	- 1.8
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
2015 Dec	+ 2.1	+ 2.2	+ 3.0	+ 2.2	- 0.9	- 1.0	- 0.0	+ 0.0	.	- 1.0	- 0.7	- 0.7	- 0.3
2016 Jan	- 0.4	- 0.4	+ 0.9	- 1.8	- 1.3	- 1.1	- 0.1	- 0.0	.	- 0.6	- 0.6	- 0.6	- 0.0
Feb	+ 0.2	+ 0.3	+ 1.6	- 0.5	- 1.3	- 1.3	- 0.1	- 0.0	.	- 0.2	- 0.2	- 0.3	+ 0.0
Mar	- 2.0	- 1.9	- 0.8	- 2.1	- 1.1	- 1.1	- 0.1	- 0.0	.	- 0.4	- 0.2	- 0.4	- 0.2
Apr	- 1.8	- 1.8	- 0.7	- 2.2	- 1.1	- 1.1	- 0.1	- 0.0	.	- 0.6	- 0.5	- 0.4	- 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** Excluding deposits under savings and loan contracts, which are classified

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

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

€ billion

Period	Negotiable bearer debt securities and money market paper										Non-negotiable bearer debt securities and money market paper 6		Subordinated	
	Total	of which							Total	of which with maturities of more than 2 years	Total	of which with maturities of more than 2 years	negotiable debt securities	non-negotiable debt securities
		Floating rate bonds 1	Zero coupon bonds 1,2	Foreign currency bonds 3,4	Certificates of deposit	with maturities of								
						Total	up to and including 1 year							
							of which without a nominal guarantee 5	more than 1 year up to and including 2 years						
<b>End of year or month*</b>														
2013	1,142.7	315.9	26.3	321.2	54.8	69.0	2.5	34.7	4.4	1,039.0	0.6	0.2	37.0	1.1
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
2015 Dec	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 Jan	1,076.5	189.8	28.3	380.2	87.0	105.3	2.4	31.7	5.8	939.4	0.2	0.2	32.2	0.5
Feb	1,088.5	187.0	32.0	392.8	96.6	119.0	2.5	32.6	5.9	936.9	0.2	0.2	32.1	0.5
Mar	1,077.6	178.4	30.8	378.0	92.2	113.7	2.4	31.1	5.7	932.9	0.3	0.2	32.8	0.5
Apr	1,085.7	177.9	32.2	386.4	95.9	118.6	2.4	31.3	5.9	935.7	0.3	0.2	33.3	0.5
<b>Changes*</b>														
2014	- 28.7	- 29.5	+ 0.0	+ 32.7	+ 14.4	+ 14.6	- 0.7	- 8.4	+ 0.6	- 35.0	+ 0.4	- 0.0	+ 0.2	+ 0.2
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
2015 Dec	- 57.3	- 32.1	- 1.7	- 19.7	- 4.7	- 6.7	- 0.5	- 0.8	- 0.6	- 49.8	+ 0.0	- 0.0	- 6.1	+ 0.0
2016 Jan	+ 0.7	+ 1.2	- 2.0	- 3.9	- 1.7	- 4.5	+ 0.3	+ 3.3	+ 0.0	+ 1.9	- 0.1	- 0.0	+ 0.3	- 0.0
Feb	+ 12.1	- 2.8	+ 3.7	+ 12.7	+ 9.6	+ 13.7	+ 0.1	+ 0.9	+ 0.1	- 2.5	- 0.0	- 0.0	- 0.1	-
Mar	- 10.9	- 8.7	- 1.2	- 14.8	- 4.4	- 5.4	- 0.1	- 1.5	- 0.1	- 4.0	+ 0.1	+ 0.0	+ 0.7	-
Apr	+ 7.8	- 0.5	+ 1.4	+ 8.4	+ 3.6	+ 4.9	+ 0.0	+ 0.2	+ 0.2	+ 2.6	- 0.0	- 0.0	+ 0.5	-

\* See Table IV.2, footnote\*; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** 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 <b>13</b>	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)				Deposits of banks (MFIs) <b>5</b>		Deposits of non-banks (non-MFIs)		Bearer debt securities outstanding	Capital (including published reserves) <b>7</b>	<i>Memo item</i> New contracts entered into in year or month <b>8</b>
			Credit balances and loans (excluding building loans) <b>1</b>	Building loans <b>2</b>	Bank debt securities <b>3</b>	Building loans			Securities (including Treasury bills and Treasury discount paper) <b>4</b>	Deposits under savings and loan contracts	Sight and time deposits	Deposits under savings and loan contracts	Sight and time deposits <b>6</b>			
						Loans under savings and loan contracts	Interim and bridging loans	Other building loans								
<b>All building and loan associations</b>																
2014	21	211.6	45.6	0.0	16.6	18.7	87.2	17.3	20.6	1.9	21.3	156.8	5.2	2.8	9.2	94.6
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 Feb	21	213.6	42.6	0.0	17.8	15.5	93.8	17.5	21.7	2.0	20.2	160.0	5.4	2.4	9.8	7.5
Mar	21	213.1	41.5	0.0	17.7	15.3	94.6	17.6	22.0	2.1	19.6	160.1	5.2	2.4	10.1	7.9
Apr	21	213.1	41.3	0.0	17.8	15.4	94.3	17.6	22.2	2.1	19.4	160.1	5.3	2.4	10.1	7.5
<b>Private building and loan associations</b>																
2016 Feb	12	148.0	26.3	–	9.7	11.4	73.2	14.9	9.0	1.4	17.1	105.3	5.1	2.4	6.6	4.8
Mar	12	147.4	25.3	–	9.5	11.3	73.8	15.0	9.0	1.4	16.6	105.4	4.9	2.4	6.6	5.0
Apr	12	147.3	25.2	–	9.5	11.4	73.4	15.0	9.3	1.4	16.4	105.3	5.0	2.4	6.6	4.9
<b>Public building and loan associations</b>																
2016 Feb	9	65.6	16.3	0.0	8.1	4.1	20.7	2.6	12.7	0.7	3.1	54.7	0.3	–	3.2	2.6
Mar	9	65.7	16.2	0.0	8.2	4.0	20.8	2.6	12.9	0.7	3.1	54.8	0.3	–	3.5	2.9
Apr	9	65.8	16.1	0.0	8.3	4.0	20.9	2.6	13.0	0.7	3.0	54.9	0.3	–	3.5	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 <b>10</b>		<i>Memo item</i> Housing bonuses received <b>12</b>	
				Total	of which Net allocations <b>11</b>	Total	Allocations			Newly granted interim and bridging loans and other building loans	Total	of which Under allocated contracts	Total	of which Repayments during quarter		
	Amounts paid into savings and loan accounts <b>9</b>	Interest credited on deposits under savings and loan contracts	Repayments of deposits under cancelled savings and loan contracts				Deposits under savings and loan contracts	Loans under savings and loan contracts <b>9</b>								
	of which Applied to settlement of interim and bridging loans	of which Applied to settlement of interim and bridging loans	Total	of which Applied to settlement of interim and bridging loans	Total	Total	Total	Total	Total							
<b>All building and loan associations</b>																
2014	29.5	2.5	6.5	45.7	27.9	39.9	16.7	4.2	6.1	3.6	17.1	14.5	8.0	10.1	8.4	0.4
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 Feb	2.4	0.0	0.5	3.8	2.3	3.3	1.5	0.4	0.4	0.3	1.4	15.9	8.3	0.7		0.0
Mar	2.2	0.0	0.6	4.0	2.3	3.4	1.4	0.3	0.4	0.3	1.6	16.0	8.3	0.7	1.9	0.0
Apr	2.4	0.0	0.6	4.6	3.1	4.0	1.7	0.6	0.7	0.6	1.5	16.1	8.4	0.7		0.0
<b>Private building and loan associations</b>																
2016 Feb	1.5	0.0	0.3	2.7	1.6	2.5	1.1	0.3	0.3	0.3	1.1	11.3	5.0	0.5		0.0
Mar	1.4	0.0	0.3	2.9	1.5	2.6	1.0	0.3	0.3	0.2	1.3	11.3	5.0	0.5	1.3	0.0
Apr	1.6	0.0	0.3	3.5	2.4	3.2	1.4	0.5	0.6	0.5	1.2	11.4	5.1	0.5		0.0
<b>Public building and loan associations</b>																
2016 Feb	0.8	0.0	0.3	1.0	0.7	0.7	0.4	0.1	0.1	0.0	0.3	4.6	3.2	0.2		0.0
Mar	0.8	0.0	0.4	1.2	0.8	0.8	0.4	0.1	0.1	0.1	0.3	4.6	3.2	0.2	0.5	0.0
Apr	0.8	0.0	0.3	1.1	0.8	0.8	0.4	0.1	0.1	0.1	0.3	4.7	3.3	0.2		0.0

\* Excluding assets and liabilities and/or transactions of foreign branches. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Including claims on building and loan associations, claims arising from registered debt securities and central bank credit balances. **2** Loans under savings and loan contracts and interim and bridging loans. **3** Including money market paper and small amounts of other securities issued by banks. **4** Including equalisation claims. **5** Including liabilities to building and loan associations. **6** Including small amounts of savings deposits. **7** Including participation rights capital and fund for general banking risks.

**8** Total amount covered by the contracts; only contracts newly entered into, for which the contract fee has been fully paid. Increases in the sum contracted count as new contracts. **9** For disbursements of deposits under savings and loan contracts arising from the allocation of contracts see "Capital disbursed". **10** Including housing bonuses credited. **11** Only allocations accepted by the beneficiaries; including allocations applied to settlement of interim and bridging loans. **12** The amounts already credited to the accounts of savers or borrowers are also included in "Amounts paid into savings and loan accounts" and "Interest and repayments received on building loans". **13** See Table IV.2, footnote 1.

## IV Banks

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

€ billion

Period	Number of		Lending to banks (MFIs)						Lending to non-banks (non-MFIs)				Other assets <sup>7</sup>		
	German banks (MFIs) with foreign branches and/or foreign subsidiaries	foreign branches <sup>1</sup> and/or foreign subsidiaries	Balance sheet total <sup>7</sup>	Credit balances and loans			Money market paper, securities <sup>2,3</sup>	Loans			Money market paper, securities <sup>2</sup>	Total	of which Derivative financial instruments in the trading portfolio		
	Total	Total	German banks	Foreign banks	Money market paper, securities <sup>2,3</sup>	Total	Total	to German non-banks	to foreign non-banks	Money market paper, securities <sup>2</sup>	Total				
<b>Foreign branches</b>													<b>End of year or month *</b>		
2013	56	209	1,726.4	435.6	421.9	141.6	280.3	13.7	519.6	411.3	11.0	400.3	108.3	771.1	485.6
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
2015 June	53	201	1,970.5	578.9	561.3	196.5	364.8	17.6	642.2	520.2	14.5	505.6	122.1	749.3	513.7
July	53	203	1,983.3	579.6	561.7	199.1	362.6	17.9	632.2	512.8	14.5	498.3	119.5	771.5	538.8
Aug	52	202	1,966.9	602.1	584.4	189.0	395.4	17.7	627.2	511.0	14.3	496.7	116.2	737.6	544.1
Sep	51	199	1,977.3	586.4	568.5	180.7	387.8	17.9	624.9	507.9	13.9	494.0	117.0	766.0	552.1
Oct	51	199	1,946.7	558.2	540.2	152.9	387.3	18.0	633.7	513.2	13.9	499.3	120.5	754.8	525.1
Nov	51	199	1,980.5	533.8	515.8	150.0	365.8	18.0	658.8	528.5	14.6	513.9	130.4	787.9	557.2
Dec	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 Jan	50	196	1,960.5	540.7	523.3	169.1	354.2	17.4	652.2	529.7	14.2	515.5	122.6	767.5	568.7
Feb	49	192	2,022.6	555.3	538.2	173.5	364.7	17.2	658.4	538.2	14.3	523.9	120.2	808.8	607.9
Mar	49	192	1,943.8	558.9	543.2	172.4	370.8	15.7	642.2	529.2	14.6	514.6	113.1	742.6	557.5
<b>Changes *</b>															
2014	-	- 4	+ 119.6	+ 74.4	+ 72.2	+ 59.6	+ 12.6	+ 2.2	+ 38.0	+ 31.4	+ 3.0	+ 28.4	+ 6.6	+ 7.5	+ 66.4
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
2015 July	± 0	+ 2	+ 11.1	- 4.4	- 4.5	+ 2.6	- 7.1	+ 0.2	- 16.6	- 13.0	- 0.1	- 12.9	- 3.6	+ 20.5	+ 21.1
Aug	- 1	- 1	- 14.3	+ 28.9	+ 28.9	- 10.1	+ 38.9	+ 0.0	+ 4.2	+ 6.1	- 0.2	+ 6.2	- 1.9	- 31.9	+ 10.5
Sep	- 1	- 3	+ 10.3	- 15.7	- 15.9	- 8.4	- 7.6	+ 0.2	- 1.8	- 2.7	- 0.4	- 2.3	+ 0.9	+ 28.3	+ 8.1
Oct	-	-	- 32.3	- 33.6	- 33.5	- 27.8	- 5.7	- 0.1	+ 1.4	- 1.0	- 0.0	- 1.0	+ 2.4	- 12.9	- 31.3
Nov	-	-	+ 30.2	- 35.3	- 34.8	- 2.9	- 31.9	- 0.5	+ 10.7	+ 2.9	+ 0.7	+ 2.2	+ 7.8	+ 29.4	+ 23.8
Dec	-	- 1	- 135.8	+ 0.3	+ 0.7	+ 11.2	- 10.6	- 0.4	- 11.7	- 6.8	- 0.6	- 6.2	- 4.9	- 106.1	- 51.3
2016 Jan	- 1	- 2	+ 118.2	+ 16.1	+ 15.9	+ 7.9	+ 8.1	+ 0.2	+ 20.9	+ 21.3	+ 0.2	+ 21.1	- 0.4	+ 85.8	+ 71.1
Feb	- 1	- 4	+ 61.6	+ 13.6	+ 13.8	+ 4.4	+ 9.5	- 0.3	+ 5.1	+ 7.4	+ 0.1	+ 7.3	- 2.3	+ 40.7	+ 38.8
Mar	-	-	- 75.2	+ 14.9	+ 16.0	- 1.0	+ 17.0	- 1.1	- 1.0	+ 4.0	+ 0.3	+ 3.7	- 5.0	- 62.5	- 39.6
<b>Foreign subsidiaries</b>													<b>End of year or month *</b>		
2013	33	75	425.2	187.9	158.7	91.4	67.3	29.2	185.4	148.3	26.1	122.3	37.1	52.0	-
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	-
2015 June	27	62	386.0	140.5	124.6	67.1	57.4	15.9	188.8	155.6	22.9	132.7	33.1	56.7	-
July	25	60	377.2	131.4	116.0	65.2	50.9	15.4	190.0	156.3	22.5	133.8	33.7	55.8	-
Aug	25	60	382.5	136.1	121.6	67.2	54.4	14.5	185.4	152.3	22.4	129.9	33.1	61.0	-
Sep	25	59	386.2	133.4	119.3	58.0	61.2	14.1	186.1	152.0	22.8	129.2	34.2	66.7	-
Oct	25	59	380.8	130.3	114.9	55.6	59.2	15.4	185.8	152.7	22.8	129.9	33.0	64.8	-
Nov	25	59	379.5	121.1	107.4	44.5	62.8	13.7	191.7	158.3	22.5	135.8	33.3	66.8	-
Dec	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 Jan	24	58	375.6	129.1	116.5	53.7	62.7	12.7	185.1	152.9	21.7	131.1	32.3	61.3	-
Feb	24	58	359.4	120.7	108.5	50.7	57.9	12.2	174.1	141.8	22.3	119.6	32.3	64.6	-
Mar	24	58	352.2	113.6	102.1	47.9	54.2	11.5	173.4	140.6	22.6	118.1	32.8	65.2	-
<b>Changes *</b>															
2014	- 5	- 12	- 46.7	- 39.9	- 26.3	- 8.0	- 18.2	- 13.6	- 17.0	- 11.4	- 4.4	- 7.0	- 5.6	+ 10.1	-
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	-
2015 July	- 2	- 2	- 10.4	- 9.9	- 9.2	- 2.0	- 7.2	- 0.7	+ 0.4	- 0.2	- 0.4	+ 0.2	+ 0.6	- 1.0	-
Aug	-	-	+ 7.9	+ 5.8	+ 6.5	+ 2.0	+ 4.5	- 0.7	- 3.3	- 2.7	- 0.1	- 2.6	- 0.6	+ 5.3	-
Sep	-	- 1	+ 3.9	- 2.6	- 2.3	- 9.1	+ 6.9	- 0.4	+ 0.8	- 0.2	+ 0.4	- 0.6	+ 1.0	+ 5.7	-
Oct	-	-	- 7.2	- 4.0	- 5.1	- 2.4	- 2.7	+ 1.1	- 1.3	- 0.1	+ 0.0	- 0.1	- 1.1	- 2.0	-
Nov	-	-	- 4.8	- 10.9	- 8.8	- 11.1	+ 2.3	- 2.1	+ 4.1	+ 3.8	- 0.2	+ 4.1	+ 0.3	+ 2.0	-
Dec	- 1	- 1	- 0.7	+ 6.8	+ 7.2	+ 5.6	+ 1.7	- 0.4	- 5.9	- 4.3	- 0.3	- 4.0	- 1.5	- 1.6	-
2016 Jan	-	-	+ 0.6	+ 3.0	+ 3.3	+ 3.6	- 0.3	- 0.3	+ 1.4	+ 0.9	- 0.5	+ 1.4	+ 0.5	- 3.8	-
Feb	-	-	- 16.4	- 8.5	- 8.0	- 3.1	- 5.0	- 0.5	- 11.2	- 11.2	+ 0.5	- 11.7	+ 0.0	+ 3.6	-
Mar	-	-	- 3.7	- 5.2	- 4.8	- 2.7	- 2.1	- 0.4	+ 0.9	+ 0.4	+ 0.3	+ 0.1	+ 0.5	+ 0.6	-

\* In this table "foreign" also includes the country of domicile of the foreign branches and foreign subsidiaries. Statistical revisions have been eliminated from the changes. (Breaks owing to changes in the reporting population have not been eliminated from

the flow figures for the foreign subsidiaries.) The figures for the latest date are always to be regarded as provisional; subsequent revisions, which appear in the following Monthly Report, are not specially marked. <sup>1</sup> Several branches in a given

IV Banks

Deposits										Money market paper and debt securities outstanding <sup>5</sup>	Working capital and own funds	Other liabilities <sup>6,7</sup>		Period
Total	of banks (MFIs)			of non-banks (non-MFIs)				Total	of which Derivative financial instruments in the trading portfolio					
	Total	German banks	Foreign banks	Total	German non-banks <sup>4</sup>		Foreign non-banks							
					Short-term	Medium and long-term								
<b>End of year or month *</b>														
<b>Foreign branches</b>														
890.9	596.4	327.0	269.4	294.5	24.2	19.1	5.1	270.3	125.4	41.2	668.9	484.1	2013	
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	
1,139.6	798.9	433.8	365.1	340.7	20.4	15.3	5.1	320.3	144.5	47.7	638.7	509.5	2015 June	
1,143.4	792.8	417.7	375.1	350.5	20.4	15.8	4.7	330.1	144.1	47.6	648.1	536.0	July	
1,144.2	797.5	416.5	381.0	346.7	19.9	15.4	4.6	326.8	138.3	47.3	637.1	537.1	Aug	
1,122.3	774.4	419.2	355.3	347.8	19.4	14.9	4.5	328.4	141.6	47.3	666.1	544.8	Sep	
1,124.6	763.8	406.5	357.3	360.8	19.7	15.0	4.7	341.1	141.0	47.6	633.5	520.6	Oct	
1,124.3	742.0	377.3	364.7	382.3	22.0	17.0	5.0	360.3	138.6	48.4	669.2	554.0	Nov	
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	Dec	
1,101.8	733.9	357.8	376.1	367.9	21.3	16.6	4.8	346.5	129.4	50.0	679.3	566.3	2016 Jan	
1,105.0	734.8	368.7	366.1	370.3	22.1	17.4	4.7	348.2	127.7	49.7	740.1	605.7	Feb	
1,083.8	714.8	344.5	370.3	369.0	23.6	19.5	4.1	345.4	121.3	49.4	689.3	559.2	Mar	
<b>Changes *</b>														
+ 101.5	+112.9	+ 89.2	+ 23.6	- 11.4	- 3.7	- 3.0	- 0.7	- 7.7	+ 3.0	+ 4.0	+ 11.1	+ 73.4	2014	
- 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	
+ 1.6	- 11.3	- 16.1	+ 4.9	+ 9.7	- 0.0	+ 0.5	- 0.5	+ 9.7	- 2.1	- 0.0	+ 9.4	+ 22.1	2015 July	
+ 7.6	+ 11.2	- 1.2	+ 12.4	- 3.5	- 0.5	- 0.4	- 0.1	- 3.0	- 3.8	- 0.3	- 11.0	+ 6.7	Aug	
- 22.1	- 23.2	+ 2.7	- 25.9	+ 1.1	- 0.5	- 0.5	- 0.0	+ 1.6	+ 3.2	+ 0.0	+ 29.0	+ 7.7	Sep	
- 2.7	- 15.5	- 12.7	- 2.8	+ 12.8	+ 0.3	+ 0.1	+ 0.1	+ 12.5	- 2.2	+ 0.2	- 32.6	- 28.7	Oct	
- 11.5	- 33.4	- 29.2	- 4.2	+ 21.9	+ 2.3	+ 2.0	+ 0.4	+ 19.6	- 6.0	+ 0.9	+ 35.7	+ 24.6	Nov	
- 55.2	- 18.9	- 18.0	- 0.9	- 36.4	- 1.0	- 0.8	- 0.2	- 35.4	- 7.2	+ 1.5	- 66.8	- 49.3	Dec	
+ 42.4	+ 20.1	- 1.5	+ 21.6	+ 22.3	+ 0.3	+ 0.4	- 0.1	+ 22.0	+ 1.1	+ 0.1	+ 76.2	+ 70.3	2016 Jan	
+ 2.0	- 0.4	+ 10.9	- 11.3	+ 2.4	+ 0.8	+ 0.8	- 0.0	+ 1.6	- 2.2	- 0.3	+ 60.9	+ 39.1	Feb	
- 9.5	- 8.6	- 24.2	+ 15.5	- 0.9	+ 1.5	+ 2.1	- 0.7	- 2.3	- 2.7	- 0.3	- 50.9	- 34.9	Mar	
<b>End of year or month *</b>														
<b>Foreign subsidiaries</b>														
334.2	201.1	113.4	87.7	133.0	18.5	16.4	2.0	114.6	21.3	30.0	39.8	-	2013	
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	
296.1	157.1	79.5	77.6	139.0	14.1	11.6	2.5	125.0	18.4	26.8	44.7	-	2015 June	
289.0	155.5	78.2	77.3	133.5	14.2	11.7	2.5	119.4	17.9	26.4	43.9	-	July	
298.2	160.9	82.3	78.6	137.3	13.9	11.4	2.5	123.3	14.3	26.2	43.8	-	Aug	
301.6	168.9	94.6	74.3	132.7	14.4	11.9	2.5	118.2	14.4	26.3	44.0	-	Sep	
298.3	166.2	91.7	74.5	132.1	14.8	12.3	2.5	117.3	13.4	26.5	42.6	-	Oct	
293.4	159.3	90.2	69.0	134.1	11.8	9.2	2.6	122.3	14.8	26.7	44.7	-	Nov	
292.3	166.7	99.6	67.1	125.7	13.1	10.5	2.6	112.6	14.4	26.3	42.9	-	Dec	
294.1	170.0	101.9	68.1	124.1	11.9	9.4	2.6	112.2	14.5	26.4	40.6	-	2016 Jan	
282.1	157.1	99.1	58.0	125.0	13.2	10.5	2.8	111.8	12.9	24.3	40.1	-	Feb	
275.0	160.5	100.5	59.9	114.5	13.4	10.5	2.9	101.1	13.3	24.2	39.6	-	Mar	
<b>Changes *</b>														
- 45.5	- 32.4	- 12.3	- 20.1	- 13.1	+ 1.8	- 1.9	+ 3.8	- 14.9	- 3.0	- 4.0	+ 5.8	-	2014	
- 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	
+ 8.5	- 2.5	- 1.3	- 1.2	- 6.0	+ 0.1	+ 0.1	+ 0.0	- 6.1	- 0.5	- 0.4	- 1.1	-	2015 July	
+ 11.0	+ 6.5	+ 4.1	+ 2.4	+ 4.5	- 0.2	- 0.3	+ 0.0	+ 4.7	- 3.6	- 0.2	+ 0.6	-	Aug	
+ 3.4	+ 8.0	+ 12.3	- 4.3	- 4.6	+ 0.5	+ 0.5	- 0.0	- 5.1	+ 0.1	+ 0.1	+ 0.3	-	Sep	
- 4.7	- 3.5	- 2.9	- 0.6	- 1.1	+ 0.4	+ 0.4	- 0.0	- 1.5	- 1.1	+ 0.2	- 1.7	-	Oct	
- 7.8	- 8.6	- 1.5	- 7.1	+ 0.8	- 3.0	- 3.1	+ 0.1	+ 3.8	+ 1.4	+ 0.2	+ 1.4	-	Nov	
+ 1.3	+ 8.7	+ 9.3	- 0.6	- 7.4	+ 1.3	+ 1.2	+ 0.0	- 8.7	- 0.4	- 0.4	- 1.2	-	Dec	
+ 2.3	+ 3.6	+ 2.3	+ 1.3	- 1.3	- 1.1	- 1.1	- 0.0	- 0.1	+ 0.1	+ 0.1	- 1.9	-	2016 Jan	
- 12.1	- 12.9	- 2.8	- 10.1	+ 0.9	+ 1.3	+ 1.1	+ 0.2	- 0.5	- 1.6	- 2.1	- 0.7	-	Feb	
- 4.2	+ 4.8	+ 1.4	+ 3.4	+ 9.0	+ 0.2	- 0.0	+ 0.2	- 9.2	+ 0.4	- 0.1	+ 0.2	-	Mar	

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 <sup>1</sup>	Reserve base <sup>2</sup>	Required reserves before deduction of lump-sum allowance <sup>3</sup>	Required reserves after deduction of lump-sum allowance <sup>4</sup>	Current accounts <sup>5</sup>	Excess reserves <sup>6</sup>	Deficiencies <sup>7</sup>
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 <sup>8</sup>	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 <sup>9</sup>	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 Mar	11,475.9	114.8	114.3	570.0	455.7	0.0
Apr <sup>P</sup>	11,548.6	115.5	115.0	623.8	508.7	...
May	...	...	...	...	...	...
June <sup>P</sup>	...	...	115.9	...	...	...

### 2 Reserve maintenance in Germany

€ million

Maintenance period beginning in <sup>1</sup>	Reserve base <sup>2</sup>	German share of euro-area reserve base in per cent	Required reserves before deduction of lump-sum allowance <sup>3</sup>	Required reserves after deduction of lump-sum allowance <sup>4</sup>	Current accounts <sup>5</sup>	Excess reserves <sup>6</sup>	Deficiencies <sup>7</sup>
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 <sup>8</sup>	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 Mar	3,156,940	27.5	31,569	31,398	162,446	131,048	0
Apr	3,183,080	27.6	31,831	31,660	186,505	154,846	0
May	...	...	...	...	...	...	...
June <sup>P</sup>	3,206,108	...	32,061	31,890	...	...	...

### (a) Required reserves of individual categories of banks

€ million

Maintenance period beginning in <sup>1</sup>	Big banks	Regional banks and other commercial banks	Branches of foreign banks	Landesbanken and savings banks	Regional institutions of credit cooperatives and credit cooperatives	Mortgage banks	Special purpose banks and building and loan associations
2010	10,633	7,949	1,845	18,128	9,914	556	1,409
2011	10,459	8,992	3,078	18,253	10,230	601	1,531
2012 <sup>8</sup>	5,388	4,696	2,477	9,626	5,262	248	871
2013	5,189	4,705	1,437	9,306	5,479	239	906
2014	5,593	4,966	1,507	9,626	5,753	216	934
2015	6,105	5,199	2,012	10,432	6,100	226	1,127
2016 Mar	5,993	5,107	2,126	10,650	6,283	239	1,001
Apr	5,903	5,167	2,222	10,713	6,328	235	1,095
May	...	...	...	...	...	...	...
June	5,967	5,196	2,366	10,742	6,342	231	1,046

### (b) Reserve base by subcategories of liabilities

€ million

Maintenance period beginning in <sup>1</sup>	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 <sup>8</sup>	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 Mar	2,105,121	3,158	357,530	594,110	97,018
Apr	2,117,242	2,655	361,713	594,518	107,165
May	...	...	...	...	...
June	2,128,104	3,241	378,003	590,967	105,797

<sup>1</sup> 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.  
<sup>2</sup> 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)).  
<sup>3</sup> Amount after applying the reserve ratio to the reserve base. The reserve ratio for liabilities with agreed maturities of up to two years is 1%.  
<sup>4</sup> Article 5 (2) of the Regulation of the European Central Bank on the application of

minimum reserves.  
<sup>5</sup> Average credit balances of credit institutions at national central banks.  
<sup>6</sup> Average credit balances less required reserves after deduction of the lump-sum allowance.  
<sup>7</sup> Required reserves after deduction of the lump-sum allowance.  
<sup>8</sup> The reserve ratio for liabilities with agreed maturities of up to two years was 2% between 1 January 1999 and 17 January 2012. Since 18 January 2012, it has stood at 1%.  
<sup>9</sup> Required reserves after deduction of the lump-sum allowance, including required reserves of Lithuania (€ 0.154 billion). Required reserves of the euro area up to 31 December 2014 amounted to € 106.2 billion.

## VI Interest rates

### 1 ECB interest rates

% per annum

Applicable from	Deposit facility	Main refinancing operations			Marginal lending facility
		Fixed rate	Minimum bid rate		
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	

1 Pursuant to section 247 of the Civil Code.

### 2 Base rates

% per annum

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

### 3 Eurosystem monetary policy operations allotted through tenders \*

Date of settlement	Bid amount € million	Allotment amount	Fixed rate tenders		Variable rate tenders		Running for ... days
			Fixed rate	Minimum bid rate	Marginal rate 1	Weighted average rate	
			% per annum				
<b>Main refinancing operations</b>							
2016 May 11	51,440	51,440	0.00	–	–	–	7
May 18	49,947	49,947	0.00	–	–	–	7
May 25	60,203	60,203	0.00	–	–	–	7
June 1	51,905	51,905	0.00	–	–	–	7
June 8	50,848	50,848	0.00	–	–	–	7
June 15	49,140	49,140	0.00	–	–	–	7
<b>Long-term refinancing operations</b>							
2016 Mar 30	7,342	7,342	0.00	–	–	–	910
Mar 31	10,254	10,254	2 0.00	–	–	–	91
Apr 28	9,388	9,388	2 ...	–	–	–	91
May 26	6,270	6,270	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
2015 Nov	–0.13	–0.16	–0.14	–0.09	–0.02	0.02	0.08
Dec	–0.20	–0.23	–0.19	–0.13	–0.04	0.00	0.06
2016 Jan	–0.24	–0.26	–0.22	–0.15	–0.06	–0.01	0.04
Feb	–0.24	–0.27	–0.25	–0.18	–0.12	–0.06	–0.01
Mar	–0.29	–0.32	–0.31	–0.23	–0.13	–0.07	–0.01
Apr	–0.34	–0.36	–0.34	–0.25	–0.14	–0.07	–0.01
May	–0.34	–0.36	–0.35	–0.26	–0.14	–0.08	–0.01

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

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

## VI Interest rates

### 5 Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) \* (a) Outstanding amounts °

End of month	Households' deposits				Non-financial corporations' deposits			
	with an agreed maturity of							
	up to 2 years		over 2 years		up to 2 years		over 2 years	
	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million	Effective interest rate 1 % pa	Volume 2 € million
2015 Apr	0.59	88,530	1.77	224,767	0.30	79,019	2.29	18,947
May	0.57	86,761	1.76	224,571	0.30	77,340	2.26	19,282
June	0.54	84,531	1.75	224,254	0.29	74,338	2.22	19,325
July	0.52	82,865	1.73	221,848	0.27	76,685	2.19	17,642
Aug	0.51	81,011	1.71	221,355	0.26	77,081	2.17	17,717
Sep	0.50	79,461	1.70	221,031	0.26	75,281	2.17	17,611
Oct	0.49	78,623	1.69	220,371	0.25	74,750	2.15	17,702
Nov	0.48	77,788	1.67	219,914	0.24	76,639	2.09	17,194
Dec	0.46	77,515	1.66	221,625	0.22	79,591	2.04	17,364
2016 Jan	0.45	76,746	1.64	221,432	0.22	79,489	2.00	17,335
Feb	0.44	75,932	1.62	221,154	0.21	80,142	2.00	17,271
Mar	0.44	76,809	1.61	221,229	0.20	82,706	1.95	17,573
Apr	0.44	77,166	1.59	220,954	0.19	83,708	1.92	17,490

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
2015 Apr	2.72	5,144	2.59	27,828	3.56	1,015,337	7.51	56,137	4.66	77,262	4.67	304,710
May	2.69	5,138	2.56	27,817	3.53	1,019,301	7.47	55,239	4.62	77,540	4.64	306,013
June	2.68	5,138	2.52	27,830	3.50	1,022,718	7.60	56,765	4.58	77,795	4.62	305,203
July	2.64	5,301	2.49	27,836	3.46	1,028,020	7.46	54,891	4.54	78,042	4.59	306,587
Aug	2.63	5,233	2.46	27,881	3.44	1,032,080	7.46	54,768	4.51	78,424	4.56	307,560
Sep	2.64	5,135	2.44	27,890	3.41	1,036,799	7.55	55,936	4.48	78,671	4.54	306,905
Oct	2.62	5,160	2.41	27,887	3.38	1,041,492	7.43	54,093	4.44	79,409	4.51	307,750
Nov	2.61	5,139	2.38	27,838	3.36	1,044,861	7.39	53,821	4.42	79,222	4.49	308,002
Dec	2.62	5,029	2.36	27,692	3.33	1,047,658	7.38	54,838	4.39	79,345	4.46	306,514
2016 Jan	2.61	5,011	2.34	27,438	3.30	1,047,865	7.44	52,884	4.35	79,779	4.43	307,381
Feb	2.60	5,022	2.36	27,364	3.27	1,049,663	7.45	53,249	4.31	80,351	4.41	307,866
Mar	2.63	5,014	2.34	27,371	3.24	1,052,498	7.49	54,287	4.29	80,695	4.38	307,355
Apr	2.56	4,927	2.31	27,215	3.21	1,057,011	7.33	52,230	4.27	81,376	4.35	308,484

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
	2015 Apr	2.98	129,602	2.46	126,479	2.93
May	2.91	130,402	2.45	128,043	2.91	580,567
June	2.89	134,307	2.43	127,057	2.88	580,448
July	2.80	130,434	2.43	125,698	2.85	585,342
Aug	2.82	130,317	2.41	126,738	2.84	587,082
Sep	2.86	132,444	2.39	126,160	2.82	585,043
Oct	2.80	130,602	2.36	127,257	2.80	587,398
Nov	2.82	128,922	2.33	129,015	2.78	594,272
Dec	2.77	125,750	2.29	129,455	2.74	593,021
2016 Jan	2.68	130,505	2.26	129,655	2.72	595,850
Feb	2.67	134,107	2.23	130,842	2.70	598,794
Mar	2.65	137,421	2.20	130,530	2.67	597,332
Apr	2.66	136,242	2.18	131,909	2.64	601,189

\* 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 grossing-up procedure was changed according to the ECB (Guideline ECB/2014/15). The data published hitherto from June 2010 to May 2015 were grossed-up again with the new method. The MFI interest rate statistics are based on the interest rates applied by MFIs and the related volumes of euro-denominated deposits and loans to households and non-financial corporations domiciled in the euro area. The household sector comprises individuals (including sole proprietors) and non-profit institutions serving households. Non-financial corporations include all enterprises other than insurance companies, banks and other financial institutions. The most recent figures are in all cases to be regarded as provisional. Subsequent revisions appearing in the following Monthly Report are not specially marked. Further information on the MFI interest rate statistics can be found on the Bundesbank's website (Statistics / Reporting system / Banking statistics / MFI interest rate statistics). ° 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 13 to 15 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 <sup>8</sup>			
		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
2015 Apr	0.16	1,043,564	0.34	7,663	0.77	653	0.94	952	0.48	528,261	0.61	72,608	
May	0.16	1,058,904	0.36	5,630	0.74	657	0.94	884	0.47	528,271	0.58	71,013	
June	0.15	1,062,893	0.29	6,524	0.70	703	0.88	880	0.46	527,934	0.56	69,686	
July	0.14	1,073,284	0.33	6,953	0.74	656	0.93	866	0.44	527,609	0.54	68,185	
Aug	0.14	1,079,170	0.32	5,546	0.65	636	0.94	879	0.43	527,949	0.52	66,653	
Sep	0.14	1,079,060	0.34	6,158	0.87	668	1.12	971	0.42	528,705	0.51	65,229	
Oct	0.15	1,089,962	0.34	5,760	0.71	793	0.90	1,088	0.41	529,980	0.49	63,966	
Nov	0.14	1,107,307	0.34	5,900	0.69	840	0.89	1,196	0.40	530,810	0.47	62,774	
Dec	0.13	1,111,065	0.28	6,140	0.50	1,161	0.97	1,379	0.39	533,865	0.45	61,900	
2016 Jan	0.12	1,117,856	0.35	7,184	0.62	1,024	1.00	1,360	0.37	534,775	0.43	60,627	
Feb	0.12	1,123,332	0.34	6,226	0.71	914	1.03	1,493	0.36	536,409	0.40	59,334	
Mar	0.11	1,120,146	0.34	6,804	0.82	1,137	0.93	1,721	0.34	535,575	0.39	58,239	
Apr	0.10	1,140,220	0.35	5,852	0.69	994	0.94	1,130	0.32	534,792	0.38	57,125	

Reporting period		Non-financial corporations' deposits							
		with an agreed maturity of				redeemable at notice of <sup>8</sup>			
		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
2015 Apr	0.06	343,035	0.11	15,562	0.36	612	0.46	660	
May	0.06	342,155	0.12	10,161	0.33	1,010	0.55	634	
June	0.06	342,151	0.20	10,205	0.43	484	0.41	512	
July	0.06	351,672	0.17	10,002	0.31	565	0.61	1,243	
Aug	0.06	354,182	0.11	8,622	0.30	312	0.73	305	
Sep	0.05	357,208	0.15	8,732	0.22	723	0.54	351	
Oct	0.05	373,013	0.10	10,805	0.28	798	0.43	528	
Nov	0.05	377,900	0.11	10,676	0.39	574	0.56	326	
Dec	0.04	375,456	0.07	14,914	0.36	1,338	0.57	872	
2016 Jan	0.03	370,533	0.10	9,780	0.32	1,283	0.42	489	
Feb	0.03	369,125	0.08	10,334	0.48	890	0.50	244	
Mar	0.05	369,344	- 0.03	14,907	0.20	931	1.34	1,057	
Apr	0.05	377,546	- 0.01	10,820	0.13	851	0.40	439	

Reporting period		Loans to households																	
		Loans for other purposes to households with an initial rate fixation of <sup>5</sup>																	
		Total						of which renegotiated loans <sup>9, 10</sup>				floating rate or up to 1 year <sup>9</sup>				of which loans to sole proprietors			
		floating rate or up to 1 year <sup>9</sup>		over 1 year and up to 5 years		over 5 years		floating rate or up to 1 year <sup>9</sup>		over 1 year and up to 5 years		over 5 years		floating rate or up to 1 year <sup>9</sup>		over 1 year and up to 5 years		over 5 years	
Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million	Effective interest rate 1 % pa	Volume 7 € million		
2015 Apr	2.03	7,162	1.92	2,656	1.77	3,917	2.83	934	2.15	2,311	1.94	2,381	2.97	737	2.07	1,602			
May	1.95	6,519	1.91	2,062	1.69	3,364	2.78	815	2.03	2,340	1.96	1,983	2.92	617	1.95	1,628			
June	1.95	8,380	2.02	2,716	1.69	4,215	2.74	998	2.05	3,167	2.01	2,452	2.84	771	2.04	2,119			
July	2.08	8,720	1.92	3,489	1.75	4,272	2.75	1,149	2.27	3,299	1.93	2,649	2.91	868	2.21	2,152			
Aug	2.12	6,485	2.01	2,170	1.88	3,121	2.72	909	2.21	2,455	2.06	1,801	2.83	694	2.16	1,665			
Sep	2.19	6,448	1.99	2,333	1.91	3,289	2.96	838	2.30	2,321	1.96	1,949	3.21	618	2.23	1,576			
Oct	2.07	7,280	1.93	2,886	1.76	3,823	2.75	966	2.29	2,491	1.97	2,264	2.88	745	2.21	1,636			
Nov	2.03	6,561	1.97	2,146	1.75	3,295	2.74	872	2.17	2,394	2.07	1,872	2.81	694	2.13	1,556			
Dec	2.05	8,344	2.03	2,796	1.81	4,005	2.75	1,136	2.11	3,203	2.06	2,469	2.80	886	2.06	2,163			
2016 Jan	1.96	7,252	2.01	2,816	1.68	3,753	2.63	1,054	2.11	2,445	2.04	2,153	2.70	823	2.03	1,617			
Feb	2.05	6,669	2.10	2,300	1.87	3,388	2.64	904	2.08	2,377	2.15	2,032	2.76	690	2.05	1,528			
Mar	2.02	7,255	1.87	2,578	1.77	3,549	2.70	996	2.09	2,710	1.96	2,167	2.81	756	2.03	1,796			
Apr	2.03	6,381	1.89	2,492	1.81	3,375	2.68	981	2.09	2,025	2.02	2,079	2.87	757	2.01	1,420			

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. <sup>7</sup> Estimated. The volume of new business is extrapolated to form the underlying total using a grossing-up procedure. <sup>8</sup> Including non-financial corporations' deposits; including fidelity and growth premia. <sup>9</sup> Excluding overdrafts. <sup>10</sup> Collected from December 2014.

VI Interest rates

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

Loans to households (cont'd)											
Loans for consumption with an initial rate fixation of 4											
Reporting period	Total (including charges)		of which renegotiated loans 9, 10			floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years	
	Annual percentage rate of charge 11 % 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
Total loans											
2015 Apr	6.18	6.11	8,169	7.01	1,553	5.00	326	4.94	3,104	6.95	4,739
May	6.31	6.24	7,346	7.46	1,458	5.08	304	4.94	2,839	7.20	4,203
June	6.37	6.29	8,006	7.63	1,547	4.83	327	4.98	3,211	7.33	4,468
July	6.48	6.40	8,959	7.81	1,769	5.09	361	5.01	3,554	7.47	5,044
Aug	6.34	6.26	7,313	7.71	1,263	5.33	309	4.98	3,020	7.31	3,984
Sep	6.28	6.21	7,331	7.63	1,200	5.20	338	4.94	3,052	7.28	3,941
Oct	6.28	6.20	7,233	7.69	1,135	5.17	309	4.88	3,104	7.36	3,820
Nov	6.21	6.15	6,657	7.58	1,055	5.24	276	4.90	2,993	7.32	3,388
Dec	6.03	5.97	6,067	7.30	934	5.67	316	4.78	2,867	7.19	2,884
2016 Jan	6.44	6.37	7,338	7.52	1,426	5.59	309	4.99	2,938	7.41	4,091
Feb	6.25	6.20	7,862	7.44	1,444	5.55	322	4.94	3,260	7.22	4,280
Mar	6.06	6.04	8,415	7.33	1,833	5.49	341	4.79	3,577	7.07	4,497
Apr	6.21	6.19	8,734	7.33	1,814	5.89	310	4.88	3,548	7.16	4,876
<b>of which: collateralised loans 12</b>											
2015 Apr	.	3.15	280	.	.	2.58	28	3.77	138	2.53	114
May	.	3.30	226	.	.	2.86	23	3.69	128	2.78	75
June	.	3.11	301	.	.	2.86	35	3.59	156	2.50	110
July	.	3.44	281	.	.	2.81	28	3.93	156	2.85	97
Aug	.	3.49	240	.	.	3.05	18	3.86	144	2.92	78
Sep	.	3.28	238	.	.	2.52	38	3.90	116	2.78	84
Oct	.	3.33	244	.	.	2.33	41	3.87	131	2.89	72
Nov	.	3.58	218	.	.	2.84	23	3.90	136	3.14	59
Dec	.	3.39	219	.	.	2.72	22	3.89	128	2.66	69
2016 Jan	.	3.32	191	.	.	2.50	21	3.72	111	2.85	59
Feb	.	3.51	220	.	.	2.85	33	3.84	135	3.08	52
Mar	.	3.29	260	.	.	2.58	25	3.71	158	2.65	77
Apr	.	3.49	206	.	.	2.75	13	3.80	145	2.77	48

Loans to households (cont'd)													
Housing loans with an initial rate fixation of 3													
Reporting period	Total (including charges)		of which renegotiated loans 9,10			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 11 % 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													
2015 Apr	1.91	1.87	20,486	1.94	4,301	2.11	2,640	1.83	1,935	1.70	7,330	1.95	8,581
May	1.81	1.77	19,549	1.95	4,229	2.20	2,315	1.84	1,754	1.61	7,123	1.78	8,357
June	1.89	1.85	24,015	1.98	5,330	2.11	2,798	1.81	2,197	1.72	9,297	1.92	9,723
July	2.04	1.99	25,310	2.06	6,017	2.17	2,915	1.91	2,502	1.86	10,095	2.10	9,798
Aug	2.09	2.06	19,745	2.15	4,445	2.27	2,290	1.95	1,939	1.92	7,566	2.15	7,950
Sep	2.07	2.03	19,161	2.08	4,209	2.17	2,344	1.98	1,851	1.92	7,276	2.12	7,690
Oct	2.07	2.05	19,874	2.04	5,455	2.11	2,577	1.99	2,125	1.94	7,230	2.14	7,942
Nov	2.04	2.02	18,426	2.11	4,212	2.27	2,190	1.94	1,874	1.89	7,319	2.09	7,043
Dec	1.98	1.95	19,521	2.02	4,769	2.16	2,713	1.88	2,045	1.83	7,385	2.01	7,378
2016 Jan	2.00	1.97	18,507	2.05	5,833	2.22	2,413	1.87	2,054	1.84	6,800	2.05	7,240
Feb	1.97	1.96	18,778	2.16	4,870	2.45	2,584	1.86	1,994	1.79	6,837	1.97	7,363
Mar	1.85	1.82	22,396	1.94	4,799	2.10	2,618	1.82	2,256	1.70	8,246	1.86	9,276
Apr	1.93	1.88	17,859	1.94	4,981	2.16	2,206	1.82	1,820	1.67	6,054	1.97	7,779
<b>of which: collateralised loans 12</b>													
2015 Apr	.	1.87	9,786	.	.	2.07	1,083	1.59	1,021	1.63	3,549	2.09	4,133
May	.	1.68	9,274	.	.	2.16	879	1.56	849	1.54	3,669	1.74	3,877
June	.	1.76	11,120	.	.	2.02	1,096	1.59	1,090	1.65	4,502	1.84	4,432
July	.	1.91	11,976	.	.	2.15	1,134	1.69	1,314	1.80	4,906	2.03	4,622
Aug	.	1.98	9,203	.	.	2.23	794	1.71	1,016	1.86	3,653	2.11	3,740
Sep	.	1.96	8,434	.	.	2.13	912	1.74	878	1.87	3,334	2.07	3,310
Oct	.	1.99	9,323	.	.	2.10	995	1.71	1,063	1.86	3,583	2.16	3,682
Nov	.	1.94	8,245	.	.	2.21	812	1.69	888	1.83	3,378	2.05	3,167
Dec	.	1.86	8,294	.	.	2.06	969	1.63	915	1.77	3,272	1.95	3,138
2016 Jan	.	1.92	8,349	.	.	2.30	916	1.62	1,003	1.80	3,276	2.04	3,154
Feb	.	1.89	7,875	.	.	2.47	987	1.62	875	1.73	3,048	1.95	2,965
Mar	.	1.74	9,786	.	.	2.01	1,002	1.63	1,075	1.63	3,807	1.81	3,902
Apr	.	1.89	7,980	.	.	2.17	848	1.53	843	1.62	2,827	2.14	3,462

For footnotes \* and 1 to 6, see p 44\*. For footnotes +, 7 to 10, see p 45\*. For footnote 12, see p 47\*. 11 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 to non-financial corporations					
	Revolving loans <b>13</b> and overdrafts <b>14</b> credit card debt <b>15</b>		<i>of which</i>				Revolving loans <b>13</b> and overdrafts <b>14</b> credit card debt <b>15</b>		<i>of which</i>			
			Revolving loans <b>13</b> and overdrafts <b>14</b>		Extended credit card debt				Revolving loans <b>13</b> and overdrafts <b>14</b>		Extended credit card debt	
	Effective interest rate <b>1</b> % pa	Volume <b>2</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>2</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>2</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>2</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>2</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>2</b> € million
2015 Apr	9.10	41,749	9.16	35,136	15.44	3,751	4.15	64,534	4.17	64,316		
May	8.99	41,166	9.03	34,577	15.44	3,755	4.09	65,569	4.10	65,334		
June	9.01	43,164	9.06	36,409	15.28	3,864	4.08	68,150	4.09	67,919		
July	8.90	41,364	8.92	34,649	15.36	3,861	3.97	64,222	3.98	63,998		
Aug	8.91	41,624	8.93	34,639	15.39	3,989	4.01	64,895	4.03	64,693		
Sep	8.95	42,843	9.01	35,907	15.43	3,899	4.08	65,570	4.10	65,322		
Oct	8.89	41,116	8.89	34,203	15.43	3,971	4.00	62,917	4.01	62,664		
Nov	8.82	40,622	8.82	33,577	15.32	4,064	3.92	65,212	3.94	64,959		
Dec	8.69	41,921	8.80	34,544	15.31	3,938	3.94	61,493	3.96	61,270		
2016 Jan	8.83	40,469	8.78	33,630	15.36	4,043	3.82	65,219	3.84	65,010		
Feb	8.82	41,049	8.81	34,005	15.36	4,071	3.79	67,167	3.80	66,930		
Mar	8.81	42,187	8.80	35,211	15.42	3,982	3.84	68,638	3.85	68,394		
Apr	8.70	40,129	8.67	33,142	15.24	4,067	3.83	66,708	3.85	66,461		

Reporting period	Loans to non-financial corporations (cont'd)															
	Total		<i>of which</i>				Loans up to €1 million with an initial rate fixation of <b>16</b>				Loans over €1 million with an initial rate fixation of <b>16</b>					
			renegotiated loans <b>9, 10</b>		floating rate or up to 1 year <b>9</b>		over 1 year and up to 5 years		over 5 years		floating rate or up to 1 year <b>9</b>		over 1 year and up to 5 years		over 5 years	
	Effective interest rate <b>1</b> % pa	Volume <b>7</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>7</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>7</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>7</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>7</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>7</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>7</b> € million	Effective interest rate <b>1</b> % pa	Volume <b>7</b> € million
<b>Total loans</b>																
2015 Apr	1.68	57,793	1.68	21,847	2.53	7,621	3.00	1,359	1.89	1,344	1.43	40,212	1.75	1,671	1.89	5,586
May	1.66	50,883	1.63	16,561	2.60	6,817	2.91	1,277	1.87	1,334	1.38	33,591	1.92	1,496	1.75	6,368
June	1.71	68,584	1.86	19,621	2.67	8,097	2.87	1,487	1.99	1,733	1.41	43,785	1.91	2,647	1.95	10,835
July	1.68	69,195	1.64	24,802	2.64	8,543	2.91	1,586	2.05	1,791	1.37	45,314	1.94	2,211	1.97	9,750
Aug	1.62	49,640	1.67	14,967	2.64	6,644	2.99	1,260	2.03	1,321	1.28	33,589	1.99	1,497	1.98	5,329
Sep	1.84	60,340	1.82	19,271	2.78	8,061	2.91	1,323	2.08	1,333	1.56	39,892	1.69	1,704	2.11	8,027
Oct	1.68	57,781	1.57	20,890	2.64	8,271	2.89	1,452	2.07	1,254	1.37	37,386	1.71	2,319	1.86	7,099
Nov	1.67	51,840	1.63	16,651	2.71	7,599	2.91	1,381	2.09	1,254	1.30	32,330	1.98	2,249	1.81	7,027
Dec	1.68	71,770	1.68	21,964	2.63	8,367	2.90	1,688	1.98	1,765	1.42	46,829	1.79	3,286	1.82	9,835
2016 Jan	1.60	56,798	1.62	19,979	2.58	7,835	2.87	1,331	2.02	1,328	1.26	38,673	2.16	2,309	1.90	5,322
Feb	1.54	52,765	1.61	15,300	2.71	7,805	2.78	1,310	1.93	1,160	1.20	34,426	1.42	2,142	1.67	5,922
Mar	1.64	62,713	1.70	19,300	2.67	8,680	2.73	1,524	1.88	1,394	1.35	41,099	1.76	2,294	1.68	7,722
Apr	1.55	57,589	1.60	19,803	2.60	8,290	2.74	1,645	1.82	1,410	1.23	38,162	1.56	1,933	1.68	6,149
<i>of which: collateralised loans <sup>12</sup></i>																
2015 Apr	1.76	10,572	. . .	. . .	2.35	981	2.62	123	1.61	440	1.66	7,028	2.08	406	1.75	1,594
May	1.84	7,214	. . .	. . .	2.61	735	2.51	102	1.68	479	1.71	4,202	2.05	427	1.77	1,269
June	1.73	10,890	. . .	. . .	2.11	642	2.51	133	1.84	561	1.53	5,897	1.90	677	1.94	2,980
July	1.70	13,470	. . .	. . .	1.99	894	2.59	175	1.86	593	1.55	8,144	1.85	592	1.87	3,072
Aug	1.65	6,913	. . .	. . .	2.14	546	2.69	128	1.86	445	1.41	4,037	1.91	302	1.93	1,455
Sep	1.93	9,689	. . .	. . .	2.07	584	2.73	101	1.92	380	1.63	5,151	1.65	395	2.44	3,078
Oct	1.72	9,269	. . .	. . .	1.99	722	2.53	160	1.94	448	1.60	5,036	1.83	752	1.78	2,151
Nov	1.76	7,680	. . .	. . .	2.04	503	2.62	130	1.92	395	1.48	4,036	2.31	1,162	1.87	1,454
Dec	1.61	13,483	. . .	. . .	1.98	636	2.57	150	1.76	539	1.47	7,249	1.84	1,438	1.67	3,471
2016 Jan	1.65	9,419	. . .	. . .	2.01	674	2.55	125	1.89	463	1.33	6,286	3.51	656	1.93	1,215
Feb	1.60	8,658	. . .	. . .	2.07	554	2.29	149	1.84	382	1.45	4,958	1.69	627	1.71	1,988
Mar	1.62	10,561	. . .	. . .	1.94	611	2.60	154	1.73	406	1.50	5,407	1.79	1,089	1.66	2,894
Apr	1.59	9,251	. . .	. . .	1.95	660	2.39	153	1.67	438	1.49	5,471	1.92	530	1.57	1,999

For footnotes \* and 1 to 6, see p 44\*. For footnotes + and 7 to 10, see p 45\*. For footnote 11, see p 46\*. **12** Collected from June 2010. For the purposes of the interest rate statistics, a loan is considered to be secured if collateral (among others financial collateral, real estate collateral, debt securities) in at least the same value as the loan amount has been posted, pledged or assigned. **13** From June 2010 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. **14** 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. **15** From June 2010 including convenience and extended credit card debt. Convenience credit is defined as the credit granted at an interest rate of 0% in the period between payment transactions effected with the card during one billing cycle and the date at which the debt balances from this specific billing cycle become due. **16** The amount category refers to the single loan transaction considered as new business.

## VII Insurance corporations and pension funds

### 1 Assets \*

€ billion

End of year/quarter	Assets										
	Financial assets									Non-financial assets	
	Total	Cash and deposits with banks (MFIs) 1	Debt securi- ties (inclu- ding financial derivatives)	Loans granted 2	Shares and other equity 3	Investment fund shares/units	Ceded share of insurance technical reserves	Other financial assets	Total		
<b>Insurance corporations and pension funds 4</b>											
2006	1,771.5	1,709.2	524.1	149.9	244.8	261.5	385.6	74.5	68.7	62.3	
2007	1,838.3	1,779.8	558.3	155.1	248.2	275.3	409.6	70.2	63.1	58.5	
2008	1,770.6	1,714.8	574.5	159.4	243.3	228.9	379.7	65.8	63.4	55.8	
2009	1,836.8	1,779.6	588.9	173.9	259.8	210.5	426.9	58.6	61.2	57.1	
2010	1,961.9	1,900.5	570.9	210.4	267.2	223.5	501.4	59.9	67.2	61.4	
2011	2,011.2	1,947.8	576.3	226.2	271.9	221.9	522.1	62.2	67.1	63.4	
2012	2,162.8	2,095.7	560.1	287.2	277.9	223.8	619.5	63.1	64.2	67.1	
2013	2,236.7	2,165.2	540.6	310.5	284.7	224.1	678.5	64.2	62.7	71.5	
2014	2,426.9	2,350.6	522.3	384.2	299.2	230.0	784.2	68.4	62.3	76.3	
2015	2,514.9	2,433.9	488.7	417.6	310.4	244.0	837.0	71.1	65.1	81.0	
2014 Q1	2,294.4	2,221.8	542.3	328.0	288.7	225.5	709.9	65.1	62.3	72.5	
Q2	2,339.8	2,266.5	538.5	345.4	291.6	226.3	736.6	66.1	61.9	73.3	
Q3	2,380.2	2,305.6	530.3	366.1	293.9	227.3	758.5	67.2	62.3	74.7	
Q4	2,426.9	2,350.6	522.3	384.2	299.2	230.0	784.2	68.4	62.3	76.3	
2015 Q1	2,531.6	2,454.3	517.8	411.7	305.0	239.5	845.5	70.7	64.2	77.3	
Q2	2,471.6	2,394.1	509.8	393.4	305.3	236.1	813.8	70.7	65.1	77.5	
Q3	2,485.9	2,407.4	498.1	408.3	308.8	238.7	817.7	71.0	65.0	78.5	
Q4	2,514.9	2,433.9	488.7	417.6	310.4	244.0	837.0	71.1	65.1	81.0	
<b>Insurance corporations</b>											
2006	1,489.2	1,444.6	410.4	127.6	224.7	254.2	292.7	73.1	62.0	44.6	
2007	1,526.2	1,485.5	432.5	130.7	226.4	267.1	304.0	68.2	56.6	40.7	
2008	1,454.7	1,416.5	436.7	133.7	221.7	221.4	284.3	63.4	55.2	38.2	
2009	1,490.3	1,452.2	440.4	146.2	236.4	202.7	317.6	55.6	53.2	38.1	
2010	1,553.3	1,513.1	420.0	170.9	243.2	210.7	356.5	56.5	55.4	40.3	
2011	1,584.6	1,542.9	419.8	191.3	246.0	210.4	361.4	58.4	55.5	41.7	
2012	1,694.4	1,651.1	405.1	246.2	251.7	211.4	425.1	59.0	52.7	43.3	
2013	1,742.1	1,695.7	386.3	268.0	257.1	211.1	462.3	59.8	51.0	46.4	
2014	1,890.8	1,841.4	367.9	331.1	270.7	215.9	542.3	63.6	50.1	49.3	
2015	1,948.9	1,897.2	334.0	358.5	280.7	228.7	577.3	66.0	52.0	51.7	
2014 Q1	1,789.2	1,742.2	385.8	285.3	260.9	212.2	486.9	60.6	50.5	47.0	
Q2	1,823.8	1,776.3	381.8	299.8	263.8	212.9	506.6	61.5	50.0	47.5	
Q3	1,855.8	1,807.3	375.2	316.5	266.1	213.5	523.2	62.5	50.3	48.5	
Q4	1,890.8	1,841.4	367.9	331.1	270.7	215.9	542.3	63.6	50.1	49.3	
2015 Q1	1,976.3	1,926.5	362.6	355.3	276.2	224.9	590.0	65.7	51.8	49.9	
Q2	1,927.0	1,877.1	355.5	339.5	276.4	221.6	565.7	65.8	52.6	49.9	
Q3	1,935.2	1,884.7	345.7	351.0	279.6	224.0	566.2	65.9	52.3	50.5	
Q4	1,948.9	1,897.2	334.0	358.5	280.7	228.7	577.3	66.0	52.0	51.7	
<b>Pension funds 4</b>											
2006	282.3	264.6	113.8	22.4	20.1	7.3	92.8	1.5	6.7	17.7	
2007	312.1	294.3	125.8	24.4	21.9	8.2	105.6	1.9	6.6	17.8	
2008	315.9	298.3	137.8	25.6	21.6	7.4	95.3	2.4	8.2	17.5	
2009	346.5	327.4	148.4	27.7	23.3	7.7	109.3	3.0	8.0	19.1	
2010	408.5	387.4	150.9	39.5	24.0	12.8	144.9	3.5	11.8	21.1	
2011	426.6	404.9	156.5	34.9	25.9	11.5	160.8	3.8	11.6	21.7	
2012	468.4	444.6	155.1	40.9	26.2	12.4	194.4	4.1	11.5	23.8	
2013	494.6	469.6	154.3	42.5	27.6	13.0	216.2	4.4	11.7	25.1	
2014	536.1	509.2	154.4	53.1	28.5	14.1	241.9	4.9	12.3	27.0	
2015	566.0	536.7	154.7	59.1	29.7	15.3	259.7	5.2	13.1	29.3	
2014 Q1	505.2	479.6	156.5	42.8	27.8	13.3	223.0	4.5	11.8	25.5	
Q2	516.0	490.2	156.8	45.6	27.8	13.4	230.0	4.6	11.9	25.8	
Q3	524.4	498.3	155.1	49.6	27.8	13.8	235.2	4.7	12.0	26.1	
Q4	536.1	509.2	154.4	53.1	28.5	14.1	241.9	4.9	12.3	27.0	
2015 Q1	555.2	527.8	155.2	56.4	28.8	14.6	255.4	4.9	12.4	27.4	
Q2	544.6	517.0	154.2	53.9	28.9	14.5	248.1	5.0	12.5	27.6	
Q3	550.7	522.7	152.4	57.2	29.1	14.7	251.6	5.0	12.7	28.0	
Q4	566.0	536.7	154.7	59.1	29.7	15.3	259.7	5.2	13.1	29.3	

Source: Bundesbank calculations based on supervisory data of the Federal Financial Supervisory Authority (BaFin). \* Valuation of securities based on current market values; valuation of other items based on book values. Figures from 2015 Q3 on have been revised. 1 Including registered bonds, borrower's note loans and Pfandbriefe of monetary financial institutions. 2 Including deposits retained on assumed reinsurance. 3 Including participation certificates ("Genuss-Scheine"). 4 The term "pension

funds" refers to the institutional sector "insurance corporations and pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes ("Pensionskassen", pension funds supervised by BaFin, Contractual Trust Arrangements (CTAs; included as from 2010) and public, church and municipal supplementary pension funds) and occupational pension schemes for the self-employed. Social security funds are not included.

VII Insurance corporations and pension funds

2 Liabilities \*

€ billion

End of year/quarter	Liabilities								
	Total	Debt securities (including financial derivatives)	Loans received <sup>1</sup>	Shares and other equity <sup>2</sup>	Insurance technical reserves			Other liabilities	Net worth <sup>4</sup>
					Total	Net equity of households in life insurance and pension fund reserves <sup>3</sup>	Unearned premiums and reserves for outstanding claims		
<b>Insurance corporations and pension funds <sup>5</sup></b>									
2006	1,771.5	8.4	91.6	210.0	1,318.8	1,049.1	269.6	81.3	61.5
2007	1,838.3	11.7	88.9	214.8	1,377.9	1,119.2	258.7	78.2	66.9
2008	1,770.6	14.7	77.0	136.0	1,396.3	1,141.5	254.8	74.7	71.8
2009	1,836.8	16.2	71.6	136.2	1,460.5	1,211.6	249.0	73.1	79.2
2010	1,961.9	17.8	72.3	137.6	1,573.3	1,318.9	254.4	71.5	89.3
2011	2,011.2	17.0	72.1	111.8	1,625.0	1,360.3	264.7	71.5	113.8
2012	2,162.8	22.4	77.1	158.9	1,708.3	1,437.1	271.2	71.3	124.8
2013	2,236.7	16.9	81.8	197.7	1,794.1	1,514.4	279.7	71.7	74.5
2014	2,426.9	17.3	88.9	202.7	1,887.5	1,591.5	296.0	72.9	157.7
2015	2,514.9	18.3	92.3	224.5	1,975.1	1,667.5	307.6	75.7	128.9
2014 Q1	2,294.4	16.3	85.1	191.3	1,825.5	1,536.6	288.9	72.6	103.5
Q2	2,339.8	16.2	86.7	184.1	1,844.3	1,553.4	290.9	72.6	136.1
Q3	2,380.2	17.6	86.3	188.0	1,861.3	1,568.1	293.3	72.6	154.4
Q4	2,426.9	17.3	88.9	202.7	1,887.5	1,591.5	296.0	72.9	157.7
2015 Q1	2,531.6	17.7	90.8	223.1	1,937.6	1,631.9	305.8	74.8	187.5
Q2	2,471.6	17.9	91.1	206.2	1,942.6	1,636.5	306.1	75.0	138.8
Q3	2,485.9	17.5	91.6	208.4	1,954.5	1,647.4	307.1	75.5	138.3
Q4	2,514.9	18.3	92.3	224.5	1,975.1	1,667.5	307.6	75.7	128.9
<b>Insurance corporations</b>									
2006	1,489.2	8.4	89.8	202.0	1,061.3	792.0	269.2	79.1	48.6
2007	1,526.2	11.7	86.4	206.7	1,090.1	831.7	258.3	75.7	55.6
2008	1,454.7	14.7	74.2	130.6	1,095.7	841.3	254.4	72.3	67.2
2009	1,490.3	16.2	68.3	130.8	1,136.4	887.8	248.5	71.1	67.5
2010	1,553.3	17.8	68.7	131.8	1,191.3	937.3	254.0	69.4	74.4
2011	1,584.6	17.0	68.3	107.0	1,224.3	960.1	264.2	69.6	98.3
2012	1,694.4	22.4	73.1	152.0	1,280.0	1,009.2	270.8	69.5	97.4
2013	1,742.1	16.9	77.7	188.7	1,340.7	1,061.4	279.3	68.8	49.2
2014	1,890.8	17.3	84.2	193.1	1,409.4	1,113.8	295.6	69.8	117.2
2015	1,948.9	18.3	87.3	213.6	1,468.8	1,161.7	307.1	72.4	88.4
2014 Q1	1,789.2	16.3	80.8	182.7	1,366.9	1,078.4	288.4	69.7	72.9
Q2	1,823.8	16.2	82.3	175.6	1,380.4	1,090.0	290.4	69.6	99.8
Q3	1,855.8	17.6	81.8	179.3	1,392.5	1,099.7	292.8	69.6	115.1
Q4	1,890.8	17.3	84.2	193.1	1,409.4	1,113.8	295.6	69.8	117.2
2015 Q1	1,976.3	17.7	86.1	212.6	1,449.7	1,144.4	305.3	71.6	138.7
Q2	1,927.0	17.9	86.3	196.5	1,452.9	1,147.3	305.6	71.8	101.7
Q3	1,935.2	17.5	86.8	198.5	1,460.5	1,153.9	306.6	72.2	99.7
Q4	1,948.9	18.3	87.3	213.6	1,468.8	1,161.7	307.1	72.4	88.4
<b>Pension funds <sup>5</sup></b>									
2006	282.3	–	1.8	8.0	257.5	257.1	0.4	2.1	12.9
2007	312.1	–	2.4	8.1	287.8	287.5	0.3	2.5	11.2
2008	315.9	–	2.8	5.4	300.6	300.2	0.4	2.4	4.7
2009	346.5	–	3.2	5.4	324.2	323.7	0.4	1.9	11.7
2010	408.5	–	3.6	5.8	382.1	381.7	0.4	2.1	15.0
2011	426.6	–	3.8	4.8	400.6	400.2	0.5	1.9	15.5
2012	468.4	–	4.1	6.9	428.3	427.9	0.4	1.8	27.3
2013	494.6	–	4.2	8.9	453.4	452.9	0.5	2.9	25.3
2014	536.1	–	4.7	9.6	478.2	477.7	0.5	3.2	40.5
2015	566.0	–	5.0	10.9	506.3	505.8	0.5	3.3	40.4
2014 Q1	505.2	–	4.3	8.6	458.7	458.2	0.5	2.9	30.6
Q2	516.0	–	4.4	8.4	463.9	463.4	0.5	3.0	36.3
Q3	524.4	–	4.5	8.7	468.9	468.4	0.5	3.1	39.3
Q4	536.1	–	4.7	9.6	478.2	477.7	0.5	3.2	40.5
2015 Q1	555.2	–	4.8	10.5	487.9	487.4	0.5	3.2	48.8
Q2	544.6	–	4.8	9.7	489.8	489.3	0.5	3.2	37.1
Q3	550.7	–	4.8	9.9	494.0	493.5	0.5	3.2	38.7
Q4	566.0	–	5.0	10.9	506.3	505.8	0.5	3.3	40.4

Source: Bundesbank calculations based on supervisory data of the Federal Financial Supervisory Authority (BaFin). \* Valuation of securities based on current market values; valuation of other items based on book values. Quarterly data and data as from 2013 are partially estimated. Figures from 2015 Q3 on have been revised. <sup>1</sup> Including deposits retained on ceded business. <sup>2</sup> Including participation certificates ("Genuss-Scheine"). <sup>3</sup> Including ageing provisions of health insurance schemes and premium reserves of accident insurance schemes with guaranteed premium refund. <sup>4</sup> As defined in the European System of Accounts (ESA 1995), net worth is the difference

between total assets and the remaining liability items. Own funds are the sum of net worth and "shares and other equity". <sup>5</sup> The term "pension funds" refers to the institutional sector "insurance corporations and pension funds" of the ESA. Pension funds thus comprise company pension schemes ("Pensionskassen", pension funds supervised by BaFin, Contractual Trust Arrangements (CTAs; included as from 2010) and public, church and municipal supplementary pension funds) and occupational pension schemes for the self-employed. Social security funds are not included.

VIII Capital market

1 Sales and purchases of debt securities and shares in Germany

€ million

Period	Debt securities																			
	Sales = total pur- chases	Sales					Purchases													
		Domestic debt securities 1					Foreign debt secur- ities 4	Residents				Non- residents 8								
		Total	Bank debt securities	Corporate bonds (non-MFIs) 2	Public debt secur- ities 3	Total 5		Credit in- stitutions including building and loan associations 6	Deutsche Bundesbank	Other sectors 7										
2004	233,890	133,711	64,231	10,778	58,703	100,179	108,119	121,841	.	-	13,723	125,772								
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	57,525					
2012	51,813	-	21,419	-	98,820	-	8,701	86,103	73,231	-	3,767	-	42,017	-	3,573	41,823	55,580			
2013	-	12,603	-	101,616	-	117,187	-	153	89,013	18,583	-	25,778	-	12,708	57,069	-	31,185			
2014	63,381	-	31,962	-	47,404	-	1,330	16,776	95,341	51,779	-	12,124	-	11,951	75,854	-	11,601			
2015	32,891	-	36,010	-	65,778	26,762	3,006	68,902	123,662	-	66,330	121,164	68,828	-	90,773					
2015 June	-	23,141	-	25,695	-	10,836	-	3,872	-	10,987	2,554	82	-	13,948	11,459	2,571	-	23,223		
July	-	1,881	-	2,977	-	585	-	1,688	-	5,251	1,097	9,990	11,603	13,155	-	14,768	-	11,870		
Aug	-	18,142	-	14,808	-	1,576	-	11,284	-	3,334	15,405	-	781	9,915	6,271	-	2,736			
Sep	-	36,863	-	20,567	-	3,560	-	19,563	-	2,555	16,296	45,478	1,546	12,775	31,157	-	8,615			
Oct	-	4,370	-	1,263	-	5,758	-	6,129	-	892	5,633	6,801	-	12,250	12,664	-	6,387	-	2,432	
Nov	-	821	-	2,159	-	14,282	-	1,729	-	13,853	1,338	5,797	-	3,259	12,847	-	10,309	-	6,618	
Dec	-	59,323	-	57,836	-	55,168	-	996	-	3,664	1,487	-	13,826	-	39,384	11,090	-	14,468	-	45,497
2016 Jan	-	8,853	-	1,881	-	7,474	-	2,924	-	12,279	10,733	6,823	2,236	12,023	-	7,436	-	2,029		
Feb	-	31,114	-	19,483	-	14,851	-	1,224	-	3,407	11,631	20,916	2,002	12,911	6,003	-	10,198			
Mar	-	26,539	-	12,729	-	1,330	-	6,889	-	13,810	13,810	26,890	1,261	13,401	12,228	-	351			
Apr	-	11,845	-	3,469	-	7,238	-	1,970	-	12,677	15,313	34,412	-	5,143	15,821	23,734	-	22,567		

€ million

Period	Shares													
	Sales = total purchases	Sales			Purchases									
		Domestic shares 9		Foreign shares 10	Residents			Non- residents 13						
		Total	Public debt secur- ities 3	Total 11	Credit in- stitutions 6	Other sectors 12								
2004	-	3,317	-	10,157	-	13,474	7,432	5,045	-	2,387	-	10,748		
2005	-	32,364	-	13,766	-	18,597	1,036	10,208	-	9,172	-	31,329		
2006	-	26,276	-	9,061	-	17,214	7,528	11,322	-	3,795	-	18,748		
2007	-	5,009	-	10,053	-	15,062	-	6,702	-	55,606	-	57,299		
2008	-	29,452	-	11,326	-	40,778	2,743	-	23,079	-	25,822	-	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	-	29,066	-	1,361	
2011	-	25,833	-	21,713	-	4,120	40,804	670	40,134	-	40,134	-	14,971	
2012	-	15,061	-	5,120	-	9,941	14,405	10,259	4,146	-	4,146	-	656	
2013	-	21,553	-	10,106	-	11,447	18,344	11,991	6,353	-	6,353	-	3,209	
2014	-	47,506	-	18,778	-	28,728	39,661	17,203	22,458	-	22,458	-	7,845	
2015	-	38,855	-	7,668	-	31,187	24,017	-	5,421	-	29,438	-	14,838	
2015 June	-	4,424	-	1,277	-	3,147	-	6,837	-	4,056	-	2,781	-	11,261
July	-	5,029	-	510	-	4,519	8,147	1,279	6,868	-	6,868	-	3,118	
Aug	-	962	-	122	-	840	1,261	-	6,693	-	7,954	-	299	
Sep	-	4,412	-	966	-	5,378	-	2,610	-	9,059	-	6,449	-	1,802
Oct	-	1,268	-	903	-	365	-	838	150	-	988	-	2,106	
Nov	-	4,836	-	640	-	4,196	1,526	5,566	-	4,040	-	3,310		
Dec	-	5,812	-	1,100	-	4,712	6,195	-	4,336	-	10,531	-	383	
2016 Jan	-	1,294	-	120	-	1,414	367	-	5,901	-	6,268	-	1,661	
Feb	-	611	-	66	-	677	1,539	-	5,401	-	6,940	-	2,150	
Mar	-	8,290	-	59	-	8,231	5,935	-	1,861	-	4,074	-	2,355	
Apr	-	1,080	-	39	-	1,119	587	-	639	-	1,226	-	1,667	

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 <sup>1</sup>				Debt securities issued by special purpose credit institutions	Other bank debt securities	Corporate bonds (non-MFIs) <sup>2</sup>	Public debt securities <sup>3</sup>	Memo item Foreign DM/euro bonds issued by German-managed syndicates
		Total	Mortgage Pfandbriefe	Public Pfandbriefe						
<b>Gross sales <sup>4</sup></b>										
2004	990,399	688,844	33,774	90,815	162,353	401,904	31,517	270,040	12,344	
2005	988,911	692,182	28,217	103,984	160,010	399,969	24,352	272,380	600	
2006	925,863	622,055	24,483	99,628	139,193	358,750	29,975	273,834	69	
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	-	
2015 Sep	143,476	84,546	2,315	2,137	59,638	20,456	26,215	32,715	-	
Oct	141,457	92,061	2,675	1,210	62,892	25,285	4,253	45,143	-	
Nov	100,701	62,684	4,141	1,158	40,780	16,605	5,567	32,450	-	
Dec	65,645	45,949	1,436	793	32,123	11,597	8,406	11,290	-	
2016 Jan	120,383	77,552	1,810	1,099	54,961	19,682	6,448	36,384	-	
Feb	127,058	80,388	6,236	886	55,057	18,208	4,135	42,535	-	
Mar	111,271	61,483	2,722	1,030	38,521	19,209	9,240	40,548	-	
Apr	115,428	69,506	1,282	536	53,522	14,167	5,762	40,160	-	
<i>of which: Debt securities with maturities of more than four years <sup>5</sup></i>										
2004	424,769	275,808	20,060	48,249	54,075	153,423	20,286	128,676	4,320	
2005	425,523	277,686	20,862	63,851	49,842	143,129	16,360	131,479	400	
2006	337,969	190,836	17,267	47,814	47,000	78,756	14,422	132,711	69	
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	-	
2015 Sep	51,283	15,197	1,745	2,137	7,234	4,080	22,790	13,296	-	
Oct	38,693	15,655	2,170	708	2,740	10,038	1,652	21,385	-	
Nov	33,799	16,563	1,910	1,158	6,586	6,909	4,010	13,227	-	
Dec	14,240	5,609	36	43	1,269	4,262	6,029	2,603	-	
2016 Jan	29,680	15,067	1,810	1,099	7,480	4,678	3,168	11,446	-	
Feb	36,168	19,792	5,716	540	9,953	3,582	1,579	14,797	-	
Mar	37,922	17,301	2,209	1,030	6,745	7,317	5,178	15,444	-	
Apr	30,946	11,246	1,207	511	4,680	4,848	4,481	15,219	-	
<b>Net sales <sup>6</sup></b>										
2004	167,233	81,860	1,039	52,615	50,142	83,293	18,768	66,605	22,124	
2005	141,715	65,798	2,151	34,255	37,242	64,962	10,099	65,819	35,963	
2006	129,423	58,336	12,811	20,150	44,890	46,410	15,605	55,482	19,208	
2007	86,579	58,168	10,896	46,629	42,567	73,127	3,683	32,093	29,750	
2008	119,472	8,517	15,052	65,773	25,165	34,074	82,653	28,302	31,607	
2009	76,441	75,554	858	80,646	25,579	21,345	48,508	103,482	21,037	
2010	21,566	87,646	3,754	63,368	28,296	48,822	23,748	85,464	10,904	
2011	22,518	54,582	1,657	44,290	32,904	44,852	3,189	80,289	5,989	
2012	85,298	100,198	4,177	41,660	3,259	51,099	6,401	21,298	2,605	
2013	140,017	125,932	17,364	37,778	4,027	66,760	1,394	15,479	3,057	
2014	34,020	56,899	6,313	23,856	862	25,869	10,497	12,383	2,626	
2015	65,147	77,273	9,271	9,754	2,758	74,028	25,300	13,174	1,441	
2015 Sep	19,054	2,097	744	1,417	3,802	1,032	20,743	3,786	-	
Oct	1,738	8,310	674	652	5,887	3,749	6,293	279	-	
Nov	4,210	10,065	3,189	989	9,760	4,483	1,260	15,536	-	
Dec	81,812	66,259	610	1,459	8,176	56,013	1,431	16,984	191	
2016 Jan	6,853	4,029	3,139	445	4,467	3,145	2,324	13,206	-	
Feb	16,450	12,194	4,786	42	6,832	534	1,222	4,133	-	
Mar	11,323	4,244	977	477	1,174	2,571	4,323	2,756	219	
Apr	8,359	7,324	236	1,468	6,691	1,865	1,909	17,592	159	

\* For definitions, see the explanatory notes in the Statistical Supplement 2 Capital market statistics on p 21 ff. <sup>1</sup> Excluding registered bank debt securities. <sup>2</sup> Including cross-border financing within groups from January 2011. <sup>3</sup> Including Federal

Railways Fund, Federal Post Office and Treuhand agency. <sup>4</sup> Gross sales means only initial sales of newly issued securities. <sup>5</sup> Maximum maturity according to the terms of issue. <sup>6</sup> 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 <sup>1</sup>					Corporate bonds (non-MFIs)	Public debt securities	Memo item Foreign DM/Euro bonds issued by German- managed syndicates
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions	Other bank debt securities			
2004	2,773,007	1,685,766	159,360	553,927	316,745	655,734	73,844	1,013,397	170,543
2005	2,914,723	1,751,563	157,209	519,674	323,587	751,093	83,942	1,079,218	134,580
2006	3,044,145	1,809,899	144,397	499,525	368,476	797,502	99,545	1,134,701	115,373
2007	3,130,723	1,868,066	133,501	452,896	411,041	870,629	95,863	1,166,794	85,623
2008	3,250,195	1,876,583	150,302	377,091	490,641	858,550	178,515	1,195,097	54,015
2009	3,326,635	1,801,029	151,160	296,445	516,221	837,203	227,024	1,298,581	32,978
2010	3,348,201	1,570,490	147,529	232,954	544,517	645,491	250,774	1,526,937	22,074
2011	3,370,721	1,515,911	149,185	188,663	577,423	600,640	247,585	1,607,226	16,085
2012	3,285,422	1,414,349	145,007	147,070	574,163	548,109	220,456	1,650,617	13,481
2013	3,145,329	1,288,340	127,641	109,290	570,136	481,273	221,851	1,635,138	10,422
2014	3,111,308	1,231,445	121,328	85,434	569,409	455,274	232,342	1,647,520	7,797
2015	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377	6,356
2015 Oct	3,123,763	1,230,497	128,019	76,149	584,747	441,581	257,440	1,635,825	6,547
Nov	3,127,974	1,220,432	131,208	77,138	574,987	437,098	256,180	1,651,361	6,547
Dec	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377	6,356
2016 Jan	3,039,308	1,158,202	127,460	75,234	571,278	384,231	259,936	1,621,171	6,356
Feb	3,055,758	1,170,396	132,246	75,276	578,109	384,765	260,058	1,625,304	6,356
Mar	3,067,081	1,174,640	133,223	74,800	579,283	387,335	264,380	1,628,060	6,137
Apr	3,058,722	1,181,964	133,459	73,331	585,974	389,200	266,289	1,610,468	5,978

#### Breakdown by remaining period to maturity <sup>3</sup>

less than 2  
2 to less than 4  
4 to less than 6  
6 to less than 8  
8 to less than 10  
10 to less than 15  
15 to less than 20  
20 and more

	Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special purpose credit institutions	Other bank debt securities	Corporate bonds (non-MFIs)	Public debt securities	Memo item Foreign DM/Euro bonds issued by German- managed syndicates	
less than 2	1,009,777	468,755	43,322	29,890	239,904	155,640	49,941	491,080	2,473
2 to less than 4	655,903	293,515	38,372	20,871	161,621	72,652	48,918	313,470	255
4 to less than 6	474,367	181,042	23,402	8,896	90,019	58,723	38,930	254,396	341
6 to less than 8	303,110	82,736	16,189	6,389	32,921	27,237	24,540	195,835	1,333
8 to less than 10	223,851	71,136	8,625	5,366	32,795	24,349	11,904	140,811	69
10 to less than 15	129,938	29,689	3,300	1,249	11,483	13,657	15,412	84,837	540
15 to less than 20	36,193	10,518	75	618	6,704	3,121	3,836	21,840	–
20 and more	225,582	44,576	175	52	10,528	33,822	72,808	108,199	967

#### Position at end-April 2016

\* Including debt securities temporarily held in the issuers' portfolios. <sup>1</sup> Excluding debt securities handed to the trustee for temporary safe custody. <sup>2</sup> Sectoral reclassification of debt securities. <sup>3</sup> Calculated from month under review until final

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

### 4 Shares in circulation issued by residents \*

€ million nominal value

Period	Share capital = circulation at end of period under review	Net increase or net decrease (-) during period under review	Change in domestic public limited companies' capital due to							Memo item Share circulation at market values (market capita- lisation) level at end of period under review <sup>2</sup>				
			cash payments and ex- change of convertible bonds <sup>1</sup>	issue of bonus shares	contribution of claims and other real assets	contribution of shares, mining shares, GmbH shares, etc	merger and transfer of assets	change of legal form	reduction of capital and liquidation					
2004	164,802	2,669	3,960	1,566	276	696	220	–	1,760	–	2,286	887,217		
2005	163,071	–	1,733	2,470	1,040	694	268	–	1,443	–	3,060	1,058,532		
2006	163,764	695	2,670	3,347	604	604	954	–	1,868	–	1,256	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	–	–	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	
2015 Oct	178,797	739	893	–	6	–	–	3	–	93	–	64	1,614,655	
Nov	176,443	–	2,354	319	18	85	–	0	–	931	–	1,845	1,685,764	
Dec	177,416	973	1,081	–	23	–	–	10	–	73	–	48	1,614,442	
2016 Jan	177,279	–	136	112	43	–	–	2	–	222	–	68	1,468,888	
Feb	177,125	–	154	52	–	–	–	0	–	63	–	144	1,435,286	
Mar	177,113	–	12	57	–	–	–	0	–	2	–	67	1,512,940	
Apr	176,705	–	408	31	–	34	–	–	281	–	2	–	1,528,339	

\* Excluding shares of public limited investment companies. <sup>1</sup> Including shares issued out of company profits. <sup>2</sup> Enterprises listed on the Regulated Market (the introduction of which marked the end of the division of organised trading segments into an

official and a regulated market on 1 November 2007) are included as well as enterprises listed on the Open Market. Source: Bundesbank calculations based on data of the Herausbergemeinschaft Wertpapier-Mitteilungen and the Deutsche Börse AG.



## VIII Capital market

### 5 Yields and indices on German securities

Period	Yields on debt securities outstanding issued by residents <sup>1</sup>							Price indices <sup>2,3</sup>			
	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 <sup>4</sup>	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 <sup>4</sup>							
% per annum							Average daily rate	End-1998 = 100	End-1987 = 100	End-1987 = 1000	
2004	3.7	3.7	3.7	4.0	3.6	4.2	4.0	120.19	99.89	268.32	4,256.08
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
2015 Dec	0.5	0.4	0.4	0.6	0.5	1.4	2.7	139.52	112.42	508.80	10,743.01
2016 Jan	0.4	0.4	0.4	0.4	0.5	1.6	2.8	141.46	115.09	464.93	9,798.11
Feb	0.2	0.1	0.1	0.2	0.4	1.3	2.8	142.48	116.73	451.93	9,495.40
Mar	0.2	0.1	0.1	0.2	0.3	1.2	2.4	142.21	116.20	473.69	9,965.51
Apr	0.2	0.1	0.1	0.1	0.3	1.1	2.2	141.89	112.67	474.25	10,038.97
May	0.2	0.1	0.1	0.1	0.3	1.0	2.1	142.19	113.75	478.01	10,262.74

<sup>1</sup> Bearer debt securities with maximum maturities according to the terms of issue of over 4 years if their mean residual maturities exceed 3 years. Convertible debt securities, etc. debt securities with unscheduled redemption, zero-coupon bonds, floating-rate notes and bonds not denominated in euro are not included. Group yields for the various categories of securities are weighted by the amounts outstan-

ding of the debt securities included in the calculation. Monthly figures are calculated on the basis of the yields on all the business days in a month. The annual figures are the unweighted means of the monthly figures. <sup>2</sup> End of year or month. <sup>3</sup> Source: Deutsche Börse AG. <sup>4</sup> Only debt securities eligible as underlying instruments for futures contracts; calculated as unweighted averages.

### 6 Sales and purchases of mutual fund shares in Germany

Period	€ million													
	Sales							Purchases						
	Open-end domestic mutual funds <sup>1</sup> (sales receipts)							Residents				Non-residents <sup>5</sup>		
	Sales = total purchases	Total	Mutual funds open to the general public			Specialised funds	Foreign funds <sup>4</sup>	Total	Credit institutions including building and loan associations <sup>2</sup>		Other sectors <sup>3</sup>			
Total			Money market funds	Securities-based funds	Real estate funds				Total	of which Foreign mutual fund shares	Total	of which Foreign mutual fund shares		
2004	14,435	1,453	- 3,978	- 6,160	- 1,246	3,245	5,431	12,982	10,267	8,446	3,796	1,821	9,186	4,168
2005	85,268	41,718	6,400	- 124	7,001	- 3,186	35,317	43,550	79,252	21,290	7,761	57,962	35,789	6,016
2006	47,264	19,535	- 14,257	490	- 9,362	- 8,814	33,791	27,729	39,006	14,676	5,221	24,330	22,508	8,258
2007	55,778	13,436	- 7,872	- 4,839	- 12,848	6,840	21,307	42,342	51,309	- 229	4,240	51,538	38,102	4,469
2008	2,598	- 7,911	- 14,409	- 12,171	- 11,149	799	6,498	10,509	11,315	- 16,625	- 9,252	27,940	19,761	- 8,717
2009	49,929	43,747	10,966	- 5,047	11,749	2,686	32,780	6,182	38,132	- 14,995	- 8,178	53,127	14,361	11,796
2010	106,190	84,906	13,381	- 148	8,683	1,897	71,345	21,284	102,591	3,873	6,290	98,718	14,994	3,598
2011	46,511	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	123,743	91,337	9,184	- 574	5,596	3,376	82,153	32,407	117,675	771	100	116,904	32,305	6,069
2014	139,011	97,711	3,998	- 473	862	1,000	93,713	41,302	144,168	819	- 1,745	143,349	43,046	- 5,154
2015	181,632	146,136	30,420	318	22,345	3,636	115,716	35,495	176,116	7,362	494	168,754	35,001	5,515
2015 Oct	12,061	8,164	2,738	- 46	2,020	354	5,426	3,898	12,060	237	417	11,823	3,481	1
Nov	7,478	6,401	2,786	- 176	2,186	193	3,615	1,077	8,427	1,025	65	7,402	1,142	- 949
Dec	26,600	26,955	5,428	- 248	5,262	487	21,527	- 355	25,069	- 1,935	- 2,182	27,004	1,827	1,531
2016 Jan	17,489	15,246	2,675	366	673	1,335	12,571	2,243	18,048	- 339	- 397	18,387	2,640	- 559
Feb	13,857	9,934	1,404	- 79	469	704	8,530	3,924	14,315	557	107	13,758	3,817	- 457
Mar	11,178	7,620	1,620	- 191	657	836	6,000	3,558	12,939	1,053	915	11,886	2,643	- 1,761
Apr	12,910	6,740	1,705	- 76	940	496	5,035	6,170	14,501	671	- 230	13,830	6,400	- 1,590

<sup>1</sup> Including public limited investment companies. <sup>2</sup> Book values. <sup>3</sup> Residual. <sup>4</sup> Net purchases or net sales (-) of foreign fund shares by residents; transaction values. <sup>5</sup> 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	2013	2014	2015	2014		2015				
				Q3	Q4	Q1	Q2	Q3	Q4	
<b>Acquisition of financial assets</b>										
Currency and deposits	4.68	- 7.30	41.49	15.13	- 4.62	- 10.85	3.71	28.11	20.52	
Debt securities	0.65	- 1.26	- 0.93	0.31	- 3.57	- 1.48	0.56	0.51	- 0.52	
short-term debt securities	1.56	1.62	- 0.77	- 0.44	0.40	- 1.06	0.93	- 1.42	0.78	
long-term debt securities	- 0.91	- 2.88	- 0.15	0.75	- 3.97	- 0.42	- 0.37	1.93	- 1.29	
Memo item										
Debt securities of domestic sectors	- 1.27	- 1.88	0.73	0.06	- 2.74	- 0.07	0.24	0.94	- 0.38	
Non-financial corporations	0.81	- 0.05	- 0.79	- 0.32	- 0.10	- 0.53	0.59	- 0.32	- 0.52	
Financial corporations	- 2.14	- 1.26	1.93	- 0.43	- 0.52	0.75	- 0.27	0.87	0.58	
General government	0.07	- 0.57	- 0.41	0.80	- 2.12	- 0.28	- 0.08	0.39	- 0.44	
Debt securities of the rest of the world	1.91	0.62	- 1.66	0.25	- 0.83	- 1.41	0.32	- 0.42	- 0.14	
Loans	9.45	14.24	27.90	5.99	3.50	23.22	5.70	1.33	- 2.35	
short-term loans	27.76	36.06	23.12	15.06	0.93	20.70	1.57	1.15	- 0.29	
long-term loans	- 18.32	- 21.83	4.78	- 9.08	2.56	2.52	4.14	0.18	- 2.06	
Memo item										
to domestic sectors	2.36	10.23	9.46	- 2.67	7.11	18.03	- 1.29	0.48	- 7.76	
Non-financial corporations	3.91	- 0.31	- 0.25	- 5.09	8.53	- 1.28	- 0.12	4.28	- 3.13	
Financial corporations	- 1.81	10.65	9.68	2.46	- 1.39	19.30	- 1.17	- 3.81	- 4.64	
General government	0.26	- 0.11	0.04	- 0.03	- 0.03	0.01	0.01	0.01	0.01	
to the rest of the world	7.09	4.01	18.44	8.65	- 3.61	5.19	6.99	0.85	5.41	
Equity and investment fund shares	39.50	11.26	47.35	9.36	- 5.63	3.23	9.05	14.46	20.60	
Equity	31.85	21.64	31.00	8.23	4.86	- 4.92	6.23	10.59	19.10	
Listed shares of domestic sectors	8.70	- 1.62	- 10.41	2.77	- 2.76	- 16.68	1.41	1.98	2.88	
Non-financial corporations	9.65	- 5.39	- 8.04	2.29	- 5.95	- 14.10	1.07	2.12	2.86	
Financial corporations	- 0.95	3.78	- 2.37	0.47	3.19	- 2.59	0.34	- 0.14	0.02	
Listed shares of the rest of the world	1.41	9.31	7.25	- 1.41	0.30	10.12	- 0.22	- 5.02	2.37	
Other equity <sup>1</sup>	21.75	13.95	34.16	6.88	7.33	1.65	5.03	13.63	13.85	
Investment fund shares	7.65	- 10.38	16.35	1.13	- 10.50	8.15	2.82	3.87	1.50	
Money market fund shares	- 0.15	0.23	0.21	- 0.01	- 0.08	- 0.25	0.17	- 0.06	0.35	
Non-MMF investment fund shares	7.80	- 10.61	16.13	1.14	- 10.41	8.40	2.65	3.93	1.15	
Insurance technical reserves	3.02	1.04	1.64	0.33	0.06	0.28	0.55	0.56	0.25	
Financial derivatives	6.49	- 1.42	- 1.59	- 0.09	- 4.10	3.55	- 2.41	2.06	- 4.79	
Other accounts receivable	167.66	- 92.43	66.44	- 19.17	- 46.69	- 27.88	48.19	15.26	30.87	
<b>Total</b>	<b>231.45</b>	<b>- 75.89</b>	<b>182.30</b>	<b>11.86</b>	<b>- 61.06</b>	<b>- 9.92</b>	<b>65.35</b>	<b>62.30</b>	<b>64.57</b>	
<b>External financing</b>										
Debt securities	12.78	1.26	7.78	2.05	4.32	3.58	4.91	0.46	- 1.17	
short-term securities	- 1.12	- 11.63	1.96	- 1.65	- 0.88	1.26	- 0.04	1.01	- 0.27	
long-term securities	13.90	12.89	5.82	3.70	5.20	2.32	4.95	- 0.55	- 0.89	
Memo item										
Debt securities of domestic sectors	5.10	4.23	1.81	- 0.15	- 0.15	0.95	2.72	- 0.72	- 1.14	
Non-financial corporations	0.81	- 0.05	- 0.79	- 0.32	- 0.10	- 0.53	0.59	- 0.32	- 0.52	
Financial corporations	2.85	4.08	2.12	0.24	0.42	1.26	1.84	- 0.44	- 0.55	
General government	- 0.05	0.00	0.02	0.00	0.00	0.01	- 0.00	0.01	0.01	
Households	1.50	0.20	0.46	- 0.07	- 0.16	0.22	0.29	0.03	- 0.07	
Debt securities of the rest of the world	7.67	- 2.97	5.97	2.20	4.17	2.63	2.19	1.18	- 0.03	
Loans	27.15	- 15.51	45.71	- 26.87	- 13.66	29.15	16.95	- 2.09	1.70	
short-term loans	24.45	1.96	19.27	- 19.82	- 11.14	8.47	14.75	- 2.89	- 1.07	
long-term loans	2.71	- 17.47	26.45	- 7.06	- 2.53	20.68	2.20	0.80	2.77	
Memo item										
from domestic sectors	- 4.64	2.51	21.11	- 17.80	- 1.49	22.50	6.54	- 0.70	- 7.23	
Non-financial corporations	3.91	- 0.31	- 0.25	- 5.09	8.53	- 1.28	- 0.12	4.28	- 3.13	
Financial corporations	12.69	13.48	15.41	- 4.43	- 5.33	15.97	8.25	- 1.66	- 7.16	
General government	- 21.23	- 10.67	5.95	- 8.28	- 4.68	7.81	- 1.59	- 3.32	3.06	
from the rest of the world	31.74	- 18.01	24.60	- 9.08	- 12.18	6.65	10.41	- 1.39	8.93	
Equity	12.04	27.88	15.04	6.08	15.43	0.05	5.40	5.89	3.69	
Listed shares of domestic sectors	- 4.47	- 0.97	6.66	0.72	- 4.69	- 1.81	- 3.65	0.73	11.39	
Non-financial corporations	9.65	- 5.39	- 8.04	2.29	- 5.95	- 14.10	1.07	2.12	2.86	
Financial corporations	- 5.02	1.59	11.05	- 2.49	- 0.31	17.66	- 5.34	- 6.36	5.09	
General government	- 0.88	0.03	0.11	0.01	0.01	0.06	0.01	0.02	0.01	
Households	- 8.21	2.80	3.55	0.90	1.57	- 5.43	0.61	4.95	3.43	
Quoted shares of the rest of the world	7.80	9.72	- 0.64	3.59	6.65	2.08	5.36	1.97	- 10.04	
Other equity <sup>1</sup>	8.70	19.13	9.02	1.77	13.46	- 0.22	3.70	3.20	2.34	
Insurance technical reserves	6.34	6.05	6.05	1.51	1.51	1.51	1.51	1.51	1.51	
Financial derivatives and employee stock options	3.72	1.93	- 9.96	- 4.73	1.92	10.89	- 16.16	- 1.04	- 3.66	
Other accounts payable	19.44	- 11.43	56.92	20.18	- 19.56	28.57	18.55	0.16	9.64	
<b>Total</b>	<b>81.47</b>	<b>10.18</b>	<b>121.54</b>	<b>- 1.79</b>	<b>- 10.04</b>	<b>73.76</b>	<b>31.17</b>	<b>4.91</b>	<b>11.71</b>	

<sup>1</sup> 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	2013	2014	2015	2014		2015			
				Q3	Q4	Q1	Q2	Q3	Q4
<b>Financial assets</b>									
Currency and deposits	411.5	406.5	463.7	391.8	406.5	387.7	397.2	432.0	463.7
Debt securities	45.0	49.6	47.8	47.9	49.6	48.6	48.4	48.4	47.8
short-term debt securities	5.1	6.8	6.0	6.4	6.8	5.7	6.7	5.2	6.0
long-term debt securities	39.9	42.9	41.7	41.6	42.9	42.9	41.7	43.2	41.7
Memo item									
Debt securities of domestic sectors	24.6	22.9	23.3	25.6	22.9	23.0	23.0	23.8	23.3
Non-financial corporations	4.7	4.6	3.6	4.7	4.6	4.1	4.5	4.2	3.6
Financial corporations	13.8	12.7	14.5	13.2	12.7	13.5	13.2	14.0	14.5
General government	6.1	5.7	5.2	7.7	5.7	5.4	5.3	5.6	5.2
Debt securities of the rest of the world	20.5	26.7	24.4	22.3	26.7	25.6	25.4	24.7	24.4
Loans	447.0	466.0	493.7	464.0	466.0	493.6	498.3	497.6	493.7
short-term loans	340.0	375.8	397.8	376.4	375.8	398.9	399.8	399.9	397.8
long-term loans	107.0	90.2	95.9	87.6	90.2	94.8	98.5	97.7	95.9
Memo item									
to domestic sectors	305.2	315.4	324.9	308.3	315.4	333.5	332.2	332.6	324.9
Non-financial corporations	216.5	216.2	216.0	207.7	216.2	215.0	214.8	219.1	216.0
Financial corporations	82.1	92.8	102.4	94.1	92.8	112.1	110.9	107.1	102.4
General government	6.5	6.4	6.5	6.5	6.4	6.4	6.5	6.5	6.5
to the rest of the world	141.8	150.5	168.8	155.7	150.5	160.2	166.1	165.0	168.8
Equity and investment fund shares	1,811.0	1,922.3	2,102.4	1,892.3	1,922.3	2,151.6	2,088.1	1,980.1	2,102.4
Equity	1,672.9	1,786.8	1,950.4	1,747.0	1,786.8	2,000.6	1,938.0	1,830.2	1,950.4
Listed shares of domestic sectors	275.4	262.2	273.0	254.6	262.2	290.6	274.6	239.0	273.0
Non-financial corporations	269.8	252.2	266.6	248.9	252.2	283.1	267.4	233.2	266.6
Financial corporations	5.7	10.0	6.3	5.7	10.0	7.4	7.2	5.9	6.3
Listed shares of the rest of the world	52.2	62.2	69.5	62.1	62.2	74.0	71.8	66.4	69.5
Other equity <sup>1</sup>	1,345.2	1,462.4	1,607.9	1,430.4	1,462.4	1,636.0	1,591.7	1,524.8	1,607.9
Investment fund shares	138.1	135.5	151.9	145.2	135.5	151.0	150.0	149.8	151.9
Money market fund shares	1.1	1.2	1.4	1.4	1.2	0.9	1.1	1.0	1.4
Non-MMF investment fund shares	137.0	134.4	150.6	143.9	134.4	150.1	149.0	148.8	150.6
Insurance technical reserves	46.1	47.3	48.7	47.2	47.3	47.6	48.0	48.3	48.7
Financial derivatives	16.8	22.6	19.2	22.8	22.6	25.7	22.8	24.5	19.2
Other accounts receivable	891.1	857.9	929.7	863.5	857.9	900.0	927.0	922.0	929.7
<b>Total</b>	<b>3,668.5</b>	<b>3,772.1</b>	<b>4,105.2</b>	<b>3,729.5</b>	<b>3,772.1</b>	<b>4,055.0</b>	<b>4,029.7</b>	<b>3,953.0</b>	<b>4,105.2</b>
<b>Liabilities</b>									
Debt securities	138.9	150.9	156.8	143.1	150.9	159.5	157.2	158.1	156.8
short-term securities	13.4	1.8	3.0	2.7	1.8	2.3	2.3	3.3	3.0
long-term securities	125.4	149.1	153.7	140.4	149.1	157.1	154.9	154.8	153.7
Memo item									
Debt securities of domestic sectors	51.1	60.0	58.6	58.5	60.0	62.5	62.6	60.6	58.6
Non-financial corporations	4.7	4.6	3.6	4.7	4.6	4.1	4.5	4.2	3.6
Financial corporations	30.8	39.7	39.8	37.7	39.7	41.9	42.7	41.2	39.8
General government	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Households	15.6	15.8	15.0	16.0	15.8	16.4	15.3	15.2	15.0
Debt securities of the rest of the world	87.8	90.8	98.2	84.6	90.8	97.0	94.6	97.5	98.2
Loans	1,418.5	1,388.8	1,437.3	1,418.5	1,388.8	1,422.8	1,439.2	1,436.7	1,437.3
short-term loans	494.2	496.2	515.9	507.1	496.2	508.8	522.3	518.1	515.9
long-term loans	924.2	892.6	921.4	911.3	892.6	914.0	916.9	918.6	921.4
Memo item									
from domestic sectors	1,098.7	1,083.3	1,102.6	1,101.6	1,083.3	1,105.5	1,112.3	1,112.4	1,102.6
Non-financial corporations	216.5	216.2	216.0	207.7	216.2	215.0	214.8	219.1	216.0
Financial corporations	821.1	814.5	828.6	836.8	814.5	831.1	839.7	838.2	828.6
General government	61.0	52.6	58.1	57.0	52.6	59.4	57.7	55.1	58.1
from the rest of the world	319.8	305.5	334.6	316.9	305.5	317.3	326.9	324.3	334.6
Equity	2,436.6	2,542.2	2,670.9	2,430.7	2,542.2	2,860.2	2,715.7	2,484.8	2,670.9
Listed shares of domestic sectors	571.9	570.0	626.4	542.1	570.0	681.4	625.1	551.6	626.4
Non-financial corporations	269.8	252.2	266.6	248.9	252.2	283.1	267.4	233.2	266.6
Financial corporations	120.3	133.9	150.1	116.7	133.9	181.9	159.4	130.8	150.1
General government	35.2	35.2	43.4	34.1	35.2	42.9	39.5	41.1	43.4
Households	146.6	148.7	166.2	142.4	148.7	173.4	158.8	146.5	166.2
Quoted shares of the rest of the world	670.8	719.9	756.3	674.9	719.9	839.8	789.6	693.2	756.3
Other equity <sup>1</sup>	1,194.0	1,252.3	1,288.3	1,213.7	1,252.3	1,339.0	1,301.0	1,240.0	1,288.3
Insurance technical reserves	243.9	249.9	256.0	248.4	249.9	251.5	253.0	254.5	256.0
Financial derivatives and employee stock options	37.3	54.0	40.2	44.4	54.0	63.9	46.6	44.7	40.2
Other accounts payable	964.8	985.5	1,052.7	982.7	985.5	1,038.5	1,025.7	1,027.5	1,052.7
<b>Total</b>	<b>5,240.0</b>	<b>5,371.3</b>	<b>5,613.9</b>	<b>5,267.9</b>	<b>5,371.3</b>	<b>5,796.4</b>	<b>5,637.3</b>	<b>5,406.4</b>	<b>5,613.9</b>

<sup>1</sup> Including unlisted shares.

## IX Financial accounts

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

€ billion

Item	2013	2014	2015	2014		2015			
				Q3	Q4	Q1	Q2	Q3	Q4
<b>Acquisition of financial assets</b>									
Currency and deposits	63.87	85.60	85.21	16.41	40.18	14.61	31.14	8.49	30.98
Currency	8.08	15.42	14.05	3.26	6.88	4.12	7.18	3.01	- 0.26
Deposits	55.79	70.18	71.16	13.15	33.30	10.49	23.96	5.48	31.24
Transferable deposits	89.41	73.84	100.96	11.88	33.62	19.30	34.43	15.01	32.22
Time deposits	- 9.78	8.74	- 9.22	0.94	4.12	- 2.32	- 3.12	- 4.21	0.44
Savings deposits (including savings certificates)	- 23.85	- 12.41	- 20.58	0.33	- 4.44	- 6.49	- 7.35	- 5.32	- 1.43
Debt securities	- 17.81	- 18.00	- 17.40	- 7.47	- 5.89	- 7.38	- 5.09	- 1.87	- 3.07
short-term debt securities	- 0.36	- 0.67	0.75	- 0.39	- 0.32	0.29	0.31	0.28	- 0.13
long-term debt securities	- 17.45	- 17.33	- 18.16	- 7.09	- 5.57	- 7.66	- 5.40	- 2.14	- 2.95
Memo item									
Debt securities of domestic sectors	- 14.86	- 15.08	- 9.34	- 5.92	- 4.25	- 4.76	- 2.98	- 0.16	- 1.45
Non-financial corporations	1.24	0.02	0.39	- 0.11	- 0.23	0.21	0.23	0.02	- 0.07
Financial corporations	- 12.46	- 12.52	- 6.80	- 4.92	- 3.58	- 4.05	- 2.40	0.44	- 0.78
General government	- 3.64	- 2.58	- 2.93	- 0.89	- 0.44	- 0.91	- 0.81	- 0.61	- 0.60
Debt securities of the rest of the world	- 2.94	- 2.93	- 8.06	- 1.56	- 1.64	- 2.62	- 2.11	- 1.71	- 1.62
Equity and investment fund shares	9.63	36.87	46.39	7.55	10.43	4.53	10.53	16.85	14.48
Equity	- 0.41	12.17	15.03	1.00	3.95	- 6.26	2.87	11.73	6.69
Listed Shares of domestic sectors	- 5.63	4.61	4.06	0.25	1.79	- 6.53	1.13	6.67	2.79
Non-financial corporations	- 5.29	2.69	3.77	0.85	1.55	- 5.50	0.49	6.03	2.76
Financial corporations	- 0.35	1.93	0.28	- 0.60	0.23	- 1.03	0.64	0.64	0.03
Quoted shares of the rest of the world	2.99	3.70	6.75	0.08	1.06	0.66	0.80	3.00	2.30
Other equity <sup>1</sup>	2.24	3.86	4.22	0.68	1.10	- 0.39	0.95	2.07	1.60
Investment fund shares	10.04	24.70	31.36	6.55	6.49	10.79	7.66	5.12	7.79
Money market fund shares	- 0.30	- 0.34	- 0.57	- 0.10	0.12	- 0.16	- 0.02	- 0.10	- 0.30
Non-MMF investment fund shares	10.34	25.04	31.93	6.65	6.37	10.95	7.68	5.22	8.09
Non-life insurance technical reserves and provision for calls under standardised guarantees	26.02	24.46	19.75	5.48	5.88	5.63	5.07	4.93	4.12
Life insurance and annuity entitlements	31.69	30.40	35.56	5.21	7.67	16.27	9.01	5.31	4.97
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	19.39	25.22	26.09	3.73	6.40	6.12	4.07	6.17	9.72
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 <sup>2</sup>	9.76	- 31.14	- 16.71	1.97	- 24.85	11.65	- 10.21	- 0.08	- 18.07
<b>Total</b>	<b>142.56</b>	<b>153.40</b>	<b>178.88</b>	<b>32.88</b>	<b>39.82</b>	<b>51.43</b>	<b>44.53</b>	<b>39.80</b>	<b>43.12</b>
<b>External financing</b>									
Loans	11.96	19.33	38.41	9.18	4.20	3.59	11.78	14.56	8.48
short-term loans	- 3.31	- 1.98	- 3.17	- 1.26	- 2.04	1.00	- 1.26	- 1.51	- 1.40
long-term loans	15.27	21.31	41.58	10.44	6.24	2.59	13.04	16.07	9.88
Memo item									
Mortgage loans	18.89	23.60	35.84	9.10	8.35	2.30	10.24	13.76	9.53
Consumer loans	- 0.30	1.21	5.44	1.33	- 1.71	1.57	2.15	1.40	0.32
Entrepreneurial loans	- 6.64	- 5.49	- 2.88	- 1.25	- 2.44	- 0.29	- 0.61	- 0.60	- 1.38
Memo item									
Loans from monetary financial institutions	12.60	18.87	39.35	9.60	4.17	3.27	11.60	15.09	9.38
Loans from other financial institutions	- 0.60	0.45	- 0.94	- 0.42	0.03	0.32	0.18	- 0.53	- 0.90
Loans from general government and rest of the world	- 0.05	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	- 0.01	0.03	0.31	0.30	- 0.43	0.25	0.05	- 0.01	0.02
<b>Total</b>	<b>11.94</b>	<b>19.36</b>	<b>38.72</b>	<b>9.48</b>	<b>3.76</b>	<b>3.84</b>	<b>11.83</b>	<b>14.55</b>	<b>8.50</b>

<sup>1</sup> Including unlisted shares. <sup>2</sup> 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	2013	2014	2015	2014		2015			
				Q3	Q4	Q1	Q2	Q3	Q4
<b>Financial assets</b>									
Currency and deposits	1,910.8	1,997.9	2,083.1	1,956.0	1,997.9	2,012.5	2,043.6	2,052.1	2,083.1
Currency	112.0	127.5	141.5	120.6	127.5	131.6	138.8	141.8	141.5
Deposits	1,798.8	1,870.4	1,941.6	1,835.4	1,870.4	1,880.9	1,904.8	1,910.3	1,941.6
Transferable deposits	907.8	981.4	1,082.4	947.8	981.4	1,000.6	1,035.1	1,050.1	1,082.4
Time deposits	245.9	256.4	246.8	250.5	256.4	254.0	250.9	246.4	246.8
Savings deposits (including savings certificates)	645.1	632.7	612.4	637.1	632.7	626.2	618.9	613.8	612.4
Debt securities	179.0	162.2	139.8	168.9	162.2	156.8	149.2	144.0	139.8
short-term debt securities	2.7	2.1	2.9	2.4	2.1	2.4	2.7	3.0	2.9
long-term debt securities	176.3	160.1	136.9	166.5	160.1	154.3	146.5	141.0	136.9
Memo item									
Debt securities of domestic sectors	116.9	102.4	89.4	107.1	102.4	98.6	94.3	92.2	89.4
Non-financial corporations	14.2	14.1	13.4	14.5	14.1	14.8	13.7	13.5	13.4
Financial corporations	90.7	78.7	69.5	82.6	78.7	75.1	72.9	71.5	69.5
General government	12.0	9.6	6.5	10.0	9.6	8.7	7.8	7.1	6.5
Debt securities of the rest of the world	62.0	59.8	50.3	61.8	59.8	58.2	54.9	51.8	50.3
Equity and investment fund shares	885.9	951.4	1,040.7	928.9	951.4	1,051.1	1,018.4	982.1	1,040.7
Equity	487.6	508.9	555.9	497.2	508.9	563.4	537.0	518.3	555.9
Listed Shares of domestic sectors	167.4	169.7	188.9	163.0	169.7	197.9	179.6	168.4	188.9
Non-financial corporations	140.4	142.1	158.7	136.2	142.1	165.4	151.1	140.2	158.7
Financial corporations	26.9	27.6	30.3	26.9	27.6	32.5	28.5	28.2	30.3
Quoted shares of the rest of the world	55.8	64.0	74.8	63.2	64.0	74.6	71.7	67.9	74.8
Other equity <sup>1</sup>	264.4	275.3	292.2	271.0	275.3	290.9	285.7	282.0	292.2
Investment fund shares	398.3	442.5	484.8	431.7	442.5	487.7	481.3	463.8	484.8
Money market fund shares	4.4	4.0	3.4	4.0	4.0	3.8	3.8	3.7	3.4
Non-MMF investment fund shares	393.8	438.5	481.4	427.7	438.5	483.8	477.5	460.1	481.4
Non-life insurance technical reserves and provision for calls under standardised guarantees	291.3	307.3	323.0	303.6	307.3	311.5	315.7	319.8	323.0
Life insurance and annuity entitlements	847.3	885.6	924.7	876.0	885.6	903.2	913.0	918.9	924.7
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	708.3	742.0	772.1	728.8	742.0	749.6	754.5	761.5	772.1
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 <sup>2</sup>	36.7	35.8	34.8	36.0	35.8	35.6	35.5	35.1	34.8
<b>Total</b>	<b>4,859.4</b>	<b>5,082.2</b>	<b>5,318.2</b>	<b>4,998.1</b>	<b>5,082.2</b>	<b>5,220.1</b>	<b>5,229.8</b>	<b>5,213.5</b>	<b>5,318.2</b>
<b>Liabilities</b>									
Loans	1,549.6	1,569.2	1,605.6	1,564.7	1,569.2	1,571.6	1,583.2	1,597.3	1,605.6
short-term loans	66.4	64.6	60.9	66.5	64.6	65.6	64.1	62.6	60.9
long-term loans	1,483.2	1,504.7	1,544.7	1,498.3	1,504.7	1,506.0	1,519.1	1,534.7	1,544.7
Memo item									
Mortgage loans	1,092.9	1,116.8	1,152.8	1,108.9	1,116.8	1,119.1	1,129.5	1,143.0	1,152.8
Consumer loans	188.7	188.9	191.9	190.6	188.9	189.2	191.2	192.2	191.9
Entrepreneurial loans	268.0	263.6	260.9	265.2	263.6	263.3	262.5	262.1	260.9
Memo item									
Loans from monetary financial institutions	1,458.4	1,477.6	1,514.9	1,473.1	1,477.6	1,479.6	1,491.0	1,505.7	1,514.9
Loans from other financial institutions	91.2	91.7	90.7	91.7	91.7	92.0	92.2	91.6	90.7
Loans from general government and rest of the world	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial derivatives	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts payable	15.6	15.7	15.9	17.3	15.7	17.0	16.7	16.9	15.9
<b>Total</b>	<b>1,565.2</b>	<b>1,585.0</b>	<b>1,621.5</b>	<b>1,582.1</b>	<b>1,585.0</b>	<b>1,588.5</b>	<b>1,599.9</b>	<b>1,614.2</b>	<b>1,621.5</b>

<sup>1</sup> Including unlisted shares. <sup>2</sup> Including accumulated interest-bearing surplus shares with insurance corporations.

## X Public finances in Germany

### 1 General government: deficit 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				
<b>Deficit/surplus<sup>1</sup></b>										
2009	- 79.6	- 40.5	- 19.5	- 5.1	- 14.4	- 3.2	- 1.6	- 0.8	- 0.2	- 0.6
2010	- 108.9	- 84.1	- 20.6	- 8.1	+ 3.8	- 4.2	- 3.3	- 0.8	- 0.3	+ 0.1
2011	- 25.9	- 29.4	- 11.4	- 0.3	+ 15.3	- 1.0	- 1.1	- 0.4	- 0.0	+ 0.6
2012 P	- 2.7	- 16.3	- 7.4	+ 2.7	+ 18.3	- 0.1	- 0.6	- 0.3	+ 0.1	+ 0.7
2013 P	- 3.8	- 7.7	- 3.2	+ 1.7	+ 5.3	- 0.1	- 0.3	- 0.1	+ 0.1	+ 0.2
2014 P	+ 8.4	+ 8.6	- 0.8	- 2.8	+ 3.4	+ 0.3	+ 0.3	- 0.0	- 0.1	+ 0.1
2015 pe	+ 19.6	+ 10.0	+ 2.9	+ 2.8	+ 4.0	+ 0.6	+ 0.3	+ 0.1	+ 0.1	+ 0.1
2014 H1 P	+ 10.8	+ 1.7	- 0.7	+ 3.3	+ 6.5	+ 0.8	+ 0.1	- 0.1	+ 0.2	+ 0.5
H2 P	- 2.4	+ 6.9	- 0.0	- 6.1	- 3.2	- 0.2	+ 0.5	- 0.0	- 0.4	- 0.2
2015 H1 pe	+ 13.5	+ 2.5	+ 3.0	+ 5.0	+ 3.0	+ 0.9	+ 0.2	+ 0.2	+ 0.3	+ 0.2
H2 pe	+ 6.1	+ 7.4	- 0.2	- 2.2	+ 1.0	+ 0.4	+ 0.5	- 0.0	- 0.1	+ 0.1
<b>Debt level<sup>2</sup></b>										
<b>End of year or quarter</b>										
2009	1,782.0	1,079.7	583.4	133.5	1.3	72.4	43.9	23.7	5.4	0.1
2010	2,089.9	1,335.2	629.7	143.0	1.3	81.0	51.7	24.4	5.5	0.1
2011	2,116.8	1,342.3	644.1	146.8	1.3	78.3	49.7	23.8	5.4	0.0
2012 P	2,193.3	1,386.6	672.3	151.0	1.2	79.6	50.3	24.4	5.5	0.0
2013 P	2,177.8	1,389.6	650.7	153.5	1.3	77.2	49.3	23.1	5.4	0.0
2014 P	2,177.7	1,396.0	644.2	154.1	1.4	74.7	47.9	22.1	5.3	0.0
2015 P	2,152.9	1,372.0	646.5	154.5	1.4	71.2	45.3	21.4	5.1	0.0
2014 Q1 P	2,168.9	1,386.8	646.5	153.3	1.2	76.1	48.6	22.7	5.4	0.0
Q2 P	2,175.8	1,395.3	644.6	154.0	1.1	75.8	48.6	22.4	5.4	0.0
Q3 P	2,176.6	1,391.4	647.1	154.3	1.1	75.2	48.1	22.4	5.3	0.0
Q4 P	2,177.7	1,396.0	644.2	154.1	1.4	74.7	47.9	22.1	5.3	0.0
2015 Q1 P	2,185.8	1,399.3	653.5	154.3	1.4	74.4	47.6	22.2	5.3	0.0
Q2 P	2,152.0	1,382.7	633.8	153.8	1.4	72.6	46.6	21.4	5.2	0.0
Q3 P	2,154.1	1,377.2	641.9	154.3	1.5	72.0	46.0	21.4	5.2	0.0
Q4 P	2,152.9	1,372.0	646.5	154.5	1.4	71.2	45.3	21.4	5.1	0.0

Sources: Federal Statistical Office and Bundesbank calculations. **1** The deficit/surplus in accordance with ESA 2010 corresponds to the Maastricht definition. **2** Quarterly

GDP ratios are based on the national output of the four preceding quarters.

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

Period	Revenue			Expenditure						Deficit/surplus	Memo item Total tax burden <sup>1</sup>	
	Total	of which		Total	of which							
		Taxes	Social contributions		Other	Social benefits	Compensation of employees	Interest	Gross capital formation			Other
<b>€ billion</b>												
2009	1,090.9	554.7	415.6	120.6	1,170.5	624.8	197.8	65.0	58.3	224.6	- 79.6	974.3
2010	1,110.3	556.2	426.2	127.9	1,219.2	634.5	203.5	63.9	59.4	258.0	- 108.9	986.5
2011	1,182.7	598.8	442.3	141.7	1,208.6	633.9	208.6	67.5	61.4	237.2	- 25.9	1,045.6
2012 P	1,222.1	623.9	454.2	144.0	1,224.8	644.4	212.9	63.1	62.2	242.3	- 2.7	1,082.6
2013 P	1,252.4	642.0	464.9	145.5	1,256.2	665.7	218.6	56.0	63.5	252.4	- 3.8	1,111.3
2014 P	1,299.6	665.1	481.9	152.5	1,291.2	691.1	224.6	51.5	63.2	260.8	+ 8.4	1,151.5
2015 pe	1,350.7	698.1	500.8	151.8	1,331.1	722.9	229.6	48.0	66.6	264.1	+ 19.6	1,204.4
<b>as a percentage of GDP</b>												
2009	44.3	22.5	16.9	4.9	47.6	25.4	8.0	2.6	2.4	9.1	- 3.2	39.6
2010	43.0	21.6	16.5	5.0	47.3	24.6	7.9	2.5	2.3	10.0	- 4.2	38.2
2011	43.8	22.2	16.4	5.2	44.7	23.4	7.7	2.5	2.3	8.8	- 1.0	38.7
2012 P	44.4	22.6	16.5	5.2	44.5	23.4	7.7	2.3	2.3	8.8	- 0.1	39.3
2013 P	44.4	22.8	16.5	5.2	44.5	23.6	7.8	2.0	2.3	8.9	- 0.1	39.4
2014 P	44.6	22.8	16.5	5.2	44.3	23.7	7.7	1.8	2.2	8.9	+ 0.3	39.5
2015 pe	44.6	23.1	16.6	5.0	44.0	23.9	7.6	1.6	2.2	8.7	+ 0.6	39.8
<b>Percentage growth rates</b>												
2009	- 1.9	- 5.3	+ 0.8	+ 6.4	+ 4.9	+ 5.5	+ 4.6	- 5.1	+ 10.7	+ 5.1	.	- 2.9
2010	+ 1.8	+ 0.3	+ 2.5	+ 6.1	+ 4.2	+ 1.5	+ 2.9	- 1.7	+ 1.9	+ 14.8	.	+ 1.3
2011	+ 6.5	+ 7.7	+ 3.8	+ 10.7	- 0.9	- 0.1	+ 2.5	+ 5.7	+ 3.3	- 8.1	.	+ 6.0
2012 P	+ 3.3	+ 4.2	+ 2.7	+ 1.6	+ 1.3	+ 1.7	+ 2.0	- 6.5	+ 1.4	+ 2.1	.	+ 3.5
2013 P	+ 2.5	+ 2.9	+ 2.4	+ 1.0	+ 2.6	+ 3.3	+ 2.7	- 11.2	+ 2.1	+ 4.2	.	+ 2.6
2014 P	+ 3.8	+ 3.6	+ 3.7	+ 4.9	+ 2.8	+ 3.8	+ 2.7	- 8.1	- 0.5	+ 3.3	.	+ 3.6
2015 pe	+ 3.9	+ 5.0	+ 3.9	- 0.5	+ 3.1	+ 4.6	+ 2.2	- 6.8	+ 5.3	+ 1.3	.	+ 4.6

Source: Federal Statistical Office. \* Figures in accordance with ESA 2010. **1** Taxes and social contributions plus customs duties.

X Public finances in Germany

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

€ billion

Period	Central, state and local government <sup>1</sup>									Social security funds <sup>2</sup>			General government, total			
	Revenue			Expenditure						Deficit / surplus	Revenue <sup>6</sup>	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus
	Total <sup>4</sup>	of which		Total <sup>4</sup>	of which <sup>3</sup>											
		Taxes	Financial transactions <sup>5</sup>		Personnel expenditure	Current grants	Interest	Fixed asset formation	Financial transactions <sup>5</sup>							
2009	623.0	524.0	7.1	713.1	187.1	286.6	63.4	38.6	34.8	- 90.1	492.1	506.0	- 14.0	1,013.4	1,117.5	- 104.0
2010	634.7	530.6	7.9	713.6	190.7	308.5	57.7	39.7	11.4	- 78.9	516.5	512.9	+ 3.7	1,033.7	1,108.9	- 75.2
2011	689.6	573.4	22.8	711.6	194.3	301.3	56.8	38.5	13.7	- 22.0	526.3	511.3	+ 15.0	1,104.2	1,111.2	- 7.0
2012 P	745.0	600.0	14.7	770.2	218.8	285.2	69.9	42.6	25.5	- 25.2	536.2	518.9	+ 17.3	1,171.1	1,179.0	- 7.9
2013 P	761.8	619.7	14.7	773.6	225.3	286.9	65.7	42.8	23.5	- 11.8	536.7	532.0	+ 4.7	1,198.1	1,205.2	- 7.0
2014 P	791.8	643.6	11.3	786.7	236.0	292.9	57.1	45.9	17.6	+ 5.1	554.4	551.1	+ 3.2	1,245.1	1,236.8	+ 8.4
2013 Q1 P	178.0	148.6	2.6	187.8	53.7	74.9	22.5	6.0	2.9	- 9.8	128.5	132.3	- 3.8	281.3	294.9	- 13.6
Q2 P	193.8	155.3	4.8	185.0	54.7	68.7	14.2	8.5	8.0	+ 8.8	133.1	132.6	+ 0.5	302.0	292.7	+ 9.4
Q3 P	183.8	151.8	2.4	192.3	55.2	70.9	20.1	11.6	3.2	- 8.5	131.6	132.6	- 1.0	290.4	299.9	- 9.5
Q4 P	204.7	164.2	4.6	207.5	60.8	71.0	10.0	15.4	8.3	- 2.8	142.7	134.2	+ 8.5	321.9	316.2	+ 5.7
2014 Q1 P	188.2	153.6	2.0	193.9	56.7	77.9	20.0	7.8	2.3	- 5.7	132.8	136.1	- 3.3	296.0	305.0	- 9.0
Q2 P	193.1	157.4	2.2	188.1	56.9	71.8	9.8	9.8	8.2	+ 5.0	136.4	135.8	+ 0.6	304.5	299.0	+ 5.6
Q3 P	192.2	157.5	3.4	193.5	57.1	71.2	17.7	11.3	4.0	- 1.4	136.3	137.4	- 1.1	303.1	305.5	- 2.4
Q4 P	219.0	174.9	3.5	211.8	65.4	73.5	9.5	16.5	3.1	+ 7.2	148.3	141.5	+ 6.8	341.6	327.6	+ 14.0
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	208.5	167.7	1.5	185.4	59.5	73.2	7.2	9.1	3.0	+ 23.1	142.4	142.3	+ 0.1	325.2	302.0	+ 23.2
Q3 P	202.7	159.0	3.8	197.9	62.3	70.9	16.6	11.6	3.4	+ 4.7	141.2	143.4	- 2.1	318.0	315.5	+ 2.6

Source: Bundesbank calculations based on Federal Statistical Office data. <sup>1</sup> 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 do not contain the special purpose associations included in the annual calculations, but they do not contain numerous other off-budget entities which are assigned to the general government sector as defined in the national accounts. From 2012, also including the bad bank FMSW. <sup>2</sup> Furthermore, 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. <sup>3</sup> The development of the types of expenditure recorded here is influenced in part by statistical changes. <sup>4</sup> Including discrepancies in clearing transactions between central, state and local government. <sup>5</sup> 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. <sup>6</sup> 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 <sup>2,3</sup>			Local government <sup>3</sup>		
	Revenue <sup>1</sup>	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus	Revenue	Expenditure	Deficit / surplus
2009	282.6	317.1	- 34.5	260.1	287.1	- 26.9	170.8	178.3	- 7.5
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	336.2	+ 2.0	218.7	218.8	- 0.1
2015 P	338.2	326.4	+ 11.8	353.9	349.2	+ 4.7	232.7	229.1	+ 3.6
2013 Q1 P	66.9	79.9	- 13.0	77.4	77.9	- 0.5	42.1	46.4	- 4.3
Q2 P	78.7	77.8	+ 0.9	81.5	78.1	+ 3.3	51.7	48.4	+ 3.4
Q3 P	77.4	85.2	- 7.8	78.7	78.9	- 0.2	51.5	52.1	- 0.5
Q4 P	90.2	92.7	- 2.5	85.8	88.6	- 2.9	60.3	57.9	+ 2.4
2014 Q1 P	69.8	80.4	- 10.6	80.3	81.0	- 0.7	45.1	50.0	- 4.8
Q2 P	77.7	76.7	+ 0.9	82.3	80.4	+ 1.9	54.8	52.0	+ 2.8
Q3 P	82.5	85.3	- 2.9	82.7	80.4	+ 2.3	53.9	54.4	- 0.5
Q4 P	92.9	80.8	+ 12.2	92.0	94.0	- 2.0	63.0	61.0	+ 2.0
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	91.4	83.3	+ 8.1	94.1	96.6	- 2.6	69.0	65.9	+ 3.0

Source: Bundesbank calculations based on Federal Statistical Office data. <sup>1</sup> 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. <sup>2</sup> Including the local authority level of the city-states Berlin, Bremen and Hamburg. <sup>3</sup> For state government from 2011, for local government from 2012: quarterly data of core budgets and off-budget entities which are assigned to the general

government sector, up to and including 2013: excluding special purpose associations. Annual figures up to and including 2011: excluding off-budget entities, but including special accounts and special purpose associations based on the calculations of the Federal Statistical Office. For the following years, Bundesbank supplementary estimations.

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### 5 Central, state and local government: tax revenue

€ million

Period	Central and state government and European Union							Balance of untransferred tax shares <sup>4</sup>	Memo item Amounts deducted in the federal budget <sup>5</sup>
	Total	Total	Central government <sup>1</sup>	State government <sup>1</sup>	European Union <sup>2</sup>	Local government <sup>3</sup>			
2009	524,000	455,615	252,842	182,273	20,501	68,419	-	34	24,846
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
2014 Q1	153,971	130,986	64,962	54,529	11,495	15,287	+	7,698	6,638
Q2	158,118	135,358	72,082	56,178	7,098	23,160	-	400	6,803
Q3	156,886	135,698	75,711	55,194	4,794	21,380	-	192	7,577
Q4	174,650	153,966	85,763	60,603	7,599	27,592	-	6,908	6,754
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	...	144,841	74,113	61,972	8,755	...	...	...	6,488
2015 Apr	.	40,632	21,101	16,860	2,671	.	.	.	2,211
2016 Apr	.	43,471	23,512	18,425	1,533	.	.	.	2,171

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. **1** Before deducting or adding supplementary central government grants, shares in energy tax revenue, compensation for the transfer of motor vehicle tax to central government and consolidation aid, which central government remits to state government. See the last column for the volume of these amounts which are deducted from tax revenue in the federal budget. **2** Custom duties and shares in VAT

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

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

€ million

Period	Joint taxes													Memo item Local government share in joint taxes
	Total <sup>1</sup>	Income taxes <sup>2</sup>					Turnover taxes <sup>5</sup>			Local business tax transfers <sup>6</sup>	Central government taxes <sup>7</sup>	State government taxes <sup>7</sup>	EU customs duties	
		Total	Wage tax <sup>3</sup>	Assessed income tax	Corporation tax	Investment income tax <sup>4</sup>	Total	Turnover tax	Turnover tax on imports					
2009	484,880	193,684	135,165	26,430	7,173	24,916	176,991	141,907	35,084	4,908	89,318	16,375	3,604	29,265
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
2014 Q1	140,035	62,941	39,035	11,808	5,610	6,487	50,533	38,904	11,629	134	20,893	4,481	1,053	9,049
Q2	144,418	65,233	40,767	11,963	5,068	7,435	49,166	37,194	11,972	1,785	22,874	4,318	1,042	9,059
Q3	144,482	60,838	40,538	10,022	4,314	5,965	51,148	38,733	12,415	1,911	24,945	4,395	1,244	8,783
Q4	164,104	69,863	47,642	11,820	5,052	5,349	52,264	39,397	12,867	3,312	33,091	4,361	1,214	10,139
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
2015 Apr	43,476	16,603	14,701	1,154	- 1,217	1,964	15,560	11,093	4,467	1,491	7,691	1,684	447	2,843
2016 Apr	46,346	17,704	15,408	947	- 345	1,694	16,490	12,248	4,242	1,700	8,187	1,833	432	2,875

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 2015: 52.3:45.5:2.2. The EU share is deducted from central government's share. **6** Respective percentage share of central and state government for 2015: 22.4:77.6. **7** For the breakdown, see Table X. 7.



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### 7 Central, state and local government: individual taxes

€ million

Period	Central government taxes <sup>1</sup>								State government taxes <sup>1</sup>				Local government taxes		
	Energy tax	Tobacco tax	Solidarity surcharge	Insurance tax	Motor vehicle tax <sup>2</sup>	Electricity tax	Spirits tax	Other	Motor vehicle tax <sup>2</sup>	Tax on the acquisition of land and buildings	Inheritance tax	Other <sup>3</sup>	Total	of which	
														Local business tax <sup>4</sup>	Real property taxes
2009	39,822	13,366	11,927	10,548	3,803	6,278	2,101	1,473	4,398	4,857	4,550	2,571	44,028	32,421	10,936
2010	39,838	13,492	11,713	10,284	8,488	6,171	1,990	1,449	.	5,290	4,404	2,452	47,780	35,712	11,315
2011	40,036	14,414	12,781	10,755	8,422	7,247	2,149	3,329	.	6,366	4,246	2,484	52,984	40,424	11,674
2012	39,305	14,143	13,624	11,138	8,443	6,973	2,121	4,047	.	7,389	4,305	2,508	55,398	42,345	12,017
2013	39,364	13,820	14,378	11,553	8,490	7,009	2,102	3,737	.	8,394	4,633	2,696	56,549	43,027	12,377
2014	39,758	14,612	15,047	12,046	8,501	6,638	2,060	3,143	.	9,339	5,452	2,764	57,728	43,763	12,691
2015	39,594	14,921	15,930	12,419	8,805	6,593	2,070	3,872	.	11,249	6,290	2,801	60,396	45,752	13,215
2014 Q1	4,675	2,477	3,577	5,642	1,861	1,550	556	555	.	2,385	1,314	782	14,070	10,829	2,880
Q2	9,868	3,708	3,955	2,096	2,517	1,718	470	-1,458	.	2,149	1,501	668	15,485	11,684	3,495
Q3	10,029	3,735	3,498	2,423	2,265	1,716	499	779	.	2,387	1,331	677	14,316	10,458	3,529
Q4	15,185	4,691	4,016	1,886	1,859	1,653	535	3,266	.	2,418	1,306	638	13,858	10,792	2,786
2015 Q1	4,704	2,223	3,783	5,825	2,454	1,806	570	904	.	2,760	1,668	779	14,288	10,912	2,982
Q2	9,512	3,683	4,278	2,187	2,361	1,465	470	937	.	2,561	1,617	660	16,368	12,383	3,636
Q3	10,159	3,981	3,714	2,436	2,108	1,643	496	1,102	.	3,021	1,335	672	15,180	11,118	3,697
Q4	15,220	5,034	4,155	1,972	1,883	1,678	534	930	.	2,906	1,670	689	14,561	11,339	2,899
2016 Q1	4,620	2,722	3,979	5,946	2,489	1,685	565	547	.	3,217	1,668	787	...	...	...
2015 Apr	2,927	1,328	964	689	860	569	138	216	.	842	629	213	.	.	.
2016 Apr	3,094	1,599	1,036	719	817	579	142	203	.	974	627	232	.	.	.

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. <sup>1</sup> For the sum total, see Table X. 6. <sup>2</sup> As of 1 July 2009, motor vehicle tax revenue is attributable to central government. Postings to state government shown there-

after relate to the booking of cash flows. <sup>3</sup> Notably betting, lottery and beer tax. <sup>4</sup> Including revenue from offshore wind farms.

### 8 German pension insurance scheme: budgetary development and assets\*

€ million

Period	Revenue <sup>1,2</sup>			Expenditure <sup>1,2</sup>				Deficit/ surplus	Assets <sup>1,4</sup>					Memo item Adminis- trative assets
	Total	of which		Total	of which		Total		Deposits <sup>5</sup>	Securities	Equity interests, mortgages and other loans <sup>6</sup>	Real estate		
		Contributions <sup>3</sup>	Payments from central government		Pension payments	Pensioners' health insurance								
2009	244,689	169,183	74,313	244,478	208,475	14,431	+ 211	16,821	16,614	23	64	120	4,525	
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 p	275,555	194,511	79,947	277,370	236,954	16,698	- 1,815	35,574	32,794	2,506	158	117	4,242	
2013 Q1	62,211	42,779	19,173	64,193	54,940	3,871	- 1,982	28,616	26,044	2,356	106	110	4,292	
Q2	64,751	45,399	19,090	64,188	54,660	3,858	+ 563	29,380	26,938	2,221	111	110	4,294	
Q3	63,610	44,194	19,154	64,775	55,169	3,898	- 1,165	28,647	25,262	3,161	113	110	4,291	
Q4	69,503	49,609	19,626	64,855	55,108	3,894	+ 4,648	33,667	29,201	4,251	114	101	4,290	
2014 Q1	64,138	44,355	19,534	64,615	55,266	3,897	- 477	32,669	28,668	3,781	121	99	4,251	
Q2	66,857	47,145	19,453	64,697	55,085	3,891	+ 2,160	35,181	31,167	3,791	126	97	4,260	
Q3	66,129	45,992	19,865	66,801	56,909	3,991	- 672	33,678	30,264	3,191	129	94	4,256	
Q4	71,927	51,577	20,096	69,548	59,225	4,192	+ 2,379	36,442	32,901	3,317	129	94	4,275	
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	

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. <sup>1</sup> The final annual figures do not tally with the quarterly figures, as the latter are all provisional. <sup>2</sup> Including financial compensation payments. Ex-

cluding investment spending and proceeds. <sup>3</sup> Including contributions for recipients of government cash benefits. <sup>4</sup> Largely corresponds to the sustainability reserves. End of year or quarter. <sup>5</sup> Including cash. <sup>6</sup> Excluding loans to other social security funds.

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### 9 Federal Employment Agency: budgetary development\*

Period	Revenue				Expenditure						Deficit/ surplus	Deficit offsetting grant or loan from central government	
	Total <sup>1</sup>	of which			Total	of which							
		Contributions	Insolvency compensation levy	Central government subscriptions		Unemployment benefit <sup>2</sup>	Short-time working benefits <sup>3</sup>	Job promotion <sup>4</sup>	Re-integration payment <sup>5</sup>	Insolvency benefit payment			Administrative expenditure <sup>6</sup>
2009	34,254	22,046	711	7,777	48,057	17,291	5,322	9,849	4,866	1,617	5,398	- 13,804	-
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	-
2013 Q1	7,762	6,429	276	245	8,612	4,301	494	1,493	.	194	1,193	- 850	-
Q2	8,041	6,870	310	-	8,230	3,969	384	1,498	.	204	1,266	- 189	-
Q3	7,898	6,708	303	-	7,580	3,644	109	1,420	.	228	1,284	+ 318	-
Q4	8,935	7,587	335	-	8,153	3,497	96	1,630	.	287	1,606	+ 782	-
2014 Q1	7,844	6,696	299	-	8,693	4,379	311	1,605	.	199	1,239	- 849	-
Q2	8,352	7,143	331	-	8,036	3,902	197	1,593	.	211	1,259	+ 316	-
Q3	8,249	6,991	318	-	7,551	3,641	123	1,458	.	163	1,313	+ 698	-
Q4	9,280	7,884	347	-	7,868	3,446	79	1,609	.	122	1,682	+ 1,412	-
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	-

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

Period	Revenue 1			Expenditure 1							Deficit/ surplus	
	Total	of which		Total	of which							
		Contributions <sup>2</sup>	Central government funds <sup>3</sup>		Hospital treatment	Pharmaceuticals	Medical treatment	Dental treatment <sup>4</sup>	Therapeutic treatment and aids	Sickness benefits		Administrative expenditure <sup>5</sup>
2009	169,837	158,662	7,200	170,825	55,977	30,696	27,635	11,219	9,578	7,258	8,949	- 988
2010 <sup>6</sup>	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 <sup>P</sup>	210,017	195,773	11,500	213,615	68,141	34,608	35,743	13,475	13,608	11,231	10,402	- 3,598
2013 Q1	47,115	43,645	2,875	48,030	15,955	7,445	8,258	3,139	2,786	2,518	2,256	- 915
Q2	48,604	45,199	2,875	48,577	15,815	7,486	8,227	3,142	3,007	2,465	2,336	+ 26
Q3	48,337	44,917	2,875	48,435	15,839	7,456	8,149	3,070	3,043	2,356	2,378	- 98
Q4	52,127	48,392	2,875	49,451	15,295	7,759	8,200	3,218	3,264	2,409	2,958	+ 2,676
2014 Q1	49,164	45,113	3,500	50,990	16,868	8,097	8,582	3,262	3,029	2,693	2,313	- 1,827
Q2	49,290	46,757	1,769	51,332	16,463	8,234	8,600	3,304	3,282	2,651	2,404	- 2,042
Q3	49,992	46,637	2,634	51,035	16,335	8,266	8,392	3,152	3,313	2,607	2,391	- 1,043
Q4	54,604	50,593	2,597	52,017	15,997	8,496	8,642	3,347	3,444	2,665	2,907	+ 2,588
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

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 ex-

penses for levying contributions incurred by other social insurance funds. Including administrative expenditure on disease management programmes. **6** Data on individual expenditure categories for 2010 only partly comparable with prior-year figures owing to a change in the statistical definition.

## X Public finances in Germany

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

€ million

Period	Revenue <sup>1</sup>		Expenditure <sup>1</sup>						Deficit/ surplus	
	Total	<i>of which</i> Contributions <sup>2</sup>	Total	<i>of which</i>						
				Non-cash care benefits	In-patient care	Nursing benefit	Contributions to pension insur- ance scheme <sup>3</sup>	Administrative expenditure		
2009	21,300	21,137	20,314	2,742	9,274	4,443	878	984	+	986
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 <b>P</b>	30,687	30,609	29,007	3,704	10,742	6,457	954	1,265	+	1,680
2013 Q1	5,907	5,871	5,916	805	2,489	1,359	212	294	-	9
Q2	6,229	6,207	6,037	827	2,498	1,436	217	289	+	192
Q3	6,183	6,166	6,205	868	2,534	1,441	223	290	-	21
Q4	6,635	6,619	6,171	865	2,537	1,451	221	278	+	464
2014 Q1	6,168	6,141	6,290	871	2,542	1,463	229	315	-	123
Q2	6,404	6,386	6,260	848	2,554	1,466	236	309	+	144
Q3	6,405	6,386	6,442	932	2,577	1,481	237	299	-	37
Q4	6,933	6,918	6,462	907	2,590	1,529	238	288	+	471
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

Source: Federal Ministry of Health. \* Including transfers to the long-term care provident fund. <sup>1</sup> The final annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional. <sup>2</sup> Since 2005 including special contributions for

childless persons (0.25% of income subject to insurance contributions). <sup>3</sup> For non-professional carers.

### 12 Central government: borrowing in the market

€ million

Period	Total new borrowing <sup>1</sup>		<i>of which</i> Change in money market loans	<i>of which</i> Change in money market deposits
	Gross <sup>2</sup>	Net		
	2009	+ 312,729		
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
2013 Q1	+ 62,030	+ 9,538	+ 1,303	- 11,879
Q2	+ 73,126	+ 8,483	+ 11,024	+ 9,979
Q3	+ 48,764	- 11,984	- 13,555	- 18,090
Q4	+ 62,862	+ 13,436	+ 8,521	+ 15,389
2014 Q1	+ 43,862	- 3,551	- 9,267	- 9,556
Q2	+ 58,444	+ 9,500	+ 6,281	+ 10,589
Q3	+ 47,215	- 8,035	- 2,111	- 10,817
Q4	+ 43,018	- 292	+ 1,907	+ 10,675
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

Source: Federal Republic of Germany – Finance Agency. <sup>1</sup> Including the Financial Market Stabilisation Fund, the Investment and Repayment Fund and the Restructuring Fund for Credit Institutions. <sup>2</sup> After deducting repurchases.

### 13 General government: debt by creditor\*

€ million

Period (End of year or quarter)	Total	Banking system		Domestic non-banks		Foreign creditors <b>pe</b>
		Bundes- bank	Domestic MFIs <b>pe</b>	Other do- mestic fi- nancial cor- porations <b>pe</b>	Other domestic creditors <sup>1</sup>	
2010	2,089,946	4,440	691,199	208,244	133,531	1,052,532
2011	2,116,832	4,440	631,193	208,005	120,689	1,152,505
2012	2,193,258	4,440	634,707	200,406	140,259	1,213,445
2013	2,177,830	4,440	625,050	190,921	144,951	1,212,468
2014 <b>P</b>	2,177,735	4,440	612,957	190,343	130,905	1,239,089
2015 <b>P</b>	2,152,943	77,220	601,197	186,703	151,358	1,136,465
2013 Q1	2,183,148	4,440	627,633	194,817	144,972	1,211,286
Q2	2,182,551	4,440	620,339	201,034	136,826	1,219,912
Q3	2,162,541	4,440	621,661	191,759	142,018	1,202,663
Q4	2,177,830	4,440	625,050	190,921	144,951	1,212,468
2014 Q1 <b>P</b>	2,168,893	4,440	622,203	190,620	131,109	1,220,521
Q2 <b>P</b>	2,175,778	4,440	619,901	189,862	131,186	1,230,389
Q3 <b>P</b>	2,176,615	4,440	621,869	189,118	127,758	1,233,431
Q4 <b>P</b>	2,177,735	4,440	612,957	190,343	130,905	1,239,089
2015 Q1 <b>P</b>	2,185,757	12,335	620,410	189,242	136,092	1,227,678
Q2 <b>P</b>	2,152,027	34,310	606,650	187,345	137,223	1,186,499
Q3 <b>P</b>	2,154,069	54,990	610,635	188,220	138,513	1,161,710
Q4 <b>P</b>	2,152,943	77,220	601,197	186,703	151,358	1,136,465

Source: Bundesbank calculations based on data from the Federal Statistical Office. \* As defined in the Maastricht Treaty. <sup>1</sup> 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) <b>1</b>	Treasury notes <b>2,3</b>	Five-year Federal notes (Bobls) <b>2</b>	Federal savings notes	Federal bonds (Bunds) <b>2</b>	Day-bond	Direct lending by credit institu- tions <b>4</b>	Loans from non-banks		Old debt	
									Social security funds	Other <b>4</b>	Equal- isation claims <b>5</b>	Other <b>5,6</b>
<b>Central, state and local government</b>												
2009	1,657,842	105,970	361,727	174,219	9,471	594,999	2,495	300,927	59	103,462	4,442	71
2010	1,732,851	87,042	391,851	195,534	8,704	628,957	1,975	302,716	21	111,609	4,440	2
2011	1,752,903	60,272	414,250	214,211	8,208	644,894	2,154	292,606	102	111,765	4,440	2
2012	1,791,254	57,172	417,469	234,355	6,818	667,198	1,725	288,806	70	113,198	4,440	2
2013	1,816,017	50,128	423,441	245,372	4,488	684,951	1,397	291,429	46	110,323	4,440	2
2014 Q1	1,809,286	41,870	417,260	259,344	4,130	688,047	1,314	282,383	21	110,476	4,440	2
Q2	1,821,829	39,049	419,662	253,524	3,773	703,513	1,262	285,729	16	110,859	4,440	2
Q3	1,818,450	34,149	427,125	265,789	3,068	691,607	1,219	280,889	16	110,147	4,440	2
Q4	1,822,276	27,951	429,633	259,186	2,375	703,812	1,187	281,984	42	111,664	4,440	2
2015 Q1 P	1,821,447	28,317	425,257	250,432	2,271	707,905	1,155	290,067	42	111,561	4,440	2
Q2 P	1,806,385	29,575	421,582	243,299	2,031	722,562	1,133	270,776	42	110,944	4,440	2
Q3 P	1,810,270	26,213	424,534	256,613	1,677	715,763	1,106	269,138	42	110,741	4,440	2
Q4 P	1,811,144	19,735	429,513	246,940	1,305	725,236	1,070	271,419	42	111,442	4,440	2
<b>Central government</b> <sup>7,8,9</sup>												
2009	1,033,017	104,409	113,637	174,219	9,471	594,780	2,495	18,347	–	11,148	4,442	70
2010	1,075,415	85,867	126,220	195,534	8,704	628,582	1,975	13,349	–	10,743	4,440	2
2011	1,081,304	58,297	130,648	214,211	8,208	644,513	2,154	9,382	–	9,450	4,440	2
2012	1,113,032	56,222	117,719	234,355	6,818	666,775	1,725	16,193	–	8,784	4,440	2
2013	1,132,505	50,004	110,029	245,372	4,488	684,305	1,397	23,817	–	8,652	4,440	2
2014 Q1	1,128,954	41,608	107,914	259,344	4,130	687,001	1,314	14,551	–	8,651	4,440	2
Q2	1,138,455	37,951	105,639	253,524	3,773	702,467	1,262	20,781	–	8,616	4,440	2
Q3	1,130,420	33,293	104,763	265,789	3,068	690,561	1,219	18,745	–	8,541	4,440	2
Q4	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
<b>State government</b>												
2009	505,359	1,561	248,091	.	.	.	.	167,310	8	88,389	.	1
2010	528,696	1,176	265,631	.	.	.	.	167,429	1	94,459	.	1
2011	537,870	1,975	283,601	.	.	.	.	154,844	62	97,387	.	1
2012	540,836	950	299,750	.	.	.	.	138,698	52	101,386	.	1
2013	545,814	125	313,412	.	.	.	.	133,899	35	98,343	.	1
2014 Q1	540,134	261	309,346	.	.	.	.	132,020	10	98,495	.	1
Q2	542,656	1,098	314,024	.	.	.	.	128,616	5	98,913	.	1
Q3	546,756	856	322,362	.	.	.	.	125,257	5	98,276	.	1
Q4	549,692	0	326,188	.	.	.	.	124,802	5	98,697	.	1
2015 Q1 P	547,175	1,821	323,055	.	.	.	.	123,632	5	98,662	.	1
Q2 P	537,972	2,040	320,492	.	.	.	.	117,313	5	98,121	.	1
Q3 P	543,326	2,056	326,447	.	.	.	.	116,573	5	98,245	.	1
Q4 P	550,085	1,199	333,124	.	.	.	.	116,761	5	98,996	.	1
<b>Local government</b> <sup>10</sup>												
2009	119,466	.	–	.	.	219	.	115,270	52	3,925	.	.
2010	128,740	.	–	.	.	375	.	121,938	20	6,407	.	.
2011	133,730	.	–	.	.	381	.	128,380	40	4,929	.	.
2012	137,386	.	–	.	.	423	.	133,916	18	3,029	.	.
2013	137,697	.	–	.	.	646	.	133,713	11	3,328	.	.
2014 Q1	140,198	.	–	.	.	1,046	.	135,811	11	3,330	.	.
Q2	140,719	.	–	.	.	1,046	.	136,332	11	3,330	.	.
Q3	141,274	.	–	.	.	1,046	.	136,888	11	3,330	.	.
Q4	142,456	.	–	.	.	1,297	.	136,674	37	4,448	.	.
2015 Q1 P	147,230	.	–	.	.	1,597	.	141,146	37	4,450	.	.
Q2 P	146,776	.	–	.	.	1,847	.	140,442	37	4,450	.	.
Q3 P	147,274	.	–	.	.	1,997	.	140,790	37	4,450	.	.
Q4 P	147,318	.	–	.	.	1,997	.	140,834	37	4,450	.	.

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** From March 2009, including debt of the Investment and Repayment Fund. **9** From January 2011, including debt of the Restructuring Fund for Credit Institutions. **10** 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	2013			2014			2015			2016			
	2013	2014	2015	2013	2014	2015	2014		2015		2016		
	Index 2010=100			Annual percentage change			Q3	Q4	Q1	Q2	Q3	Q4	Q1
<b>At constant prices, chained</b>													
<b>I Origin of domestic product</b>													
Production sector (excluding construction)	106.3	108.1	110.2	0.4	1.6	2.0	1.6	1.1	1.1	2.2	2.3	2.3	0.5
Construction	101.3	104.0	104.0	- 1.2	2.6	0.0	0.2	- 0.4	- 2.2	- 0.6	- 0.4	2.6	0.5
Wholesale/retail trade, transport and storage, hotel and restaurant services	103.9	105.2	106.7	- 2.4	1.3	1.4	0.7	1.5	1.7	1.3	1.4	1.3	1.2
Information and communication	122.6	125.5	129.6	6.0	2.4	3.3	2.5	2.4	2.2	3.5	3.4	3.9	2.3
Financial and insurance activities	99.1	99.8	98.8	0.5	0.6	- 1.0	- 0.0	0.2	0.0	- 1.2	- 2.0	- 0.7	2.5
Real estate activities	102.6	103.6	105.0	1.4	1.0	1.3	1.0	0.9	0.9	1.2	1.4	1.7	0.9
Business services <sup>1</sup>	104.0	106.6	109.2	0.6	2.4	2.5	2.6	2.2	1.8	2.7	2.2	3.4	1.8
Public services, education and health	102.6	103.7	105.2	0.6	1.0	1.5	0.7	1.2	1.4	1.7	1.7	1.3	0.7
Other services	98.4	98.5	98.9	- 0.9	0.1	0.4	- 0.0	0.0	- 0.1	0.3	0.1	1.2	0.3
Gross value added	104.4	106.0	107.6	0.3	1.5	1.5	1.3	1.2	1.1	1.6	1.6	1.9	1.0
Gross domestic product <sup>2</sup>	104.4	106.1	107.9	0.3	1.6	1.7	1.2	1.6	1.3	1.6	1.7	2.1	1.3
<b>II Use of domestic product</b>													
Private consumption <sup>3</sup>	103.0	103.9	106.1	0.6	0.9	2.0	0.5	1.6	2.3	1.7	2.2	1.9	1.8
Government consumption	103.0	104.8	107.4	0.8	1.7	2.5	1.8	2.0	2.1	2.4	2.4	3.0	2.7
Machinery and equipment	101.6	106.3	111.4	- 2.3	4.5	4.8	3.8	2.3	3.9	3.4	5.4	6.3	2.4
Premises	107.5	110.7	111.0	- 1.1	2.9	0.3	- 0.0	1.1	- 2.2	- 0.0	0.2	3.2	1.9
Other investment <sup>4</sup>	106.3	109.7	112.5	- 0.3	3.1	2.6	3.7	3.7	2.6	2.6	2.6	2.5	2.2
Changes in inventories <sup>5, 6</sup>	.	.	.	0.6	- 0.3	- 0.5	- 0.9	- 0.3	- 0.4	- 1.0	- 0.3	- 0.4	- 0.1
Domestic demand	102.7	104.1	105.7	0.8	1.3	1.6	0.0	1.5	1.4	0.8	1.9	2.3	2.0
Net exports <sup>6</sup>	.	.	.	- 0.5	0.4	0.2	1.1	0.2	0.0	0.9	- 0.1	0.0	- 0.5
Exports	113.0	117.6	123.9	1.6	4.0	5.4	4.7	4.4	4.8	6.5	5.2	5.0	1.5
Imports	109.9	114.0	120.7	3.1	3.7	5.8	2.4	4.6	5.8	5.4	6.2	5.9	3.1
Gross domestic product <sup>2</sup>	104.4	106.1	107.9	0.3	1.6	1.7	1.2	1.6	1.3	1.6	1.7	2.1	1.3
<b>At current prices (€ billion)</b>													
<b>III Use of domestic product</b>													
Private consumption <sup>3</sup>	1,562.7	1,592.2	1,634.8	1.9	1.9	2.7	1.5	2.3	2.6	2.6	2.9	2.6	2.4
Government consumption	541.9	564.0	586.8	3.7	4.1	4.0	4.1	4.0	3.5	4.0	3.8	4.7	4.9
Machinery and equipment	181.3	189.8	200.1	- 2.0	4.7	5.4	4.0	2.6	4.3	4.0	6.1	6.9	3.0
Premises	277.2	291.8	297.6	1.6	5.2	2.0	1.8	2.7	- 0.2	1.7	1.8	4.7	3.2
Other investment <sup>4</sup>	98.8	103.5	108.5	0.9	4.8	4.7	5.6	5.4	4.8	4.8	4.8	4.6	4.7
Changes in inventories <sup>5</sup>	- 10.5	- 22.0	- 38.0	.	.	.	.	.	.	.	.	.	.
Domestic use	2,651.4	2,719.3	2,789.7	2.5	2.6	2.6	1.3	2.4	2.2	1.8	2.9	3.4	2.9
Net exports	169.4	196.4	236.2	.	.	.	.	.	.	.	.	.	.
Exports	1,283.1	1,333.2	1,419.7	1.3	3.9	6.5	4.8	4.7	5.6	8.4	6.4	5.5	0.8
Imports	1,113.7	1,136.8	1,183.5	1.3	2.1	4.1	1.1	3.1	3.4	4.6	4.9	3.5	0.0
Gross domestic product <sup>2</sup>	2,820.8	2,915.7	3,025.9	2.4	3.4	3.8	2.9	3.2	3.3	3.7	3.7	4.4	3.1
<b>IV Prices (2010=100)</b>													
Private consumption	104.9	105.9	106.6	1.2	1.0	0.6	1.0	0.7	0.4	0.9	0.6	0.7	0.6
Gross domestic product	104.7	106.6	108.7	2.1	1.7	2.1	1.7	1.6	2.0	2.1	1.9	2.2	1.8
Terms of trade	98.3	99.7	102.4	1.4	1.5	2.7	1.3	1.7	3.1	2.6	2.4	2.8	2.5
<b>V Distribution of national income</b>													
Compensation of employees	1,430.8	1,485.3	1,541.3	2.8	3.8	3.8	3.8	3.7	3.4	3.9	3.9	3.8	4.0
Entrepreneurial and property income	665.8	690.9	719.9	0.9	3.8	4.2	4.2	1.5	4.0	2.9	4.1	5.8	1.8
National income	2,096.6	2,176.2	2,261.2	2.2	3.8	3.9	3.9	3.1	3.6	3.6	4.0	4.4	3.2
<i>Memo item:</i> Gross national income	2,882.0	2,982.4	3,091.3	2.2	3.5	3.7	3.4	3.1	3.3	3.3	3.7	4.2	3.2

Source: Federal Statistical Office; figures computed in May 2016. <sup>1</sup> Professional, scientific, technical, administration and support service activities. <sup>2</sup> Gross value added plus taxes on products (netted with subsidies on products). <sup>3</sup> Including non-profit in-

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

## XI Economic conditions in Germany

### 2 Output in the production sector\*

Adjusted for working-day variations ◐

	of which:											
	Production sector, total	Construc-tion	Energy	Industry								
				Total	of which: by main industrial grouping				of which: by economic sector			
				Inter-mediate goods	Capital goods	Durable goods	Non-durable goods	Manu-facture of basic metals and fabricated metal products	Manu-facture of computers, electronic and optical products and electrical equipment	Machinery and equipment	Motor vehicles, trailers and semi-trailers	
<b>2010=100</b>												
% 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												
2012	106.3	105.9	97.4	107.5	104.6	113.3	100.5	99.8	107.3	107.8	115.2	112.7
2013	106.4	105.6	96.4	107.8	104.4	114.0	100.1	100.6	108.3	106.0	113.7	114.8
2014	107.9	108.4	92.7	109.8	106.3	116.6	100.5	102.2	111.3	108.7	115.1	119.5
2015	108.5	106.0	97.5	110.3	106.2	117.6	102.8	101.9	111.4	109.5	114.8	119.3
2015 Q1	105.2	84.1	104.7	108.3	106.2	113.8	104.0	99.3	110.4	107.6	107.3	122.7
Q2	108.4	108.3	91.3	110.6	107.7	117.5	101.5	100.7	113.4	108.0	115.9	120.3
Q3	109.0	113.8	93.1	110.4	107.4	116.6	100.2	103.2	112.2	111.0	113.5	117.5
Q4	111.3	117.9	100.7	111.7	103.3	122.6	105.4	104.4	109.7	111.3	122.5	116.5
2016 Q1 x	106.9	87.2	101.8	110.4	107.6	117.0	105.6	100.2	112.2	109.6	108.4	126.4
2015 Apr	107.4	105.7	95.3	109.2	106.8	115.7	102.1	98.7	113.0	104.4	112.2	120.8
May	106.7	107.7	89.4	108.8	106.4	115.0	99.7	99.8	111.9	106.1	112.1	119.8
June	111.0	111.4	89.3	113.7	109.8	121.9	102.6	103.5	115.2	113.5	123.4	120.3
July 2	111.7	116.0	94.2	113.4	109.9	121.0	97.2	104.8	114.8	111.7	116.1	126.8
Aug 2	102.1	110.2	90.7	102.4	102.5	103.8	90.8	100.8	105.8	105.0	105.6	96.8
Sep	113.3	115.1	94.5	115.5	109.9	125.1	112.7	103.9	116.0	116.2	118.9	129.0
Oct	113.9	119.0	99.0	115.2	110.2	123.2	109.5	106.7	117.6	112.6	116.1	130.4
Nov	115.7	120.6	101.3	116.9	109.5	127.0	113.4	108.7	117.1	115.8	121.3	129.5
Dec	104.2	114.2	101.7	103.1	90.2	117.7	93.4	97.7	94.3	105.5	130.0	89.7
2016 Jan x	100.4	72.3	106.4	103.7	103.2	106.1	99.0	99.0	106.9	102.9	95.3	116.1
Feb x	104.3	85.2	96.9	108.0	105.1	115.3	104.3	95.7	109.3	107.2	105.6	127.1
Mar x	116.1	104.0	102.2	119.6	114.6	129.5	113.4	105.9	120.5	118.7	124.2	136.1
Apr x,p	108.7	106.2	93.1	111.1	107.5	118.9	104.9	99.7	113.3	107.9	110.9	129.9
<b>Annual percentage change</b>												
2012	- 0.4	- 1.0	+ 1.9	- 0.6	- 2.2	+ 1.3	- 3.6	- 1.5	- 1.7	- 2.2	+ 1.8	+ 0.1
2013	+ 0.1	- 0.3	- 1.0	+ 0.3	- 0.2	+ 0.6	- 0.4	+ 0.8	+ 0.9	- 1.7	- 1.3	+ 1.9
2014	+ 1.4	+ 2.7	- 3.8	+ 1.9	+ 1.8	+ 2.3	+ 0.4	+ 1.6	+ 2.8	+ 2.5	+ 1.2	+ 4.1
2015	+ 0.6	- 2.2	+ 5.2	+ 0.5	- 0.1	+ 0.9	+ 2.3	- 0.3	+ 0.1	+ 0.7	- 0.3	- 0.2
2015 Q1	+ 0.1	- 4.4	+ 5.8	- 0.1	- 0.6	+ 0.4	+ 1.6	- 0.7	- 0.6	+ 1.3	- 0.7	+ 0.1
Q2	+ 1.2	- 2.0	+ 6.4	+ 1.1	+ 0.2	+ 1.8	+ 3.4	+ 0.6	+ 0.9	+ 1.2	+ 3.4	- 1.3
Q3	+ 1.0	- 2.3	+ 7.5	+ 0.9	+ 0.2	+ 1.6	+ 3.3	+ 0.4	+ 1.0	+ 0.3	- 1.3	+ 2.6
Q4	- 0.3	- 0.8	+ 1.1	- 0.4	- 0.3	- 0.2	+ 0.7	- 1.6	- 1.0	+ 0.1	- 2.2	- 2.0
2016 Q1 x	+ 1.6	+ 3.6	- 2.7	+ 2.0	+ 1.3	+ 2.8	+ 1.5	+ 0.9	+ 1.7	+ 1.9	+ 1.0	+ 3.0
2015 Apr	+ 0.7	- 2.7	+ 7.7	+ 0.4	- 0.7	+ 2.0	+ 4.0	- 2.6	+ 0.8	- 0.8	+ 3.7	- 1.4
May	+ 1.6	+ 0.1	+ 4.3	+ 1.5	+ 0.7	+ 2.0	+ 5.4	+ 1.6	+ 1.5	+ 2.5	+ 2.9	- 0.4
June	+ 1.3	- 3.4	+ 7.3	+ 1.3	+ 0.8	+ 1.4	+ 1.1	+ 2.7	+ 0.3	+ 1.8	+ 3.4	- 2.1
July 2	+ 0.6	- 2.8	+ 11.0	+ 0.3	- 0.5	+ 0.5	+ 0.1	+ 2.0	+ 0.1	+ 0.3	+ 1.3	- 2.3
Aug 2	+ 2.4	- 1.3	+ 6.7	+ 2.5	+ 0.6	+ 4.8	+ 8.9	+ 0.3	+ 1.9	- 0.3	- 0.7	+ 15.7
Sep	+ 0.2	- 2.6	+ 5.1	+ 0.2	+ 0.5	+ 0.2	+ 2.0	- 1.2	+ 1.0	+ 0.8	- 4.3	- 1.0
Oct	+ 0.2	- 0.8	+ 0.6	+ 0.3	- 0.7	+ 2.1	+ 1.2	- 2.8	+ 0.6	- 1.7	- 0.2	+ 3.5
Nov	± 0.0	± 0.0	+ 2.9	- 0.3	± 0.0	- 0.9	+ 1.3	+ 0.2	- 1.6	- 0.3	- 1.7	- 3.6
Dec	- 1.0	- 1.5	- 0.2	- 1.2	- 0.1	- 1.7	- 0.5	- 2.3	- 2.1	+ 2.7	- 4.5	- 7.0
2016 Jan x	+ 2.7	+ 2.0	± 0.0	+ 3.2	+ 1.4	+ 5.2	+ 4.0	+ 1.7	+ 2.3	+ 2.4	+ 0.7	+ 7.5
Feb x	+ 2.0	+ 8.4	- 4.2	+ 2.1	+ 2.0	+ 2.4	+ 0.6	+ 1.3	+ 1.4	+ 1.9	+ 1.5	+ 1.5
Mar x	+ 0.4	+ 1.1	- 4.1	+ 0.8	+ 0.7	+ 1.3	+ 0.2	- 0.1	+ 1.4	+ 1.5	+ 0.8	+ 0.9
Apr x,p	+ 1.2	+ 0.5	- 2.3	+ 1.7	+ 0.7	+ 2.8	+ 2.7	+ 1.0	+ 0.3	+ 3.4	- 1.2	+ 7.5

Source of the unadjusted figures: Federal Statistical Office. \* For explanatory notes, see Statistical Supplement Seasonally adjusted business statistics, Tables II.10 to II.12. ◐ Using the Census X-12-ARIMA method, version 0.2.8. 1 Share of gross value added at factor cost of the production sector in the base year 2010. 2 Influenced by

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

## XI Economic conditions in Germany

### 3 Orders received by industry \*

Adjusted for working-day variations ◦

Period	Industry		of which:									
			Intermediate goods		Capital goods		Consumer goods		of which:			
	2010=100	Annual percent- age change	2010=100	Annual percent- age change	2010=100	Annual percent- age change	2010=100	Annual percent- age change	Durable goods	Annual percent- age change	Non-durable goods	Annual percent- age change
<b>Total</b>												
2011	109.9	+ 10.5	109.1	+ 9.6	111.2	+ 11.8	103.8	+ 4.2	105.3	+ 5.8	103.3	+ 3.7
2012	106.9	- 2.7	104.2	- 4.5	109.2	- 1.8	103.8	± 0.0	99.4	- 5.6	105.3	+ 1.9
2013	109.4	+ 2.3	103.3	- 0.9	114.3	+ 4.7	105.9	+ 2.0	101.8	+ 2.4	107.4	+ 2.0
2014	112.4	+ 2.7	103.9	+ 0.6	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
2015 Apr	116.0	+ 3.2	103.9	- 1.6	125.4	+ 6.2	110.7	+ 3.5	103.8	- 4.0	113.1	+ 6.0
May	113.7	+ 6.1	104.5	+ 2.3	120.5	+ 8.6	110.9	+ 4.9	101.8	+ 3.8	114.1	+ 5.2
June	123.4	+ 9.1	106.7	+ 0.9	136.5	+ 14.8	114.3	+ 5.4	108.0	+ 3.1	116.5	+ 6.2
July	116.6	± 0.0	105.0	- 1.3	124.4	+ 0.3	118.7	+ 3.5	107.8	+ 10.0	122.6	+ 1.7
Aug	102.7	+ 2.4	93.4	- 1.2	108.4	+ 5.3	109.7	- 0.6	99.5	+ 5.9	113.3	- 2.5
Sep	112.0	+ 0.1	100.0	- 1.8	120.1	+ 1.0	114.2	+ 1.6	116.4	+ 6.7	113.5	- 0.1
Oct	113.8	- 1.0	102.9	- 3.9	120.6	± 0.0	120.2	+ 4.9	114.8	+ 5.8	122.1	+ 4.5
Nov	116.6	+ 1.7	105.3	+ 1.1	124.9	+ 2.1	115.4	+ 1.9	109.6	+ 4.6	117.4	+ 1.0
Dec	110.6	- 1.9	90.3	- 2.5	125.5	- 2.6	106.3	+ 8.8	98.7	+ 6.2	109.0	+ 9.7
2016 Jan	114.1	+ 0.2	102.9	- 5.1	120.3	+ 2.0	126.6	+ 11.6	116.1	+ 10.6	130.3	+ 12.0
Feb	112.4	+ 0.1	100.6	- 1.8	120.0	+ 1.4	119.2	- 0.7	104.1	+ 2.8	124.4	- 1.8
Mar	127.3	+ 1.4	108.8	- 3.9	141.1	+ 4.3	123.1	+ 4.9	118.0	+ 3.6	124.9	+ 5.2
Apr P	113.7	- 2.0	105.3	+ 1.3	119.9	- 4.4	111.9	+ 1.1	116.8	+ 12.5	110.2	- 2.6
<b>From the domestic market</b>												
2011	109.7	+ 10.3	109.7	+ 10.3	110.8	+ 11.4	103.5	+ 3.9	110.2	+ 10.9	101.1	+ 1.5
2012	103.9	- 5.3	103.3	- 5.8	105.4	- 4.9	99.2	- 4.2	101.9	- 7.5	98.2	- 2.9
2013	104.4	+ 0.5	101.9	- 1.4	107.6	+ 2.1	100.4	+ 1.2	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
2015 Apr	108.1	+ 0.4	100.5	- 3.5	117.3	+ 4.0	99.1	+ 0.1	99.8	- 7.2	98.8	+ 2.9
May	105.8	+ 1.8	101.1	- 0.2	111.3	+ 3.2	100.8	+ 5.7	92.2	- 0.9	103.8	+ 7.8
June	107.2	+ 1.9	100.7	- 1.2	114.5	+ 4.8	102.0	+ 2.1	100.0	- 6.2	102.7	+ 5.2
July	112.4	+ 3.6	101.5	- 2.5	123.5	+ 9.3	110.7	+ 2.2	104.6	+ 3.0	112.9	+ 2.0
Aug	98.9	+ 1.0	93.1	- 1.0	103.5	+ 2.5	106.6	+ 3.6	99.7	+ 4.2	109.1	+ 3.5
Sep	105.4	+ 3.1	96.2	- 0.6	114.3	+ 6.8	107.8	+ 2.4	115.0	+ 2.4	105.3	+ 2.4
Oct	107.8	- 1.1	98.8	- 3.1	116.8	+ 0.4	108.3	+ 1.5	113.0	+ 2.1	106.7	+ 1.3
Nov	110.4	+ 4.2	102.0	+ 1.8	119.1	+ 6.2	108.3	+ 5.6	108.4	+ 2.0	108.2	+ 6.8
Dec	97.9	+ 0.7	84.1	- 4.2	112.8	+ 4.4	90.8	+ 2.7	83.6	- 1.4	93.4	+ 4.1
2016 Jan	105.6	- 2.3	98.3	- 5.7	112.7	+ 0.4	107.1	+ 0.8	105.1	+ 3.3	107.8	- 0.1
Feb	105.6	+ 0.6	95.0	- 2.4	115.5	+ 3.3	110.1	- 0.7	99.4	+ 0.5	113.9	- 1.1
Mar	117.2	- 4.2	102.9	- 5.1	132.3	- 4.2	113.1	+ 2.0	114.7	+ 5.7	112.6	+ 0.7
Apr P	108.4	+ 0.3	102.7	+ 2.2	115.1	- 1.9	102.1	+ 3.0	104.7	+ 4.9	101.2	+ 2.4
<b>From abroad</b>												
2011	109.9	+ 10.3	108.4	+ 8.8	111.4	+ 11.8	104.1	+ 4.5	101.0	+ 1.4	105.2	+ 5.6
2012	109.3	- 0.5	105.2	- 3.0	111.6	+ 0.2	107.7	+ 3.5	97.3	- 3.7	111.3	+ 5.8
2013	113.5	+ 3.8	104.8	- 0.4	118.5	+ 6.2	110.7	+ 2.8	100.8	+ 3.6	114.1	+ 2.5
2014	117.9	+ 3.9	107.4	+ 2.5	123.4	+ 4.1	118.0	+ 6.6	102.1	+ 1.3	123.5	+ 8.2
2015	120.7	+ 2.4	107.8	+ 0.4	127.4	+ 3.2	122.1	+ 3.5	110.7	+ 8.4	126.0	+ 2.0
2015 Apr	122.5	+ 5.3	107.9	+ 0.6	130.4	+ 7.5	120.6	+ 5.9	107.3	- 1.2	125.2	+ 8.2
May	120.2	+ 9.4	108.6	+ 5.2	126.2	+ 11.8	119.6	+ 4.4	110.1	+ 7.4	122.9	+ 3.5
June	136.6	+ 14.3	113.8	+ 3.3	150.1	+ 20.2	124.9	+ 8.0	115.0	+ 11.3	128.3	+ 7.0
July	120.0	- 2.6	109.2	± 0.0	125.0	- 4.4	125.6	+ 4.5	110.5	+ 16.6	130.8	+ 1.4
Aug	105.8	+ 3.5	93.8	- 1.4	111.4	+ 7.0	112.4	- 3.8	99.3	+ 7.2	116.9	- 6.7
Sep	117.3	- 2.0	104.5	- 3.0	123.6	- 2.1	119.7	+ 1.0	117.6	+ 10.6	120.4	- 1.9
Oct	118.6	- 1.0	107.7	- 4.7	122.9	- 0.2	130.4	+ 7.4	116.3	+ 9.2	135.2	+ 6.9
Nov	121.7	- 0.2	109.2	+ 0.2	128.4	- 0.2	121.5	- 0.7	110.7	+ 7.0	125.2	- 2.9
Dec	121.0	- 3.4	97.7	- 0.6	133.3	- 6.0	119.6	+ 13.2	111.8	+ 11.8	122.3	+ 13.7
2016 Jan	121.0	+ 1.9	108.3	- 4.5	125.0	+ 3.0	143.3	+ 19.9	125.6	+ 16.5	149.4	+ 21.0
Feb	118.0	- 0.3	107.1	- 1.1	122.7	+ 0.2	126.9	- 0.8	108.2	+ 4.7	133.3	- 2.3
Mar	135.5	+ 5.8	115.8	- 2.6	146.5	+ 9.7	131.6	+ 7.0	120.9	+ 1.9	135.3	+ 8.7
Apr P	118.0	- 3.7	108.3	+ 0.4	122.8	- 5.8	120.2	- 0.3	127.3	+ 18.6	117.8	- 5.9

Source of the unadjusted figures: Federal Statistical Office. \* At current prices; for explanatory notes, see Statistical Supplement Seasonally adjusted business statistics,

Tables II.14 to II.16. ◦ Using the Census X-12-ARIMA method, version 0.2.8.

## XI Economic conditions in Germany

### 4 Orders received by construction \*

Adjusted for working-day variations ◯

Period	Breakdown by type of construction										Breakdown by client 1					
	Building															
	Total		Housing construction		Industrial construction		Public sector construction		Civil engineering		Industry		Public sector 2			
2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	2010 = 100	Annual percentage change	
2011	107.1	+ 7.5	112.2	+ 12.5	120.5	+ 21.0	113.6	+ 13.8	91.5	- 8.1	102.0	+ 2.5	112.7	+ 13.2	95.9	- 3.7
2012	114.7	+ 7.1	121.4	+ 8.2	132.4	+ 9.9	124.2	+ 9.3	91.7	+ 0.2	107.9	+ 5.8	118.8	+ 5.4	103.4	+ 7.8
2013	119.2	+ 3.9	126.5	+ 4.2	140.6	+ 6.2	128.1	+ 3.1	93.9	+ 2.4	111.9	+ 3.7	121.9	+ 2.6	107.7	+ 4.2
2014	118.5	- 0.6	127.2	+ 0.6	146.6	+ 4.3	126.8	- 1.0	90.6	- 3.5	109.9	- 1.8	121.8	- 0.1	104.0	- 3.4
2015	124.2	+ 4.8	133.6	+ 5.0	165.4	+ 12.8	124.3	- 2.0	98.5	+ 8.7	114.8	+ 4.5	122.6	+ 0.7	109.3	+ 5.1
2015 Mar	142.6	+ 2.8	149.9	+ 2.4	189.6	+ 14.8	133.5	- 9.7	120.5	+ 14.3	135.3	+ 3.2	136.8	- 3.0	129.7	+ 3.0
Apr	127.0	- 5.2	133.1	- 0.2	171.4	+ 0.8	118.6	- 2.5	100.9	+ 5.3	120.9	- 10.2	118.1	- 5.8	118.2	- 7.9
May	132.8	+ 4.0	138.2	+ 5.6	167.9	+ 6.9	131.0	+ 6.6	101.2	- 1.7	127.4	+ 2.2	130.6	+ 8.6	120.9	- 2.1
June	137.8	+ 4.4	145.5	+ 4.0	175.0	+ 7.4	139.1	+ 4.6	106.7	- 7.2	130.0	+ 4.7	134.1	+ 2.0	126.6	+ 5.4
July	132.0	- 3.4	139.4	- 0.4	184.5	+ 28.1	120.3	- 18.4	107.2	- 1.9	124.6	- 6.5	120.7	- 13.6	122.4	- 6.1
Aug	123.9	+ 2.1	130.1	+ 6.2	157.6	+ 24.1	123.1	- 5.7	96.8	+ 8.0	117.6	- 2.3	119.3	- 4.3	115.0	- 0.8
Sep	134.3	+ 10.3	151.3	+ 16.3	202.3	+ 35.8	133.8	+ 3.7	103.2	+ 7.4	117.3	+ 3.3	128.3	+ 4.0	113.2	+ 3.5
Oct	117.7	+ 3.5	128.0	- 1.0	158.4	+ 4.2	116.4	- 10.0	102.9	+ 21.8	107.5	+ 9.7	120.5	+ 1.1	98.6	+ 6.4
Nov	118.8	+ 19.6	137.1	+ 21.3	152.4	+ 17.1	144.6	+ 24.0	84.9	+ 24.3	100.5	+ 17.3	140.4	+ 28.9	83.2	+ 7.8
Dec	123.3	+ 21.0	135.0	+ 10.6	166.7	+ 8.0	125.4	+ 8.9	101.2	+ 27.6	111.6	+ 36.4	114.8	+ 4.6	114.6	+ 57.2
2016 Jan	108.5	+ 13.9	117.6	+ 15.4	147.4	+ 20.5	106.6	+ 6.1	91.9	+ 39.9	99.3	+ 11.8	111.5	+ 7.0	89.7	+ 19.0
Feb	120.6	+ 15.0	126.0	+ 11.0	157.8	+ 15.4	115.4	+ 9.2	94.8	+ 4.3	115.3	+ 19.7	109.5	+ 5.7	117.1	+ 25.4
Mar	164.7	+ 15.5	168.4	+ 12.3	227.3	+ 19.9	146.7	+ 9.9	117.0	- 2.9	160.9	+ 18.9	150.0	+ 9.6	154.5	+ 19.1

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

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

### 5 Retail trade turnover, sales of motor vehicles \*

Adjusted for calendar variations ◯

Period	Retail trade															
	of which: by enterprises main product range 1													Wholesale and retail trade and repair of motor vehicles and motorcycles		
	Total		Food, beverages, tobacco 2		Textiles, clothing footwear and leather goods		Information and communications equipment		Construction and flooring materials, household appliances, furniture		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles					
	At current prices	Annual percentage change	At prices in year 2010	Annual percentage change	At current prices	Annual percentage change	At current prices	Annual percentage change	At current prices	Annual percentage change	At current prices	Annual percentage change	At current prices	Annual percentage change		
2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100	2010 = 100		
2011	102.7	+ 2.6	101.1	+ 1.0	102.5	+ 2.3	101.6	+ 1.8	99.4	- 0.5	103.7	+ 3.7	100.3	+ 0.3	107.0	+ 7.8
2012	104.5	+ 1.8	100.8	- 0.3	105.2	+ 2.6	102.3	+ 0.7	99.0	- 0.4	104.6	+ 0.9	100.7	+ 0.4	105.8	- 1.1
2013	106.3	+ 1.7	101.3	+ 0.5	109.0	+ 3.6	103.1	+ 0.8	95.4	- 3.6	102.3	- 2.2	103.4	+ 2.7	104.5	- 1.2
2014	108.2	+ 1.8	102.7	+ 1.4	111.6	+ 2.4	104.9	+ 1.7	94.6	- 0.8	101.9	- 0.4	110.7	+ 7.1	107.1	+ 2.5
2015 3	111.4	+ 3.0	105.8	+ 3.0	115.0	+ 3.0	105.6	+ 0.7	96.0	+ 1.5	105.1	+ 3.1	117.1	+ 5.8	115.4	+ 7.7
2015 Apr 3	112.5	+ 3.6	105.8	+ 3.2	117.1	+ 3.0	109.4	+ 4.7	82.1	+ 0.6	109.9	+ 2.6	116.5	+ 6.5	123.1	+ 9.2
May	111.9	+ 4.1	105.4	+ 3.6	117.6	+ 5.3	108.1	+ 1.4	81.3	- 3.7	108.7	+ 5.7	113.4	+ 5.2	120.5	+ 10.0
June	108.8	+ 1.8	102.9	+ 1.6	114.3	+ 0.6	105.7	+ 3.3	82.3	+ 0.1	102.5	+ 3.3	114.5	+ 5.0	121.4	+ 9.5
July	111.8	+ 4.2	106.5	+ 4.3	115.7	+ 3.3	108.1	+ 4.6	91.2	+ 1.3	103.6	+ 4.2	120.0	+ 5.4	118.5	+ 9.1
Aug	108.1	+ 2.5	102.9	+ 2.5	115.4	+ 6.5	96.5	- 9.7	86.5	+ 3.3	99.4	+ 0.1	112.2	+ 4.8	105.6	+ 6.1
Sep	108.6	+ 3.5	103.0	+ 3.8	110.2	+ 3.9	112.6	+ 4.7	93.5	+ 2.0	102.5	+ 3.7	114.1	+ 5.3	114.4	+ 6.8
Oct	114.6	+ 2.8	108.2	+ 2.4	115.7	+ 1.9	120.6	+ 6.1	98.2	- 0.3	110.9	+ 2.1	119.6	+ 4.6	124.4	+ 7.2
Nov	116.0	+ 2.9	109.9	+ 2.3	116.7	+ 3.4	104.4	- 2.9	110.9	+ 1.3	115.1	+ 4.1	123.1	+ 6.3	124.5	+ 10.5
Dec	131.6	+ 3.5	125.8	+ 3.3	134.0	+ 3.7	124.3	+ 0.6	148.5	+ 1.3	113.6	+ 5.8	131.3	+ 4.5	106.3	+ 4.4
2016 Jan	103.9	+ 2.3	99.8	+ 1.7	108.3	+ 3.3	92.4	+ 3.7	99.0	- 2.7	93.4	+ 2.9	116.3	+ 3.2	105.6	+ 10.3
Feb	100.0	+ 1.9	95.7	+ 1.9	105.6	+ 3.3	80.2	- 1.7	86.0	+ 0.1	94.7	+ 4.1	113.4	+ 4.2	110.9	+ 9.4
Mar	113.4	+ 0.3	107.3	+ 0.2	117.0	+ 1.0	97.5	- 8.5	91.5	+ 1.4	112.6	+ 0.0	123.5	+ 3.5	135.5	+ 5.4
Apr	112.4	- 0.1	105.7	- 0.1	117.1	+ 0.0	112.2	+ 2.6	80.9	- 1.5	111.1	+ 1.1	117.6	+ 0.9	...	...

Source of the unadjusted figures: Federal Statistical Office. \* Excluding value-added tax; For explanatory notes, see Statistical Supplement Seasonally adjusted business statistics, Tables II.24. ◯ Using the Census X-12-ARIMA method, version 0.2.8. 1 In

stores. 2 Including stalls and markets. 3 Figures from January 2015 are provisional, in some cases revised, and particularly uncertain in recent months owing to estimates for missing reports.



## XI Economic conditions in Germany

### 6 Labour market \*

Period	Employment 1		Employment subject to social contributions 2,3						Short time workers 4		Unemployment 5		Unemployment rate 5,6 in %	Vacancies, 5,7 thousands
	Thousands	Annual percentage change	Total		of which:			Solely jobs exempt from social contributions 2	Total	Cyclically induced	Total	Recipients of insured unemployment benefits		
			Thousands	Annual percentage change	Production sector	Services excluding temporary employment	Temporary employment							
			Thousands	Annual percentage change	Thousands	Thousands	Thousands							
2011	41,577	+ 1.4	28,687	+ 2.4	8,579	19,091	794	5,014	148	100	2,976	893	7.1	466
2012	42,060	+ 1.2	29,341	+ 2.3	8,738	19,600	773	4,981	112	67	2,897	902	6.8	478
2013	42,328	+ 0.6	29,713	+ 1.3	8,782	19,954	743	5,017	124	77	2,950	970	6.9	457
2014	42,703	+ 0.9	30,197	+ 1.6	8,859	20,328	770	5,029	94	49	2,898	933	6.7	490
2015	43,056	+ 0.8	30,823	+ 2.1	8,936	20,837	806	4,856	...	8	2,795	859	6.4	569
2013 Q1	41,880	+ 0.7	29,385	+ 1.4	8,697	19,771	701	4,972	234	102	3,131	1,109	7.4	444
Q2	42,249	+ 0.6	29,573	+ 1.2	8,746	19,864	725	5,016	99	87	2,941	945	6.8	459
Q3	42,515	+ 0.6	29,776	+ 1.2	8,809	19,952	772	5,050	70	57	2,903	934	6.7	471
Q4	42,666	+ 0.6	30,118	+ 1.2	8,877	20,230	774	5,028	92	61	2,827	891	6.6	455
2014 Q1	42,226	+ 0.8	29,809	+ 1.4	8,759	20,099	730	4,991	178	58	3,109	1,078	7.2	452
Q2	42,667	+ 1.0	30,080	+ 1.7	8,828	20,251	753	5,043	72	56	2,886	900	6.6	487
Q3	42,903	+ 0.9	30,284	+ 1.7	8,895	20,341	799	5,065	50	37	2,860	909	6.6	512
Q4	43,016	+ 0.8	30,614	+ 1.6	8,955	20,622	796	5,018	77	46	2,738	846	6.3	510
2015 Q1	42,523	+ 0.7	30,360	+ 1.8	8,831	20,547	756	4,863	169	51	2,993	1,011	6.9	515
Q2	42,987	+ 0.7	30,671	+ 2.0	8,894	20,736	792	4,863	61	47	2,772	822	6.3	560
Q3	43,274	+ 0.9	30,927	+ 2.1	8,973	20,861	840	4,868	47	33	2,759	827	6.3	595
Q4	43,440	+ 1.0	31,332	+ 2.3	9,047	21,202	837	4,828	...	8	2,655	775	6.0	604
2016 Q1	9 43,056	9 + 1.3	8 31,063	8 + 2.3	8 8,925	8 21,120	8 791	8 4,778	...	8 52	2,892	932	6.6	610
2013 Jan	41,862	+ 0.8	29,334	+ 1.4	8,685	19,737	697	4,961	234	104	3,138	1,121	7.4	420
Feb	41,853	+ 0.8	29,345	+ 1.5	8,682	19,749	698	4,962	245	104	3,156	1,132	7.4	448
Mar	41,926	+ 0.7	29,423	+ 1.2	8,701	19,798	698	4,969	222	98	3,098	1,072	7.3	463
Apr	42,083	+ 0.6	29,562	+ 1.2	8,744	19,863	718	4,994	113	100	3,020	1,001	7.1	460
May	42,288	+ 0.6	29,637	+ 1.2	8,762	19,899	734	5,036	86	74	2,937	935	6.8	457
June	42,376	+ 0.6	29,616	+ 1.1	8,763	19,863	747	5,066	99	86	2,865	897	6.6	459
July	42,419	+ 0.6	29,596	+ 1.2	8,768	19,814	773	5,086	81	68	2,914	943	6.8	469
Aug	42,484	+ 0.6	29,843	+ 1.2	8,825	19,998	776	5,031	60	47	2,946	956	6.8	471
Sep	42,641	+ 0.6	30,165	+ 1.4	8,905	20,224	786	5,003	70	56	2,849	904	6.6	473
Oct	42,746	+ 0.6	30,181	+ 1.2	8,899	20,252	785	5,011	83	70	2,801	870	6.5	466
Nov	42,730	+ 0.6	30,149	+ 1.1	8,888	20,249	779	5,048	80	67	2,806	881	6.5	458
Dec	42,523	+ 0.6	29,884	+ 1.2	8,781	20,158	731	5,048	114	45	2,874	923	6.7	440
2014 Jan	42,170	+ 0.7	29,736	+ 1.4	8,738	20,054	726	4,977	189	63	3,136	1,104	7.3	425
Feb	42,195	+ 0.8	29,784	+ 1.5	8,749	20,085	728	4,976	193	57	3,138	1,105	7.3	456
Mar	42,312	+ 0.9	29,932	+ 1.7	8,796	20,158	742	4,990	152	55	3,055	1,026	7.1	476
Apr	42,522	+ 1.0	30,060	+ 1.7	8,825	20,240	749	5,030	77	60	2,943	938	6.8	485
May	42,684	+ 0.9	30,125	+ 1.6	8,835	20,289	750	5,060	72	56	2,882	893	6.6	481
June	42,795	+ 1.0	30,175	+ 1.9	8,853	20,292	779	5,087	66	52	2,833	869	6.5	495
July	42,833	+ 1.0	30,121	+ 1.8	8,859	20,217	800	5,100	54	40	2,871	909	6.6	502
Aug	42,857	+ 0.9	30,312	+ 1.6	8,903	20,358	802	5,046	44	32	2,902	934	6.7	515
Sep	43,020	+ 0.9	30,663	+ 1.7	8,991	20,603	812	5,013	51	39	2,808	885	6.5	518
Oct	43,118	+ 0.9	30,676	+ 1.6	8,979	20,641	808	5,021	61	49	2,733	836	6.3	517
Nov	43,067	+ 0.8	30,636	+ 1.6	8,960	20,642	798	5,020	63	52	2,717	834	6.3	515
Dec	42,862	+ 0.8	30,398	+ 1.7	8,863	20,563	753	5,012	107	39	2,764	867	6.4	498
2015 Jan	42,459	+ 0.7	30,276	+ 1.8	8,813	20,493	747	4,846	169	50	3,032	1,043	7.0	485
Feb	42,475	+ 0.7	30,342	+ 1.9	8,818	20,542	756	4,821	183	52	3,017	1,034	6.9	519
Mar	42,635	+ 0.8	30,528	+ 2.0	8,864	20,649	777	4,829	154	50	2,932	955	6.8	542
Apr	42,820	+ 0.7	30,645	+ 1.9	8,893	20,720	784	4,850	67	54	2,843	868	6.5	552
May	43,002	+ 0.7	30,718	+ 2.0	8,900	20,773	794	4,875	57	44	2,762	815	6.3	557
June	43,138	+ 0.8	30,771	+ 2.0	8,914	20,785	819	4,902	59	45	2,711	782	6.2	572
July	43,181	+ 0.8	30,744	+ 2.1	8,933	20,722	840	4,908	49	35	2,773	830	6.3	589
Aug	43,236	+ 0.9	30,986	+ 2.2	8,992	20,896	846	4,841	40	26	2,796	851	6.4	597
Sep	43,406	+ 0.9	31,330	+ 2.2	9,075	21,147	850	4,810	51	39	2,708	799	6.2	600
Oct	43,493	+ 0.9	31,365	+ 2.2	9,067	21,199	846	4,813	61	47	2,649	764	6.0	612
Nov	43,505	+ 1.0	31,384	+ 2.4	9,058	21,241	842	4,845	66	52	2,633	764	6.0	610
Dec	43,322	+ 1.1	31,164	+ 2.5	8,960	21,185	820	4,843	...	8 39	2,681	798	6.1	591
2016 Jan	42,991	+ 1.3	8 30,954	8 + 2.2	8 8,900	8 21,050	8 782	8 4,768	...	8 48	2,920	961	6.7	581
Feb	43,015	+ 1.3	8 31,048	8 + 2.3	8 8,919	8 21,110	8 792	8 4,757	...	8 54	2,911	947	6.6	614
Mar	9 43,162	9 + 1.2	8 31,209	8 + 2.2	8 8,952	8 21,215	8 805	8 4,775	...	8 53	2,845	888	6.5	635
Apr	9 43,364	9 + 1.3	...	...	...	...	...	...	...	...	2,744	817	6.3	640
May	...	...	...	...	...	...	...	...	...	...	2,664	774	10 6.0	655

Sources: Federal Statistical Office; Federal Employment Agency. \* Annual and quarterly figures: averages; calculated by the Bundesbank; deviations from the official figures are due to rounding. 1 Workplace concept; averages. 2 Monthly figures: end of month. 3 From January 2012, excluding all persons taking up federal voluntary service or a year of social or ecological work. 4 Number within a given month. 5 Mid-month level. 6 Relative to the total civilian labour force. 7 Excluding government-assisted forms of employment and seasonal jobs, including jobs located

abroad. 8 Unadjusted figures estimated by the Federal Employment Agency. In 2013 and 2014, the estimated values for Germany deviated from the final data by a maximum of 0.3 % for employees subject to social contributions, by a maximum of 1.6 % for persons solely in jobs exempt from social contributions, and by a maximum of 21.3 % for cyclically induced short-time work. 9 Initial preliminary estimate by the Federal Statistical Office. 10 From May 2016 calculated on the basis of new labour force figures.

## XI Economic conditions in Germany

### 7 Prices

Period	Consumer price index						Construction price index	Index of producer prices of industrial products sold on the domestic market <sup>3</sup>	Index of producer prices of agricultural products <sup>3</sup>	Indices of foreign trade prices		HWWI Index of World Market Prices of Raw Materials <sup>4</sup>			
	Total	of which			Energy <sup>1</sup>	Services excluding house rents <sup>2</sup>				House rents <sup>2</sup>	Exports	Imports	Energy <sup>5</sup>	Other raw materials <sup>6</sup>	
		Food	Other durable and non-durable consumer goods excluding energy <sup>1</sup>												
	2010 = 100														
	<b>Index level</b>														
2011	7	102.1	102.2	100.8	110.1	101.0	101.3	102.9	105.3	113.4	103.3	106.4	132.2	113.5	
2012	7	104.1	105.7	102.0	116.4	102.4	102.5	105.7	107.0	119.4	104.9	108.7	141.9	110.4	
2013		105.7	110.4	103.0	118.0	103.8	103.8	107.9	106.9	120.7	104.3	105.9	133.1	101.0	
2014		106.6	111.5	103.9	115.5	105.5	105.4	109.7	105.8	111.1	104.0	103.6	120.8	96.8	
2015		106.9	112.4	105.1	107.4	106.9	106.7	111.3	103.9 <sup>8</sup>	106.9	104.9	100.9	80.1	92.5	
2014 July		107.0	111.3	103.2	117.0	106.7	105.4	110.0	105.8	113.9	104.1	103.6	127.7	95.6	
Aug		107.0	110.6	103.5	116.4	106.9	105.6		105.7	111.5	104.1	103.5	123.6	96.3	
Sep		107.0	110.9	104.5	116.5	105.8	105.6		105.7	107.9	104.3	103.8	122.2	95.0	
Oct		106.7	110.9	104.5	114.8	105.4	105.8		105.5	103.7	104.2	103.5	111.9	95.5	
Nov		106.7	110.4	104.7	113.5	105.7	105.9	110.1	103.6	104.2	102.7	103.1	97.5		
Dec		106.7	110.8	104.4	109.1	107.0	106.0		104.8	102.7	103.9	101.0	84.3	96.0	
2015 Jan		105.6	111.4	103.6	105.6	105.3	106.1	110.8	104.2	102.4	104.4	100.2	71.4	97.7	
Feb		106.5	112.3	104.0	107.8	106.9	106.2		104.3	104.8	104.7	101.6	86.2	97.2	
Mar		107.0	112.2	105.1	109.3	106.8	106.3		104.4	105.1	105.3	102.6	86.9	98.9	
Apr		107.0	113.2	105.3	109.8	106.0	106.5	111.1	104.5	106.0	105.6	103.2	94.0	98.3	
May		107.1	113.2	105.1	110.9	106.2	106.5		104.5	104.8	105.4	103.0	96.9	96.4	
June		107.0	112.6	104.9	110.4	106.3	106.6		104.4	105.3	105.3	102.5	93.3	94.9	
July		107.2	111.8	104.4	109.8	107.8	106.7		104.4	104.5	105.4	101.8	85.5	94.8	
Aug		107.2	111.5	104.9	107.5	108.1	106.8	111.5	103.9	102.1	104.9	100.3	72.3	89.0	
Sep		107.0	112.1	105.9	105.7	107.0	106.9		103.5 <sup>8</sup>	107.4	104.6	99.6	71.8	87.0	
Oct		107.0	112.7	106.1	104.9	106.9	107.0	111.8	103.1	108.9	104.4	99.3	72.6	86.2	
Nov		107.1	112.9	106.0	105.0	107.1	107.1		102.9	107.6	104.5	99.1	71.4	85.9	
Dec		107.0	112.4	105.6	102.0	108.4	107.1		102.4	107.3	104.1	97.9	60.2	83.6	
2016 Jan		106.1	112.4	105.0	99.5	106.8	107.3		101.7	106.8	103.9	96.4	50.0	82.3	
Feb		106.5	113.2	105.1	98.6	107.7	107.4	112.5	101.2	106.0	103.4	95.8	51.5	82.2	
Mar		107.3	113.7	106.1	99.6	108.8	107.5		101.2	106.5	103.6	96.5	60.1	85.6	
Apr		106.9	113.8	106.8	100.5	106.6	107.6		101.3	105.9	103.5	96.4	63.5	87.2	
May		107.2	113.2	106.7	102.1	107.5	107.7	...	...	...	...	70.0	89.9		
		<b>Annual percentage change</b>													
2011	7	+ 2.1	+ 2.2	+ 0.8	+ 10.1	+ 1.0	+ 1.3	+ 2.9	+ 5.3	+ 13.4	+ 3.3	+ 6.4	+ 32.2	+ 13.5	
2012	7	+ 2.0	+ 3.4	+ 1.2	+ 5.7	+ 1.4	+ 1.2	+ 2.7	+ 1.6	+ 5.3	+ 1.5	+ 2.2	+ 7.3	+ 2.7	
2013		+ 1.5	+ 4.4	+ 1.0	+ 1.4	+ 1.4	+ 1.3	+ 2.1	+ 0.1	+ 1.1	+ 0.6	+ 2.6	+ 6.2	+ 8.5	
2014		+ 0.9	+ 1.0	+ 0.9	+ 2.1	+ 1.6	+ 1.5	+ 1.7	+ 1.0	+ 8.0	+ 0.3	+ 2.2	+ 9.2	+ 4.2	
2015		+ 0.3	+ 0.8	+ 1.2	+ 7.0	+ 1.3	+ 1.2	+ 1.5	+ 1.8 <sup>8</sup>	+ 3.8	+ 0.9	+ 2.6	+ 33.7	+ 4.4	
2014 July		+ 0.8	+ 0.1	+ 0.8	+ 1.5	+ 1.5	+ 1.4	+ 1.7	+ 0.8	+ 4.6	+ 0.1	+ 1.7	+ 4.5	+ 4.3	
Aug		+ 0.8	+ 0.3	+ 1.1	+ 1.9	+ 1.5	+ 1.5		+ 0.8	+ 6.5	+ 0.1	+ 1.9	+ 8.6	+ 1.8	
Sep		+ 0.8	+ 0.9	+ 1.1	+ 2.2	+ 1.4	+ 1.4		+ 1.0	+ 10.7	+ 0.1	+ 1.6	+ 9.9	+ 2.4	
Oct		+ 0.8	+ 0.7	+ 0.6	+ 2.3	+ 1.7	+ 1.6		+ 1.0	+ 14.5	+ 0.3	+ 1.2	+ 14.0	+ 0.2	
Nov		+ 0.6	+ 0.0	+ 0.8	+ 2.5	+ 1.3	+ 1.4	+ 1.6	+ 0.9	+ 15.3	+ 0.3	+ 2.1	+ 20.9	+ 1.2	
Dec		+ 0.2	+ 1.2	+ 1.1	+ 6.6	+ 1.4	+ 1.4	+ 1.7	+ 1.7	+ 16.1	+ 0.1	+ 3.7	+ 35.9	+ 0.6	
2015 Jan		+ 0.3	+ 1.1	+ 0.8	+ 9.0	+ 1.2	+ 1.3	+ 1.5	+ 2.2	+ 14.3	+ 0.4	+ 4.4	+ 44.8	+ 1.8	
Feb		+ 0.1	+ 0.4	+ 0.8	+ 7.3	+ 1.7	+ 1.3		+ 2.1	+ 12.2	+ 0.7	+ 3.0	+ 33.3	+ 0.0	
Mar		+ 0.3	+ 0.1	+ 0.9	+ 5.7	+ 1.3	+ 1.3		+ 1.7	+ 12.7	+ 1.4	+ 1.4	+ 31.0	+ 2.1	
Apr		+ 0.5	+ 1.1	+ 1.1	+ 5.9	+ 1.2	+ 1.3	+ 1.5	+ 1.5	+ 12.5	+ 1.6	+ 0.6	+ 25.5	+ 1.0	
May		+ 0.7	+ 1.4	+ 1.2	+ 5.0	+ 1.8	+ 1.2		+ 1.3	+ 11.8	+ 1.4	+ 0.8	+ 25.0	+ 2.5	
June		+ 0.3	+ 1.0	+ 1.4	+ 5.9	+ 0.9	+ 1.2		+ 1.4	+ 10.5	+ 1.3	+ 1.4	+ 29.8	+ 2.6	
July		+ 0.2	+ 0.4	+ 1.2	+ 6.2	+ 1.0	+ 1.2		+ 1.4	+ 1.3	+ 8.3	+ 1.2	+ 1.7	+ 33.0	+ 0.8
Aug		+ 0.2	+ 0.8	+ 1.4	+ 7.6	+ 1.1	+ 1.1	+ 1.4	+ 1.7	+ 8.4	+ 0.8	+ 3.1	+ 41.5	+ 7.6	
Sep		+ 0.0	+ 1.1	+ 1.3	+ 9.3	+ 1.1	+ 1.2		+ 2.1 <sup>8</sup>	+ 0.5	+ 0.3	+ 4.0	+ 41.2	+ 8.4	
Oct		+ 0.3	+ 1.6	+ 1.5	+ 8.6	+ 1.4	+ 1.1	+ 1.5	+ 2.3	+ 5.0	+ 0.2	+ 4.1	+ 35.1	+ 9.7	
Nov		+ 0.4	+ 2.3	+ 1.2	+ 7.5	+ 1.3	+ 1.1		+ 2.5	+ 3.9	+ 0.3	+ 3.5	+ 30.7	+ 11.9	
Dec		+ 0.3	+ 1.4	+ 1.1	+ 6.5	+ 1.3	+ 1.0		+ 2.3	+ 4.5	+ 0.2	+ 3.1	+ 28.6	+ 12.9	
2016 Jan		+ 0.5	+ 0.9	+ 1.4	+ 5.8	+ 1.4	+ 1.1		+ 2.4	+ 4.3	+ 0.5	+ 3.8	+ 30.0	+ 15.8	
Feb		+ 0.0	+ 0.8	+ 1.1	+ 8.5	+ 0.7	+ 1.1	+ 3.0	+ 1.1	+ 1.2	+ 5.7	+ 40.3	+ 15.4		
Mar		+ 0.3	+ 1.3	+ 1.0	+ 8.9	+ 1.9	+ 1.1	+ 3.1	+ 1.3	+ 1.6	+ 5.9	+ 30.8	+ 13.4		
Apr		+ 0.1	+ 0.5	+ 1.4	+ 8.5	+ 0.6	+ 1.0	+ 3.1	+ 0.1	+ 2.0	+ 6.6	+ 32.4	+ 11.3		
May		+ 0.1	+ 0.0	+ 1.5	+ 7.9	+ 1.2	+ 1.1	...	...	...	...	+ 27.8	+ 6.7		

Source: Federal Statistical Office and Bundesbank calculation based on data provided by the Federal Statistical Office; for the Index of World Market Prices of Raw Materials: HWWI. <sup>1</sup> Electricity, gas and other fuels. <sup>2</sup> Net rents. <sup>3</sup> Excluding value-added tax. <sup>4</sup> For the euro area, in euro. <sup>5</sup> Coal and crude oil (Brent). <sup>6</sup> Food,

beverages and tobacco as well as industrial raw materials. <sup>7</sup> From May 2011 and from January 2012, increase in tobacco tax. <sup>8</sup> From September 2015 onwards, provisional figures.

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### 8 Households' income \*

Period	Gross wages and salaries <sup>1</sup>		Net wages and salaries <sup>2</sup>		Monetary social benefits received <sup>3</sup>		Mass income <sup>4</sup>		Disposable income <sup>5</sup>		Saving <sup>6</sup>		Saving ratio <sup>7</sup>
	€ 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
2008	1,008.1	4.0	670.8	3.4	358.2	0.5	1,029.1	2.4	1,582.6	2.6	165.9	4.9	10.5
2009	1,009.5	0.1	672.6	0.3	383.2	7.0	1,055.7	2.6	1,569.2	- 0.8	156.2	- 5.9	10.0
2010	1,039.0	2.9	702.2	4.4	387.7	1.2	1,089.9	3.2	1,606.4	2.4	160.1	2.5	10.0
2011	1,088.6	4.8	729.4	3.9	383.0	- 1.2	1,112.4	2.1	1,653.7	2.9	158.2	- 1.2	9.6
2012	1,133.5	4.1	757.8	3.9	389.3	1.6	1,147.1	3.1	1,690.4	2.2	156.5	- 1.0	9.3
2013	1,168.3	3.1	779.7	2.9	398.5	2.4	1,178.2	2.7	1,719.8	1.7	157.1	0.4	9.1
2014	1,213.7	3.9	808.1	3.6	409.8	2.8	1,217.8	3.4	1,759.7	2.3	167.6	6.7	9.5
2015	1,261.1	3.9	836.5	3.5	426.5	4.1	1,263.0	3.7	1,809.8	2.8	175.0	4.4	9.7
2014 Q4	334.8	3.8	222.0	3.5	102.6	4.7	324.6	3.9	447.5	3.1	36.7	13.0	8.2
2015 Q1	292.5	3.5	193.9	2.8	108.5	4.2	302.4	3.3	448.3	2.8	58.0	4.0	12.9
Q2	308.6	4.1	200.2	3.4	105.2	4.7	305.3	3.8	447.9	2.8	41.7	4.9	9.3
Q3	311.8	4.1	211.5	3.7	106.8	4.2	318.4	3.9	453.7	3.0	36.7	3.9	8.1
Q4	348.2	4.0	231.0	4.1	106.0	3.3	337.0	3.8	459.9	2.8	38.6	5.1	8.4
2016 Q1	305.0	4.3	202.0	4.2	111.4	2.7	313.5	3.7	459.6	2.5	60.0	3.5	13.1

Source: Federal Statistical Office; figures computed in May 2016. \* 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 <sup>1</sup>								Memo item: Wages and salaries per employee <sup>3</sup>	
	On an hourly basis				On a monthly basis					
	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
2008	96.5	2.8	96.3	2.9	96.2	3.1	95.9	3.3	97.6	2.4
2009	98.4	2.0	98.3	2.0	98.3	2.3	98.2	2.4	97.6	- 0.1
2010	100.0	1.6	100.0	1.8	100.0	1.7	100.0	1.8	100.0	2.5
2011	101.7	1.7	101.8	1.8	101.8	1.8	101.8	1.8	103.4	3.4
2012	104.5	2.7	104.5	2.6	104.8	2.9	104.7	2.9	106.2	2.8
2013	107.1	2.5	107.1	2.5	107.4	2.5	107.3	2.5	108.4	2.1
2014	110.3	3.0	110.2	2.9	110.4	2.8	110.4	2.9	111.4	2.7
2015	112.9	2.4	112.7	2.3	113.0	2.4	113.0	2.4	114.4	2.8
2014 Q4	123.1	2.9	123.0	2.8	123.3	2.8	111.2	2.8	121.7	2.7
2015 Q1	104.5	2.2	104.4	2.2	104.3	2.3	111.7	2.4	107.5	2.5
Q2	105.9	2.3	105.7	2.2	106.1	2.3	112.8	2.4	112.3	3.0
Q3	115.1	2.5	115.0	2.4	115.3	2.4	113.7	2.5	112.8	2.9
Q4	126.1	2.4	125.9	2.3	126.2	2.3	113.9	2.4	125.0	2.7
2016 Q1	106.6	2.0	106.4	2.0	106.8	2.3	114.3	2.4	110.4	2.7
2015 Oct	106.3	2.6	106.1	2.5	106.3	2.4	113.9	2.4	.	.
Nov	163.7	2.5	163.5	2.5	164.0	2.4	113.9	2.5	.	.
Dec	108.2	2.1	108.0	2.0	108.3	2.1	113.9	2.4	.	.
2016 Jan	106.5	2.3	106.3	2.2	106.6	2.4	114.1	2.4	.	.
Feb	106.4	2.1	106.2	2.1	106.5	2.3	114.1	2.3	.	.
Mar	107.0	1.6	106.8	1.6	107.1	2.3	114.8	2.3	.	.
Apr	108.3	2.0	108.1	2.0	108.3	1.9	114.9	2.0	.	.

**1** Current data are normally revised on account of additional reports. **2** Excluding one-off payments and covenants (capital formation benefits, special payments, such as annual bonuses, holiday pay, Christmas bonuses (13<sup>th</sup> monthly salary payment

and retirement provisions). **3** Source: Federal Statistical Office; figures computed in May 2016.

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

End-of-year/end-of-quarter data

Period	Assets								Equity and liabilities							
	Total assets	Non-current assets	of which			Current assets	of which			Equity	Liabilities					
			Intangible assets	Tangible assets	Financial assets		Inventories	Trade receivables	Cash <sup>1</sup>		Total	Long-term		Short-term		
												Total	of which Financial debt	Total	of which	
Financial debt	Trade payables															
<b>Total (€ billion)</b>																
2011	1,838.5	1,116.0	340.0	477.4	232.9	722.5	190.6	180.4	119.3	537.8	1,300.7	663.6	347.3	637.1	176.8	160.9
2012	1,904.7	1,178.7	380.6	490.5	240.6	726.0	189.9	179.1	125.9	561.6	1,343.1	719.0	380.1	624.1	180.0	160.6
2013	1,938.4	1,196.1	387.1	499.5	241.0	742.3	189.0	179.8	139.0	576.1	1,362.3	726.4	383.3	635.9	191.3	166.8
2014	2,117.2	1,311.0	433.0	534.4	260.1	806.3	204.4	190.7	135.8	588.0	1,529.2	835.3	434.3	693.9	216.0	179.8
2015 <b>P</b>	2,277.7	1,428.2	476.5	582.6	283.4	849.5	216.8	195.8	140.9	642.1	1,635.5	887.6	475.2	747.9	234.6	186.2
2015 Q1	2,257.4	1,399.4	456.7	558.9	284.4	858.0	220.3	212.5	139.0	607.7	1,649.8	910.0	454.1	739.7	224.9	184.3
Q2	2,218.5	1,384.0	459.8	557.6	281.8	834.5	219.1	204.4	132.0	629.9	1,588.6	857.6	449.8	731.0	224.7	180.7
Q3	2,206.1	1,368.1	450.6	553.4	277.8	838.0	219.0	195.9	142.1	622.7	1,583.4	861.4	450.4	722.0	213.9	179.3
Q4 <b>P</b>	2,277.7	1,428.2	476.5	582.6	283.4	849.5	216.8	195.8	140.9	642.1	1,635.5	887.6	475.2	747.9	234.6	186.2
<b>as a percentage of total assets</b>																
2011	100.0	60.7	18.5	26.0	12.7	39.3	10.4	9.8	6.5	29.3	70.8	36.1	18.9	34.7	9.6	8.8
2012	100.0	61.9	20.0	25.8	12.6	38.1	10.0	9.4	6.6	29.5	70.5	37.8	20.0	32.8	9.5	8.4
2013	100.0	61.7	20.0	25.8	12.4	38.3	9.8	9.3	7.2	29.7	70.3	37.5	19.8	32.8	9.9	8.6
2014	100.0	61.9	20.5	25.2	12.3	38.1	9.7	9.0	6.4	27.8	72.2	39.5	20.5	32.8	10.2	8.5
2015 <b>P</b>	100.0	62.7	20.9	25.6	12.4	37.3	9.5	8.6	6.2	28.2	71.8	39.0	20.9	32.8	10.3	8.2
2015 Q1	100.0	62.0	20.2	24.8	12.6	38.0	9.8	9.4	6.2	26.9	73.1	40.3	20.1	32.8	10.0	8.2
Q2	100.0	62.4	20.7	25.1	12.7	37.6	9.9	9.2	6.0	28.4	71.6	38.7	20.3	33.0	10.1	8.2
Q3	100.0	62.0	20.4	25.1	12.6	38.0	9.9	8.9	6.4	28.2	71.8	39.1	20.4	32.7	9.7	8.1
Q4 <b>P</b>	100.0	62.7	20.9	25.6	12.4	37.3	9.5	8.6	6.2	28.2	71.8	39.0	20.9	32.8	10.3	8.2
<b>Groups with a focus on the production sector (€ billion) <sup>2</sup></b>																
2011	1,474.2	860.6	221.7	373.8	214.9	613.6	172.3	143.6	92.7	421.6	1,052.6	530.5	260.8	522.2	151.2	116.7
2012	1,540.7	921.3	258.9	388.0	222.1	619.4	172.5	140.4	98.1	443.7	1,097.0	581.8	286.6	515.2	161.0	116.5
2013	1,559.6	933.2	259.1	398.7	224.1	626.4	172.7	140.0	106.6	457.3	1,102.3	580.9	286.2	521.4	170.4	118.6
2014	1,693.7	1,016.3	278.4	425.8	246.5	677.4	187.0	143.6	102.1	456.2	1,237.5	667.4	325.9	570.0	194.4	126.4
2015 <b>P</b>	1,819.9	1,102.0	305.8	460.6	268.2	717.9	199.9	150.0	108.2	491.1	1,328.7	712.3	360.0	616.4	209.5	131.3
2015 Q1	1,810.1	1,084.9	291.7	445.3	269.4	725.2	202.3	162.9	108.4	470.3	1,339.8	730.0	341.4	609.8	202.0	134.5
Q2	1,782.5	1,075.0	295.2	446.2	267.7	707.5	202.0	156.0	107.0	492.7	1,289.8	693.7	343.5	596.1	195.9	132.0
Q3	1,771.2	1,058.9	286.4	440.9	263.7	712.3	201.8	148.8	114.7	482.6	1,288.5	697.3	345.0	591.2	185.1	129.7
Q4 <b>P</b>	1,819.9	1,102.0	305.8	460.6	268.2	717.9	199.9	150.0	108.2	491.1	1,328.7	712.3	360.0	616.4	209.5	131.3
<b>as a percentage of total assets</b>																
2011	100.0	58.4	15.0	25.4	14.6	41.6	11.7	9.7	6.3	28.6	71.4	36.0	17.7	35.4	10.3	7.9
2012	100.0	59.8	16.8	25.2	14.4	40.2	11.2	9.1	6.4	28.8	71.2	37.8	18.6	33.4	10.5	7.6
2013	100.0	59.8	16.6	25.6	14.4	40.2	11.1	9.0	6.8	29.3	70.7	37.3	18.4	33.4	10.9	7.6
2014	100.0	60.0	16.4	25.1	14.6	40.0	11.0	8.5	6.0	26.9	73.1	39.4	19.2	33.7	11.5	7.5
2015 <b>P</b>	100.0	60.6	16.8	25.3	14.7	39.5	11.0	8.2	5.9	27.0	73.0	39.1	19.8	33.9	11.5	7.2
2015 Q1	100.0	59.9	16.1	24.6	14.9	40.1	11.2	9.0	6.0	26.0	74.0	40.3	18.9	33.7	11.2	7.4
Q2	100.0	60.3	16.6	25.0	15.0	39.7	11.3	8.8	6.0	27.6	72.4	38.9	19.3	33.4	11.0	7.4
Q3	100.0	59.8	16.2	24.9	14.9	40.2	11.4	8.4	6.5	27.3	72.8	39.4	19.5	33.4	10.5	7.3
Q4 <b>P</b>	100.0	60.6	16.8	25.3	14.7	39.5	11.0	8.2	5.9	27.0	73.0	39.1	19.8	33.9	11.5	7.2
<b>Groups with a focus on the services sector (€ billion)</b>																
2011	364.3	255.4	118.3	103.6	17.9	108.9	18.3	36.8	26.6	116.2	248.1	133.1	86.5	115.0	25.6	44.1
2012	364.0	257.4	121.7	102.6	18.4	106.5	17.4	38.7	27.9	117.9	246.1	137.1	93.6	108.9	18.9	44.2
2013	378.8	262.9	128.0	100.8	16.8	115.9	16.3	39.8	32.4	118.8	260.0	145.4	97.1	114.5	20.8	48.2
2014	423.5	294.7	154.7	108.6	13.6	128.9	17.4	47.1	33.7	131.8	291.7	167.9	108.4	123.8	21.6	53.4
2015 <b>P</b>	457.8	326.1	170.7	122.1	15.2	131.7	16.9	45.7	32.8	151.0	306.8	175.3	115.1	131.5	25.1	54.9
2015 Q1	447.3	314.5	165.0	113.6	14.9	132.8	17.9	49.6	30.6	137.3	310.0	180.1	112.7	129.9	23.0	49.8
Q2	436.0	309.1	164.6	111.4	14.1	126.9	17.1	48.3	25.0	137.3	298.8	163.9	106.3	134.9	28.8	48.7
Q3	434.9	309.2	164.2	112.5	14.1	125.6	17.2	47.1	27.4	140.0	294.8	164.0	105.3	130.8	28.8	49.6
Q4 <b>P</b>	457.8	326.1	170.7	122.1	15.2	131.7	16.9	45.7	32.8	151.0	306.8	175.3	115.1	131.5	25.1	54.9
<b>as a percentage of total assets</b>																
2011	100.0	70.1	32.5	28.5	4.9	29.9	5.0	10.1	7.3	31.9	68.1	36.5	23.8	31.6	7.0	12.1
2012	100.0	70.7	33.4	28.2	5.1	29.3	4.8	10.6	7.7	32.4	67.6	37.7	25.7	29.9	5.2	12.1
2013	100.0	69.4	33.8	26.6	4.4	30.6	4.3	10.5	8.6	31.4	68.6	38.4	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	8.0	31.1	68.9	39.6	25.6	29.2	5.1	12.6
2015 <b>P</b>	100.0	71.2	37.3	26.7	3.3	28.8	3.7	10.0	7.2	33.0	67.0	38.3	25.1	28.7	5.5	12.0
2015 Q1	100.0	70.3	36.9	25.4	3.3	29.7	4.0	11.1	6.8	30.7	69.3	40.3	25.2	29.0	5.1	11.1
Q2	100.0	70.9	37.8	25.6	3.2	29.1	3.9	11.1	5.7	31.5	68.5	37.6	24.4	30.9	6.6	11.2
Q3	100.0	71.1	37.8	25.9	3.2	28.9	3.9	10.8	6.3	32.2	67.8	37.7	24.2	30.1	6.6	11.4
Q4 <b>P</b>	100.0	71.2	37.3	26.7	3.3	28.8	3.7	10.0	7.2	33.0	67.0	38.3	25.1	28.7	5.5	12.0

\* Non-financial groups listed in Germany which publish IFRS consolidated financial statements on a quarterly basis and make a noteworthy contribution to value added

in Germany. In some cases revised. Excluding groups in real estate activities. <sup>1</sup> Including cash equivalents. <sup>2</sup> 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					
	€ billion	Annual change in % 3	€ billion	Annual change in % 3	Weighted average	Distribution 2			€ billion	Annual change in % 3	Weighted average	Distribution 2				
						First quartile	Median	Third quartile				First quartile	Median	Third quartile		
					Annual change in percentage points 3	%	%	%		Annual change in percentage points 3	%	%	%			
<b>Total</b>																
2007	1,234.1	4.4	173.6	15.1	14.1	1.3	7.8	12.7	18.4	95.6	27.5	7.7	1.4	4.2	8.4	13.1
2008	1,307.5	6.4	164.5	-5.6	12.6	-1.6	5.8	11.6	17.6	80.9	-16.6	6.2	-1.7	2.5	6.6	12.1
2009	1,175.4	-10.5	138.4	-16.4	11.8	-0.8	4.0	9.5	15.8	57.9	-28.0	4.9	-1.2	0.3	5.1	9.3
2010	1,340.0	13.2	184.3	30.4	13.8	1.8	6.0	11.2	18.6	100.4	64.9	7.5	2.3	3.1	6.5	12.1
2011	1,434.5	8.4	177.9	-0.3	12.4	-1.1	5.5	10.7	17.4	94.6	-5.4	6.6	-1.0	2.7	6.6	11.9
2012	1,552.7	6.6	190.8	3.3	12.3	-0.4	5.1	10.1	17.5	96.9	-7.1	6.2	-0.9	1.8	6.1	11.0
2013	1,557.4	-0.5	188.5	-2.5	12.1	-0.2	5.0	9.9	18.2	99.9	6.2	6.4	0.4	1.8	5.8	10.8
2014	1,586.1	1.0	200.7	4.9	12.7	0.5	5.6	10.2	17.2	109.2	7.4	6.9	0.4	1.8	6.2	11.1
2015 P	1,672.7	6.6	199.5	-0.5	11.9	-0.9	5.9	10.5	17.3	91.8	-15.5	5.5	-1.4	1.4	6.4	10.8
2013 Q2	393.6	1.1	48.3	-1.4	12.3	-0.3	4.1	9.2	16.7	27.3	-4.8	6.9	-0.4	0.9	4.9	10.2
Q3	384.3	-1.6	47.2	-1.0	12.3	0.1	5.1	10.3	16.1	25.6	99.8	6.7	3.5	1.3	5.8	11.8
Q4	406.7	-0.4	47.6	-1.6	11.7	-0.1	5.2	11.1	19.5	20.5	-12.2	5.0	-0.7	0.9	6.7	12.6
2014 Q1	381.5	-0.1	50.2	8.9	13.2	1.1	3.7	8.7	16.2	30.6	15.3	8.0	1.1	0.1	5.1	10.2
Q2	386.7	-2.0	47.9	-0.2	12.4	0.2	4.6	9.7	16.9	26.4	-2.3	6.8	-0.0	1.3	5.7	11.1
Q3	394.7	2.8	49.9	3.9	12.6	0.1	5.4	11.3	18.3	28.6	8.2	7.2	0.4	1.8	6.8	12.7
Q4	423.6	3.0	52.8	7.2	12.5	0.5	4.0	11.6	19.3	23.5	8.7	5.6	0.3	0.5	6.7	12.0
2015 Q1	409.8	7.3	51.2	1.9	12.5	-0.7	4.5	9.7	17.2	28.8	-5.9	7.0	-1.0	-0.8	5.9	11.4
Q2	425.7	9.9	52.9	10.2	12.4	0.0	4.7	9.7	16.6	30.8	16.6	7.2	0.4	1.3	5.6	10.9
Q3	416.8	5.4	49.5	-0.6	11.9	-0.7	4.8	10.5	16.6	17.2	-39.5	4.1	-3.1	1.0	6.3	11.5
Q4 P	437.0	3.9	46.3	-12.5	10.6	-2.0	6.9	11.7	18.3	15.4	-35.1	3.5	-2.1	2.2	7.4	12.3
<b>Groups with a focus on the production sector 4</b>																
2007	900.5	3.8	129.6	16.9	14.4	1.6	7.8	12.7	17.6	73.8	33.1	8.2	1.8	5.0	8.6	12.5
2008	966.1	7.2	122.6	-6.2	12.7	-1.8	5.8	11.3	15.6	62.0	-17.1	6.4	-1.9	2.4	6.7	11.4
2009	854.1	-11.5	97.7	-19.9	11.4	-1.2	2.9	9.2	14.0	41.9	-31.0	4.9	-1.4	-1.3	4.7	8.8
2010	999.2	15.7	139.1	38.1	13.9	2.3	6.3	11.2	16.2	77.7	70.0	7.8	2.5	2.9	7.0	11.9
2011	1,098.9	10.6	131.9	-2.6	12.0	-1.6	5.3	10.7	16.2	74.8	-6.5	6.8	-1.3	2.1	6.8	11.2
2012	1,194.3	7.6	143.1	5.5	12.0	-0.2	5.2	10.2	15.9	83.0	2.8	7.0	-0.3	1.8	6.1	9.8
2013	1,195.9	-0.7	140.2	-2.2	11.7	-0.2	4.3	9.9	15.4	75.1	-5.1	6.3	-0.3	1.2	5.6	9.8
2014	1,217.7	0.9	149.9	5.7	12.3	0.6	5.1	9.4	15.1	81.8	7.8	6.7	0.4	1.0	5.8	9.9
2015 P	1,301.8	6.6	146.3	-2.2	11.2	-1.0	6.1	10.2	15.1	64.8	-19.4	5.0	-1.7	1.3	6.3	9.8
2013 Q2	303.3	1.4	36.0	-2.1	11.9	-0.4	3.6	9.1	15.2	20.6	-8.4	6.8	-0.7	0.4	5.0	9.4
Q3	290.7	-2.2	33.4	-0.4	11.5	0.2	4.5	10.1	15.0	17.5	15.3	6.0	1.0	0.8	5.7	10.1
Q4	311.6	-0.5	34.6	1.9	11.1	0.3	4.5	10.7	15.5	14.3	-7.3	4.6	-0.3	0.0	6.0	10.4
2014 Q1	297.8	0.1	39.1	6.4	13.1	0.8	3.5	8.7	14.5	25.0	10.4	8.4	0.8	0.3	5.3	9.0
Q2	297.2	-2.3	36.1	0.3	12.1	0.3	4.0	9.4	15.3	20.5	-0.2	6.9	0.2	1.1	5.3	10.6
Q3	300.0	3.3	36.4	6.3	12.1	0.3	4.2	10.3	16.0	20.9	12.6	7.0	0.6	1.2	6.3	10.3
Q4	322.9	2.8	38.4	10.1	11.9	0.8	3.3	10.6	15.6	15.5	9.1	4.8	0.3	-0.7	6.1	10.3
2015 Q1	319.0	7.0	41.2	5.4	12.9	-0.2	5.4	9.7	14.9	25.3	1.4	7.9	-0.4	0.9	6.0	9.6
Q2	329.0	10.5	40.1	11.2	12.2	0.1	4.4	9.5	15.2	24.1	17.9	7.3	0.5	1.4	5.3	9.7
Q3	316.5	5.3	34.3	-5.2	10.8	-1.2	4.6	10.0	15.1	8.8	-54.6	2.8	-4.0	1.0	5.8	10.1
Q4 P	338.0	4.0	30.7	-19.8	9.1	-2.7	5.9	11.0	16.2	6.6	-53.8	2.0	-2.8	2.0	6.4	10.8
<b>Groups with a focus on the services sector</b>																
2007	333.5	6.4	43.9	9.3	13.2	0.4	7.0	12.7	20.6	21.8	9.6	6.5	0.2	3.3	7.8	14.3
2008	341.4	4.0	41.9	-3.7	12.3	-1.0	5.9	12.5	19.7	19.0	-14.6	5.6	-1.2	2.8	6.6	12.7
2009	321.3	-7.4	40.8	-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	340.8	5.8	45.2	8.7	13.3	0.3	5.9	10.8	19.9	22.7	46.7	6.7	1.7	3.3	5.9	12.4
2011	335.6	1.5	45.9	7.6	13.7	0.8	5.7	10.6	20.9	19.8	-0.8	5.9	-0.1	3.2	6.4	13.8
2012	358.4	3.0	47.7	-3.3	13.3	-0.9	5.1	10.0	23.2	13.9	-47.1	3.9	-3.0	2.1	5.7	14.0
2013	361.5	-0.1	48.2	-3.5	13.3	-0.5	5.3	9.9	21.1	24.8	91.7	6.9	3.0	2.7	5.9	12.2
2014	368.4	1.0	50.8	2.2	13.8	0.2	6.2	12.7	23.2	27.4	5.7	7.4	0.3	2.9	7.2	14.1
2015 P	370.9	6.4	53.3	5.3	14.4	-0.1	5.9	11.1	22.1	27.0	-1.5	7.3	-0.6	1.4	6.7	14.0
2013 Q2	90.3	-0.3	12.2	1.0	13.5	0.2	4.9	9.4	19.2	6.7	12.0	7.4	0.8	1.2	4.8	13.9
Q3	93.5	0.5	13.8	-2.8	14.8	-0.5	5.7	10.7	21.0	8.1	307.7	8.6	12.5	2.0	6.2	13.1
Q4	95.1	0.1	13.0	-11.1	13.6	-1.7	6.4	13.2	24.0	6.2	-24.2	6.6	-1.9	2.0	8.1	16.1
2014 Q1	83.7	-0.6	11.1	20.1	13.3	2.3	3.8	8.9	21.2	5.6	49.8	6.7	2.2	-0.4	4.6	13.1
Q2	89.5	-0.5	11.9	-1.8	13.3	-0.2	4.8	10.4	18.7	6.0	-10.0	6.7	-0.7	1.4	6.0	13.0
Q3	94.7	1.1	13.5	-2.9	14.2	-0.6	7.1	13.1	24.6	7.7	-3.4	8.1	-0.4	3.1	7.8	13.8
Q4	100.7	3.7	14.4	-1.6	14.3	-0.7	5.4	15.6	25.3	8.1	7.5	8.0	0.2	2.1	8.4	19.5
2015 Q1	90.9	8.7	10.1	-12.1	11.1	-2.7	3.8	9.6	22.2	3.5	-45.4	3.9	-3.4	-2.6	5.6	14.3
Q2	96.7	7.8	12.8	7.0	13.2	-0.1	5.0	11.4	21.7	6.7	11.2	6.9	0.2	1.3	6.7	13.8
Q3	100.3	5.9	15.2	13.8	15.2	1.1	5.2	12.1	20.0	8.4	9.1	8.4	0.3	0.7	7.1	13.1
Q4 P	99.0	3.5	15.6	9.7	15.8	0.9	7.8	14.1	26.2	8.7	9.2	8.8	0.5	2.3	9.7	17.5

\* Non-financial groups listed in Germany which publish IFRS consolidated financial statements on a quarterly basis and make a noteworthy contribution to value added in Germany. In some cases revised. Excluding groups in real estate activities. 1 Earnings before interest, taxes, depreciation and amortisation. 2 Quantile data are based

on the groups' unweighted return on sales. 3 Adjusted for substantial changes in the basis of consolidation of large groups and in the reporting sample. See the explanatory notes in the Statistical Supplement Seasonally adjusted business statistics. 4 Including groups in agriculture and forestry.

## XII External sector

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

€ million

Item	2013	2014	2015	2015		2016			
				Q3	Q4	Q1 P	Jan	Feb	Mar P
A Current account	+ 215,159	+ 251,343	+ 329,544	+ 96,446	+ 107,837	+ 50,507	+ 7,038	+ 11,189	+ 32,280
1 Goods									
Exports	1,914,039	1,968,822	2,076,497	517,532	528,861	492,932	147,095	165,340	180,497
Imports	1,703,470	1,721,229	1,754,905	435,965	438,098	419,573	135,018	140,181	144,374
Balance	+ 210,569	+ 247,594	+ 321,590	+ 81,565	+ 90,763	+ 73,360	+ 12,077	+ 25,160	+ 36,123
2 Services									
Receipts	647,717	707,405	765,146	201,318	200,076	174,297	57,634	55,988	60,675
Expenditure	578,716	631,846	698,776	181,161	185,563	164,512	55,552	52,782	56,178
Balance	+ 69,001	+ 75,558	+ 66,369	+ 20,157	+ 14,514	+ 9,785	+ 2,082	+ 3,206	+ 4,497
3 Primary income									
Receipts	611,127	633,589	647,064	153,970	166,522	140,694	41,862	46,594	52,238
Expenditure	531,996	563,804	572,246	137,098	133,731	124,774	39,193	39,805	45,776
Balance	+ 79,131	+ 69,789	+ 74,819	+ 16,875	+ 32,789	+ 15,920	+ 2,669	+ 6,789	+ 6,462
4 Secondary income									
Receipts	88,185	92,947	103,167	23,842	26,122	24,343	7,770	8,238	8,335
Expenditure	231,725	234,539	236,404	45,993	56,352	72,902	17,560	32,204	23,138
Balance	- 143,539	- 141,593	- 133,235	- 22,151	- 30,230	- 48,559	- 9,791	- 23,966	- 14,802
B Capital account	+ 20,588	+ 19,086	- 14,357	+ 5,625	+ 6,538	+ 2,097	- 886	+ 2,219	+ 764
C Financial account (Increase: +)	+ 350,211	+ 370,297	+ 306,638	+ 51,536	+ 181,195	+ 66,172	- 22,562	+ 37,427	+ 51,307
1 Direct investment	- 58,477	+ 59,624	+ 114,644	- 12,557	+ 36,987	+ 27,300	- 31,053	+ 44,526	+ 13,827
By resident units abroad	+ 611,335	+ 195,890	+ 601,491	+ 119,346	+ 114,714	+ 94,261	+ 1,776	+ 66,543	+ 25,942
By non-resident units in the euro area	+ 669,813	+ 136,262	+ 486,844	+ 131,902	+ 77,727	+ 66,962	+ 32,829	+ 22,018	+ 12,115
2 Portfolio investment	- 3,844	+ 113,297	+ 233,973	+ 91,674	+ 137,481	+ 148,271	+ 74,161	+ 66,100	+ 8,010
By resident units abroad	+ 258,618	+ 455,442	+ 394,498	+ 24,321	+ 106,226	+ 116,012	+ 23,770	+ 44,449	+ 47,793
Equity and investment fund shares	+ 171,690	+ 143,539	+ 14,134	- 13,182	- 2,413	- 5,832	- 1,465	- 15,544	+ 11,177
Long-term debt securities	+ 79,370	+ 222,275	+ 374,869	+ 71,220	+ 76,752	+ 123,166	+ 23,661	+ 64,420	+ 35,085
Short-term debt securities	+ 7,559	+ 89,628	+ 5,496	- 33,718	+ 31,887	- 1,320	+ 1,575	- 4,427	+ 1,532
By non-resident units in the euro area	+ 262,463	+ 342,144	+ 160,524	- 67,353	- 31,256	- 32,259	- 50,391	- 21,651	+ 39,783
Equity and investment fund shares	+ 189,935	+ 262,328	+ 234,947	+ 11,326	+ 51,636	- 22,210	- 42,256	+ 11,646	+ 8,400
Long-term debt securities	+ 64,320	+ 98,062	- 26,762	- 68,584	- 28,570	- 36,463	- 14,493	- 40,817	+ 18,847
Short-term debt securities	+ 8,208	- 18,242	- 47,660	- 10,093	- 54,323	+ 26,413	+ 6,357	+ 7,520	+ 12,536
3 Financial derivatives and employee stock options	+ 14,605	+ 42,827	+ 70,499	- 811	+ 45,119	+ 7,097	+ 10,053	+ 4,570	- 7,526
4 Other investment	+ 393,233	+ 150,171	- 123,152	- 29,441	- 42,974	- 117,616	- 74,608	- 78,900	+ 35,892
Eurosysteem	+ 57,972	+ 55,790	- 13,570	- 18,210	+ 3,195	- 6,480	+ 16,161	- 18,042	- 4,599
General government	- 9,132	+ 10,692	+ 18,029	+ 3,931	- 316	+ 8,175	+ 8,065	+ 633	- 523
MFIs (excluding the Eurosysteem)	+ 262,772	+ 101,813	- 129,758	- 34,556	- 38,164	- 79,822	- 71,083	- 32,393	+ 23,654
Enterprises and households	+ 81,622	- 18,125	+ 2,146	+ 19,393	- 7,691	- 39,488	- 27,750	- 29,098	+ 17,360
5 Reserve assets	+ 4,691	+ 4,380	+ 10,669	+ 2,671	+ 4,580	+ 1,120	- 1,115	+ 1,131	+ 1,104
D Net errors and omissions	+ 114,462	+ 99,869	- 8,551	- 50,536	+ 66,820	+ 13,567	- 28,714	+ 24,019	+ 18,262

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

XII External sector

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

€ million

Period	Current account							Financial account (Net lending: + / net borrowing: -)			
	Total	Goods (fob/fob) <sup>1</sup>		Services (fob/fob) <sup>3</sup>	Primary income	Secondary income	Balance of capital account <sup>4</sup>	Total	of which Reserve assets	Errors and omissions <sup>5</sup>	
		Total	of which Supple- mentary trade items <sup>2</sup>								
2001	-	7,911	+ 101,273	+ 3,321	- 62,833	- 17,195	- 29,155	- 3,258	+ 947	- 6,032	+ 12,116
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	+	164,581	+ 163,426	- 8,900	- 32,482	+ 69,156	- 35,520	+ 1,642	+ 120,858	+ 2,836	- 45,365
2012	+	193,593	+ 200,401	- 10,518	- 32,775	+ 65,825	- 39,858	- 413	+ 144,802	+ 1,297	- 48,378
2013	+	190,420	+ 211,647	- 4,331	- 43,223	+ 65,754	- 43,758	- 591	+ 218,884	+ 838	+ 29,056
2014	+	212,880	+ 226,499	- 7,739	- 35,353	+ 62,387	- 40,653	+ 1,138	+ 244,434	- 2,564	+ 30,415
2015 r	+	257,209	+ 263,186	- 4,407	- 30,165	+ 63,739	- 39,550	- 159	+ 225,848	- 2,213	- 31,202
2013 Q2	+	45,113	+ 55,055	+ 1,547	- 10,255	+ 7,804	- 7,491	+ 743	+ 59,059	+ 72	+ 13,203
Q3	+	41,102	+ 50,743	- 3,290	- 16,483	+ 16,129	- 9,287	- 5	+ 54,577	- 785	+ 13,480
Q4	+	62,069	+ 53,496	- 1,273	- 6,470	+ 26,157	- 11,114	- 1,738	+ 71,558	+ 1,464	+ 11,227
2014 Q1	+	48,137	+ 52,292	+ 168	- 6,298	+ 17,061	- 14,918	+ 2,142	+ 60,264	- 565	+ 9,985
Q2	+	44,982	+ 54,295	- 2,031	- 7,242	+ 4,641	- 6,712	+ 519	+ 55,960	- 610	+ 10,458
Q3	+	54,257	+ 60,313	- 2,818	- 15,461	+ 17,223	- 7,818	+ 367	+ 59,283	+ 332	+ 4,659
Q4	+	65,503	+ 59,599	- 3,058	- 6,352	+ 23,462	- 11,206	- 1,890	+ 68,927	- 1,722	+ 5,313
2015 Q1	+	58,227	+ 60,426	- 1,680	- 4,717	+ 18,340	- 15,822	+ 218	+ 30,366	- 21	- 28,079
Q2	+	58,483	+ 69,391	- 2,043	- 5,962	+ 2,107	- 7,052	+ 1,098	+ 72,772	- 465	+ 13,191
Q3	+	66,065	+ 68,045	+ 577	- 13,746	+ 18,393	- 6,628	+ 703	+ 64,091	- 1,455	- 2,678
Q4 r	+	74,434	+ 65,324	- 1,260	- 5,741	+ 24,898	- 10,048	- 2,178	+ 58,620	- 272	- 13,636
2016 Q1	+	65,167	+ 64,909	+ 333	- 5,707	+ 19,425	- 13,460	- 417	+ 22,749	+ 1,228	- 42,001
2013 Nov	+	22,387	+ 20,021	+ 267	- 2,050	+ 6,523	- 2,106	+ 164	+ 25,483	+ 407	+ 2,932
Dec	+	22,942	+ 14,328	- 1,242	+ 1,327	+ 13,414	- 6,126	- 2,406	+ 24,876	+ 1,269	+ 4,340
2014 Jan	+	13,276	+ 15,435	- 945	- 2,527	+ 4,741	- 4,371	+ 1,486	+ 2,235	- 375	- 12,527
Feb	+	13,109	+ 17,038	- 278	- 2,507	+ 5,908	- 7,330	+ 417	+ 22,757	- 898	+ 9,231
Mar	+	21,752	+ 19,819	+ 1,391	- 1,263	+ 6,413	- 3,217	+ 239	+ 35,273	+ 708	+ 13,281
Apr	+	16,501	+ 18,418	- 720	- 1,585	+ 2,911	- 3,243	+ 186	+ 29,516	+ 151	+ 12,830
May	+	12,180	+ 17,917	- 1,675	- 1,948	- 2,726	- 1,063	- 72	+ 9,435	- 631	- 2,673
June	+	16,301	+ 17,960	+ 363	- 3,708	+ 4,456	- 2,406	+ 405	+ 17,008	- 130	+ 302
July	+	20,303	+ 22,747	- 1,684	- 4,991	+ 5,562	- 3,016	- 402	+ 13,449	+ 431	- 6,452
Aug	+	10,707	+ 14,254	- 748	- 6,617	+ 5,430	- 2,359	+ 426	+ 13,062	+ 166	+ 1,930
Sep	+	23,247	+ 23,312	- 385	- 3,853	+ 6,231	- 2,442	+ 343	+ 32,772	- 265	+ 9,181
Oct	+	21,331	+ 22,823	- 1,448	- 4,994	+ 6,058	- 2,556	- 112	+ 15,294	+ 203	- 5,926
Nov	+	18,686	+ 18,095	- 382	- 2,039	+ 6,130	- 3,500	+ 152	+ 22,905	+ 30	+ 4,067
Dec	+	25,486	+ 18,681	- 1,228	+ 681	+ 11,274	- 5,150	- 1,930	+ 30,728	- 1,955	+ 7,172
2015 Jan	+	14,894	+ 15,713	- 1,154	- 1,723	+ 5,103	- 4,199	+ 20	- 3,644	+ 372	- 18,558
Feb	+	16,288	+ 19,585	- 948	- 1,617	+ 5,826	- 7,505	+ 24	+ 11,597	+ 266	- 4,716
Mar	+	27,045	+ 25,129	+ 422	- 1,378	+ 7,411	- 4,117	+ 173	+ 22,413	- 660	- 4,805
Apr	+	21,534	+ 22,552	- 1,240	- 1,444	+ 3,303	- 2,877	+ 348	+ 31,171	- 69	+ 9,288
May	+	11,673	+ 21,472	- 437	- 2,013	- 5,805	- 1,982	+ 557	+ 17,542	- 78	+ 5,312
June	+	25,276	+ 25,366	- 367	- 2,506	+ 4,609	- 2,194	+ 192	+ 24,059	- 318	- 1,409
July	+	25,258	+ 25,485	- 1,024	- 4,466	+ 6,553	- 2,314	+ 462	+ 20,319	- 1,170	- 5,401
Aug	+	14,411	+ 16,856	+ 472	- 5,441	+ 5,735	- 2,739	+ 40	+ 19,461	- 180	+ 5,010
Sep	+	26,396	+ 25,704	+ 1,129	- 3,838	+ 6,106	- 1,575	+ 201	+ 24,311	- 105	- 2,287
Oct r	+	23,219	+ 24,283	+ 23	- 4,785	+ 6,808	- 3,087	- 94	+ 16,509	+ 154	- 6,616
Nov r	+	25,150	+ 22,723	- 378	- 1,963	+ 6,874	- 2,485	+ 163	+ 20,203	- 548	- 5,110
Dec r	+	26,065	+ 18,317	- 905	+ 1,008	+ 11,216	- 4,476	- 2,248	+ 21,908	+ 123	- 1,910
2016 Jan	+	14,160	+ 13,749	- 183	- 2,455	+ 5,140	- 2,275	- 89	- 5,751	- 186	- 19,822
Feb	+	21,114	+ 22,844	- 673	- 1,143	+ 6,932	- 7,518	+ 426	+ 9,125	+ 1,478	- 12,415
Mar	+	29,894	+ 28,316	- 158	- 2,109	+ 7,353	- 3,666	- 754	+ 19,375	- 64	- 9,764
Apr p	+	28,782	+ 27,812	+ 126	- 788	+ 3,494	- 1,737	+ 1,295	+ 42,639	+ 696	+ 12,562

<sup>1</sup> Excluding freight and insurance costs of foreign trade. <sup>2</sup> 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. <sup>3</sup> Including freight and insurance costs of foreign trade. <sup>4</sup> Including net

acquisition/disposal of non-produced non-financial assets. <sup>5</sup> 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

Ländergruppe/Land		2013	2014	2015	2015		2016			
					Nov	Dec	Jan	Feb	Mar	Apr P
All countries <sup>1</sup>	Exports	1,088,025	1,123,746	1,196,378	102,937	91,843	88,596	99,518	107,005	104,257
	Imports	890,393	910,145	948,504	81,954	73,160	75,264	79,350	80,852	78,650
	Balance	+ 197,632	+ 213,601	+ 247,875	+ 20,983	+ 18,683	+ 13,332	+ 20,168	+ 26,153	+ 25,607
I European countries	Exports	743,067	761,914	805,298	70,401	59,817	62,575	68,866	72,525	...
	Imports	625,934	642,738	654,420	56,940	49,926	50,510	55,388	56,274	...
	Balance	+ 117,133	+ 119,176	+ 150,878	+ 13,461	+ 9,890	+ 12,065	+ 13,477	+ 16,251	...
1 EU member states (28)	Exports	618,383	648,446	693,903	60,764	51,522	54,567	59,610	62,680	...
	Imports	509,738	527,117	543,640	47,304	41,742	42,170	46,780	47,382	...
	Balance	+ 108,645	+ 121,329	+ 150,263	+ 13,459	+ 9,779	+ 12,397	+ 12,830	+ 15,298	...
Euro-area (19) countries	Exports	405,220	413,753	435,249	37,893	32,423	34,313	36,955	39,039	...
	Imports	343,487	350,550	357,238	30,750	27,419	27,802	30,516	31,063	...
	Balance	+ 61,732	+ 63,203	+ 78,012	+ 7,142	+ 5,004	+ 6,510	+ 6,439	+ 7,977	...
of which Austria	Exports	56,217	55,807	58,087	5,294	4,317	4,417	4,860	5,239	...
	Imports	36,734	36,218	37,322	3,306	2,714	2,874	3,161	3,388	...
	Balance	+ 19,483	+ 19,590	+ 20,764	+ 1,988	+ 1,604	+ 1,543	+ 1,700	+ 1,850	...
Belgium and Luxembourg	Exports	47,954	47,345	46,579	3,921	3,552	3,711	3,906	4,175	...
	Imports	41,965	42,548	40,119	3,446	2,963	3,230	3,371	3,434	...
	Balance	+ 5,989	+ 4,797	+ 6,460	+ 475	+ 589	+ 480	+ 535	+ 741	...
France	Exports	99,250	100,580	102,989	8,826	7,538	8,359	8,735	9,055	...
	Imports	63,489	66,714	66,993	5,816	5,386	5,150	6,001	5,819	...
	Balance	+ 35,761	+ 33,866	+ 35,997	+ 3,010	+ 2,152	+ 3,210	+ 2,734	+ 3,237	...
Italy	Exports	53,212	54,240	58,080	5,196	4,151	4,709	5,130	5,448	...
	Imports	46,911	48,522	49,067	4,325	3,658	3,792	4,239	4,385	...
	Balance	+ 6,301	+ 5,718	+ 9,012	+ 871	+ 493	+ 917	+ 890	+ 1,063	...
Netherlands	Exports	70,975	72,736	79,487	6,851	6,157	6,118	6,456	6,933	...
	Imports	88,698	87,796	87,962	7,200	6,705	6,803	6,734	7,289	...
	Balance	- 17,723	- 15,060	- 8,475	- 349	- 548	- 685	- 278	- 356	...
Spain	Exports	31,349	34,820	38,781	3,358	2,915	3,075	3,456	3,534	...
	Imports	23,639	24,804	26,487	2,359	2,310	2,084	2,527	2,337	...
	Balance	+ 7,709	+ 10,016	+ 12,295	+ 999	+ 605	+ 991	+ 929	+ 1,197	...
Other EU member states	Exports	213,163	234,693	258,653	22,871	19,099	20,255	22,654	23,641	...
	Imports	166,251	176,567	186,402	16,554	14,323	14,368	16,264	16,320	...
	Balance	+ 46,912	+ 58,126	+ 72,251	+ 6,317	+ 4,776	+ 5,887	+ 6,391	+ 7,321	...
of which United Kingdom	Exports	71,280	79,163	89,283	7,759	6,317	6,947	8,021	7,983	...
	Imports	39,466	38,545	38,240	3,074	2,852	2,741	3,267	2,982	...
	Balance	+ 31,815	+ 40,618	+ 51,043	+ 4,685	+ 3,464	+ 4,205	+ 4,753	+ 5,001	...
2 Other European countries	Exports	124,684	113,468	111,396	9,637	8,295	8,007	9,256	9,845	...
	Imports	116,196	115,621	110,780	9,636	8,184	8,340	8,608	8,891	...
	Balance	+ 8,488	- 2,153	+ 616	+ 1	+ 111	- 332	+ 648	+ 954	...
of which Switzerland	Exports	46,924	46,202	49,298	4,329	3,729	3,850	4,053	4,382	...
	Imports	38,321	39,392	42,707	4,000	3,141	3,309	3,726	3,641	...
	Balance	+ 8,603	+ 6,810	+ 6,590	+ 329	+ 588	+ 541	+ 327	+ 740	...
II Non-European countries	Exports	341,213	358,337	388,703	32,357	32,048	25,891	30,521	34,284	...
	Imports	264,459	267,407	294,006	25,014	23,157	24,682	23,962	24,578	...
	Balance	+ 76,754	+ 90,930	+ 94,696	+ 7,343	+ 8,890	+ 1,209	+ 6,559	+ 9,706	...
1 Africa	Exports	21,803	22,505	24,068	1,800	2,010	1,487	1,866	2,695	...
	Imports	23,108	20,242	18,175	1,371	1,336	1,279	1,212	1,328	...
	Balance	- 1,305	+ 2,263	+ 5,893	+ 428	+ 675	+ 208	+ 654	+ 1,368	...
2 America	Exports	130,427	135,293	157,450	13,019	12,272	10,092	12,428	13,986	...
	Imports	75,023	74,191	84,659	7,381	6,850	6,355	6,712	7,312	...
	Balance	+ 55,404	+ 61,103	+ 72,791	+ 5,637	+ 5,422	+ 3,737	+ 5,715	+ 6,674	...
of which United States	Exports	89,348	95,928	114,024	9,514	8,838	7,475	8,952	10,566	...
	Imports	48,582	49,207	59,388	5,176	4,910	4,464	4,844	5,282	...
	Balance	+ 40,766	+ 46,721	+ 54,636	+ 4,338	+ 3,928	+ 3,011	+ 4,109	+ 5,284	...
3 Asia	Exports	179,038	190,973	196,938	16,695	16,967	13,618	15,454	16,759	...
	Imports	162,960	170,050	188,235	16,045	14,717	16,788	15,818	15,675	...
	Balance	+ 16,077	+ 20,923	+ 8,703	+ 650	+ 2,250	- 3,170	- 364	+ 1,084	...
of which Middle East	Exports	32,754	35,462	39,732	3,614	3,887	2,474	2,850	3,322	...
	Imports	8,921	7,865	7,313	579	571	528	524	458	...
	Balance	+ 23,833	+ 27,598	+ 32,420	+ 3,035	+ 3,315	+ 1,946	+ 2,326	+ 2,864	...
Japan	Exports	17,076	16,910	17,038	1,454	1,370	1,282	1,413	1,556	...
	Imports	19,492	19,007	20,229	1,706	1,647	1,694	1,718	1,938	...
	Balance	- 2,416	- 2,097	- 3,192	- 253	- 278	- 412	- 305	- 383	...
People's Republic of China <sup>2</sup>	Exports	66,912	74,369	71,403	5,921	6,017	5,174	5,914	6,122	...
	Imports	74,544	79,828	91,622	8,257	7,229	8,245	7,753	7,395	...
	Balance	- 7,633	- 5,459	- 20,219	- 2,335	- 1,212	- 3,071	- 1,840	- 1,273	...
New industrial countries and emerging markets of Asia <sup>3</sup>	Exports	45,894	48,476	51,673	4,219	4,108	3,584	3,929	4,305	...
	Imports	36,672	38,782	42,425	3,435	3,246	3,962	3,408	3,495	...
	Balance	+ 9,222	+ 9,695	+ 9,248	+ 785	+ 862	- 378	+ 521	+ 811	...
4 Oceania and polar regions	Exports	9,946	9,566	10,247	844	799	695	773	844	...
	Imports	3,368	2,924	2,937	217	256	260	219	263	...
	Balance	+ 6,578	+ 6,641	+ 7,310	+ 627	+ 543	+ 435	+ 553	+ 581	...

\* 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. Euro-area including Lithuania. <sup>1</sup> Including fuel and other

supplies for ships and aircraft and other data not classifiable by region. <sup>2</sup> Excluding Hong Kong. <sup>3</sup> 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)

		Services							Primary income		
Period	Total	of which						Compensation of employees	Investment income	Other primary income <sup>3</sup>	
		Transport	Travel <sup>1</sup>	Financial services	Charges for the use of intellectual property	Tele-communications, computer and information services	Other business services				Government goods and services <sup>2</sup>
2011	- 32,482	- 8,533	- 33,755	+ 7,812	+ 2,389	+ 857	- 6,787	+ 2,939	+ 3,358	+ 64,718	+ 1,081
2012	- 32,775	- 10,189	- 35,422	+ 8,793	+ 3,030	+ 1,442	- 9,459	+ 3,103	+ 3,155	+ 61,666	+ 1,005
2013	- 43,223	- 12,075	- 37,713	+ 8,123	+ 3,605	- 758	- 5,912	+ 3,078	+ 523	+ 64,008	+ 1,223
2014	- 35,353	- 13,254	- 37,653	+ 7,817	+ 4,274	+ 2,600	- 1,785	+ 3,035	+ 259	+ 61,258	+ 871
2015	- 30,165	- 12,655	- 35,567	+ 10,181	+ 5,118	+ 3,796	- 3,659	+ 3,102	+ 735	+ 63,370	- 366
2014 Q3	- 15,461	- 3,248	- 15,929	+ 2,179	+ 859	+ 232	- 226	+ 744	- 549	+ 18,766	- 994
Q4	- 6,352	- 3,312	- 7,278	+ 2,076	+ 1,130	+ 1,550	- 1,206	+ 705	+ 132	+ 19,643	+ 3,687
2015 Q1	- 4,717	- 2,926	- 5,742	+ 2,319	+ 1,306	+ 278	- 347	+ 904	+ 799	+ 18,598	- 1,057
Q2	- 5,962	- 2,218	- 7,829	+ 2,272	+ 1,093	+ 1,298	- 1,155	+ 830	- 31	+ 3,256	- 1,118
Q3	- 13,746	- 3,352	- 14,388	+ 2,779	+ 847	+ 292	- 594	+ 770	- 445	+ 20,042	- 1,204
Q4	- 5,741	- 4,158	- 7,608	+ 2,811	+ 1,872	+ 1,928	- 1,563	+ 598	+ 411	+ 21,474	+ 3,013
2016 Q1	- 5,707	- 2,439	- 6,421	+ 2,272	+ 1,243	+ 249	- 1,168	+ 840	+ 754	+ 19,316	- 645
2015 June	- 2,506	- 736	- 3,471	+ 649	+ 292	+ 933	- 30	+ 203	- 3	+ 4,981	- 368
July	- 4,466	- 1,130	- 3,787	+ 1,084	+ 149	- 194	- 679	+ 270	- 237	+ 7,147	- 357
Aug	- 5,441	- 883	- 5,963	+ 777	+ 569	+ 75	- 391	+ 268	- 98	+ 6,226	- 393
Sep	- 3,838	- 1,339	- 4,638	+ 918	+ 129	+ 412	+ 476	+ 232	- 110	+ 6,670	- 454
Oct	- 4,785	- 1,409	- 4,464	+ 686	+ 436	+ 197	- 675	+ 235	+ 144	+ 7,076	- 411
Nov	- 1,963	- 1,530	- 1,982	+ 1,044	+ 609	+ 260	- 683	+ 220	+ 139	+ 7,175	- 440
Dec	+ 1,008	- 1,220	- 1,162	+ 1,081	+ 826	+ 1,471	- 205	+ 143	+ 128	+ 7,223	+ 3,864
2016 Jan	- 2,455	- 921	- 1,687	+ 952	+ 184	- 459	- 722	+ 276	+ 258	+ 5,227	- 345
Feb	- 1,143	- 1,039	- 1,723	+ 607	+ 774	+ 165	- 138	+ 290	+ 272	+ 6,590	+ 70
Mar	- 2,109	- 479	- 3,011	+ 714	+ 285	+ 543	- 308	+ 274	+ 224	+ 7,498	- 370
Apr P	- 788	- 490	- 1,215	+ 829	+ 488	+ 69	- 668	+ 309	- 12	+ 3,962	- 455

<sup>1</sup> Since 2001, the sample results of a household survey have been used on the expenditure side. <sup>2</sup> Domestic public authorities' receipts from and expenditure on services, not included elsewhere; including the receipts from foreign military bases.

<sup>3</sup> Includes, inter alia, taxes on leasing, production and imports transferred to the EU as well as subsidies received from the EU.

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

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

		General government				All sectors excluding general government <sup>2</sup>				€ million		
Period	Total	Total	of which		Total	of which			Total	Non-produced non-financial assets	Capital transfers	
			Current international cooperation <sup>1</sup>	Current taxes on income, wealth etc.		Personal transfers between resident and nonresident households <sup>3</sup>	of which Workers' remittances					
2011	- 35,520	- 21,293	- 4,446	+ 6,718	- 14,227	- 2,977	- 2,977	+ 1,642	+ 1,148	+ 494		
2012	- 39,858	- 25,493	- 5,214	+ 5,206	- 14,366	- 2,952	- 2,952	- 413	+ 1,745	- 2,158		
2013	- 43,758	- 29,708	- 5,611	+ 6,177	- 14,050	- 3,250	- 3,229	- 591	+ 1,076	- 1,667		
2014	- 40,653	- 28,169	- 6,076	+ 8,088	- 12,485	- 3,476	- 3,451	+ 1,138	+ 2,782	- 1,643		
2015	- 39,550	- 25,546	- 7,065	+ 9,800	- 14,004	- 3,540	- 3,523	- 159	+ 2,136	- 2,295		
2014 Q3	- 7,818	- 4,601	- 1,196	+ 939	- 3,216	- 870	- 863	+ 367	+ 711	- 344		
Q4	- 11,206	- 8,633	- 1,944	+ 759	- 2,573	- 866	- 863	- 1,890	+ 332	- 2,222		
2015 Q1	- 15,822	- 12,975	- 2,614	+ 1,327	- 2,847	- 885	- 881	+ 218	- 10	+ 228		
Q2	- 7,052	- 1,803	- 1,161	+ 6,278	- 5,249	- 885	- 881	+ 1,098	+ 1,143	- 45		
Q3	- 6,628	- 3,850	- 1,196	+ 1,212	- 2,778	- 885	- 881	+ 703	+ 870	- 167		
Q4	- 10,048	- 6,918	- 2,094	+ 981	- 3,130	- 885	- 881	- 2,178	+ 134	- 2,312		
2016 Q1	- 13,460	- 10,054	- 2,704	+ 1,284	- 3,406	- 1,270	- 1,267	- 417	- 676	+ 259		
2015 June	- 2,194	- 939	- 476	+ 1,415	- 1,254	- 295	- 294	+ 192	+ 281	- 89		
July	- 2,314	- 1,338	- 464	+ 278	- 976	- 295	- 294	+ 462	+ 534	- 72		
Aug	- 2,739	- 1,961	- 441	+ 276	- 778	- 295	- 294	+ 40	+ 294	- 255		
Sep	- 1,575	- 551	- 291	+ 659	- 1,024	- 295	- 294	+ 201	+ 41	+ 160		
Oct	- 3,087	- 2,281	- 394	+ 197	- 806	- 295	- 294	- 94	+ 141	- 235		
Nov	- 2,485	- 1,543	- 722	+ 77	- 941	- 295	- 294	+ 163	+ 274	- 110		
Dec	- 4,476	- 3,094	- 979	+ 707	- 1,383	- 295	- 294	- 2,248	- 281	- 1,966		
2016 Jan	- 2,275	- 1,167	- 1,181	+ 586	- 1,109	- 441	- 440	- 89	+ 2	- 91		
Feb	- 7,518	- 6,258	- 1,079	+ 281	- 1,260	- 441	- 440	+ 426	+ 188	+ 238		
Mar	- 3,666	- 2,629	- 444	+ 416	- 1,038	- 388	- 387	- 754	- 866	+ 112		
Apr P	- 1,737	- 706	- 509	+ 1,216	- 1,031	- 351	- 350	+ 1,295	+ 1,436	- 142		

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

## XII External sector

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

€ million

Item	2013	2014	2015	2015		2016			
				Q3	Q4	Q1	Feb	Mar	Apr P
I Net domestic investment abroad (Increase: +)	+ 60,705	+ 299,954	+ 253,658	+ 81,368	- 53,343	+ 155,981	+ 94,103	+ 12,020	+ 73,485
1 Direct investment	+ 68,688	+ 85,658	+ 98,017	+ 14,089	+ 29,606	+ 30,747	+ 13,616	+ 22,874	+ 2,995
Equity of which	+ 43,586	+ 66,413	+ 69,542	+ 12,265	+ 22,053	+ 22,203	+ 8,037	+ 9,525	+ 4,769
Reinvestment of earnings <sup>1</sup>	+ 17,880	+ 21,373	+ 15,866	+ 1,772	+ 4,442	+ 7,335	+ 2,874	+ 4,013	+ 2,249
Debt instruments	+ 25,103	+ 19,246	+ 28,475	+ 1,824	+ 7,552	+ 8,544	+ 5,580	+ 13,349	- 1,773
2 Portfolio investment	+ 140,366	+ 149,023	+ 124,134	+ 26,451	+ 17,656	+ 47,212	+ 13,389	+ 22,744	+ 20,392
Shares <sup>2</sup>	+ 18,946	+ 12,380	+ 19,737	+ 1,139	+ 7,552	+ 1,314	- 2,165	+ 5,376	- 1,092
Investment fund shares <sup>3</sup>	+ 32,407	+ 41,302	+ 35,495	+ 4,586	+ 4,620	+ 9,724	+ 3,924	+ 3,558	+ 6,170
Long-term debt securities <sup>4</sup>	+ 84,469	+ 95,794	+ 73,923	+ 26,607	+ 6,023	+ 31,209	+ 7,377	+ 16,065	+ 14,231
Short-term debt securities <sup>5</sup>	+ 4,543	- 454	- 5,021	- 5,880	- 539	+ 4,965	+ 4,254	- 2,255	+ 1,082
3. Financial derivatives and employee stock options <sup>6</sup>	+ 23,944	+ 31,769	+ 25,796	+ 2,720	+ 5,492	+ 4,925	+ 3,138	+ 893	+ 2,491
4. Other investment <sup>7</sup>	- 173,131	+ 36,069	+ 7,923	+ 39,563	- 105,825	+ 71,868	+ 62,481	- 34,426	+ 46,911
Monetary financial institutions <sup>8</sup>	+ 56,929	+ 76,305	- 90,287	+ 16,755	- 110,672	+ 11,342	+ 16,609	- 39,927	+ 20,263
Long-term	- 50,777	+ 21,149	- 2,803	+ 2,020	- 15,050	+ 1,948	+ 3,281	- 2,313	+ 710
Short-term	- 6,152	+ 55,156	- 87,484	+ 14,735	- 95,622	+ 9,394	+ 13,328	- 37,614	+ 19,553
Enterprises and households <sup>9</sup>	+ 21,335	- 7,517	- 13,097	- 4,217	- 22,398	+ 30,486	+ 23,379	+ 2,468	+ 14,018
Long-term	+ 7,033	+ 2,091	+ 12,588	+ 5,420	+ 1,260	- 772	- 190	- 873	- 586
Short-term	+ 14,302	- 9,608	- 25,685	- 9,637	- 23,658	+ 31,258	+ 23,569	+ 3,341	+ 14,603
General government	+ 7,982	+ 17,161	- 12,057	+ 2,925	- 1,790	+ 5,061	+ 4,486	- 1,150	- 3,954
Long-term	+ 15,663	- 405	- 7,425	- 803	- 1,202	- 1,367	- 425	- 97	- 153
Short-term	- 7,681	+ 17,566	- 4,632	+ 3,728	- 588	+ 6,428	+ 4,911	- 1,053	- 3,801
Bundesbank	- 145,519	- 49,880	+ 123,364	+ 24,100	+ 29,035	+ 24,980	+ 18,007	+ 4,184	+ 16,584
5. Reserve assets	+ 838	- 2,564	- 2,213	- 1,455	- 272	+ 1,228	+ 1,478	- 64	+ 696
II Net foreign investment in the reporting country (Increase: +)	- 158,179	+ 55,521	+ 27,809	+ 17,278	- 111,963	+ 133,231	+ 84,977	- 7,355	+ 30,846
1 Direct investment	+ 47,079	+ 6,240	+ 41,579	+ 9,022	+ 4,087	+ 26,907	+ 10,636	+ 17,905	+ 5,256
Equity of which	+ 685	+ 23,991	+ 18,498	+ 1,941	+ 1,593	+ 6,492	+ 1,475	+ 981	+ 1,733
Reinvestment of earnings <sup>1</sup>	- 4,538	+ 3,662	+ 5,765	+ 2,287	- 1,378	+ 3,677	+ 1,518	+ 873	+ 1,332
Debt instruments	+ 46,394	- 17,751	+ 23,081	+ 7,081	+ 2,494	+ 20,416	+ 9,161	+ 16,924	+ 3,523
2 Portfolio investment	- 20,184	+ 11,583	- 75,003	- 19,364	- 49,097	+ 6,102	+ 7,616	+ 243	- 25,859
Shares <sup>2</sup> )	+ 4,933	+ 5,137	+ 10,255	- 5,225	+ 4,866	- 2,998	- 2,125	+ 2,354	- 1,701
Investment fund shares <sup>3</sup>	+ 6,069	- 5,154	+ 5,515	+ 3,610	+ 584	- 2,777	- 457	- 1,761	- 1,590
Long-term debt securities <sup>4</sup>	- 8,329	+ 14,785	- 97,980	- 22,953	- 32,606	- 6,427	- 10,348	+ 3,979	- 28,022
Short-term debt securities <sup>5</sup>	- 22,857	- 3,185	+ 7,207	+ 5,204	- 21,941	+ 18,303	+ 20,546	- 4,330	+ 5,455
3. Other investment <sup>7</sup>	- 185,075	+ 37,698	+ 61,232	+ 27,620	- 66,953	+ 100,221	+ 66,726	- 25,503	+ 51,449
Monetary financial institutions <sup>8</sup>	- 158,323	+ 32,495	- 41,434	- 2,169	- 99,753	+ 41,105	+ 15,171	- 39,478	+ 48,169
Long-term	- 16,819	- 14,555	- 19,517	- 60	- 1,753	- 3,913	- 520	- 3,143	- 2,334
Short-term	- 141,504	+ 47,050	- 21,918	- 2,108	- 98,000	+ 45,018	+ 15,690	- 36,335	+ 50,503
Enterprises and households <sup>9</sup>	- 1,957	+ 16,777	+ 18,120	+ 3,985	+ 5,579	+ 39,419	+ 26,136	+ 7,805	- 618
Long-term	- 13,166	- 2,008	+ 15,290	+ 6,976	- 1,038	+ 141	+ 830	- 245	+ 875
Short-term	+ 11,209	+ 18,785	+ 2,829	- 2,991	+ 6,616	+ 39,278	+ 25,306	+ 8,050	- 1,493
General government	- 1,900	- 5,610	- 11,235	- 250	+ 204	+ 5,643	+ 8,026	+ 2,024	- 795
Long-term	+ 8,979	- 931	- 3,654	+ 0	+ 283	- 2,478	+ 240	+ 80	+ 112
Short-term	- 10,878	- 4,680	- 7,582	- 251	- 79	+ 8,121	+ 7,786	+ 1,944	- 907
Bundesbank	- 22,895	- 5,964	+ 95,782	+ 26,054	+ 27,018	+ 14,054	+ 17,393	+ 4,147	+ 4,694
III Net financial account (Net lending: + / net borrowing: -)	+ 218,884	+ 244,434	+ 225,848	+ 64,091	+ 58,620	+ 22,749	+ 9,125	+ 19,375	+ 42,639

<sup>1</sup> Estimate based on data on direct investment stocks abroad and in the Federal Republic of Germany (see Special Statistical Publication 10). <sup>2</sup> Including participation certificates. <sup>3</sup> Including reinvestment of earnings. <sup>4</sup> Up to and including 2012, without accrued interest. Long-term: original maturity of more than one year or unlimited. <sup>5</sup> Short-term: original maturity up to one year. <sup>6</sup> Balance of transactions

arising from options and financial futures contracts as well as employee stock options. <sup>7</sup> Includes in particular loans, trade credits as well as currency and deposits. <sup>8</sup> Excluding Bundesbank. <sup>9</sup> 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 since the beginning of European monetary union °

€ million

End of reporting period	External assets									External-liabilities <sup>3,4</sup>	Net external position (col 1 minus col 10)	
	Total	Reserve assets					Other investment					
		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 <sup>1</sup>	Portfolio investment <sup>2</sup>			
												1
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	–	66,213	37,735
2003	95,394	76,680	36,533	1,540	6,069	32,538	18,259	4,474	454	–	83,296	12,098
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	–	396,623	282,181
2015	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	–	493,509	307,199
2013 Sep	796,646	156,452	107,819	12,920	8,375	27,337	583,320	570,368	56,873	–	404,069	392,577
Oct	785,449	154,486	106,477	12,941	7,981	27,086	574,449	561,497	56,514	–	425,957	359,492
Nov	761,730	148,010	99,631	12,962	7,945	27,473	557,441	544,488	56,278	–	412,241	349,489
Dec	721,741	143,753	94,876	12,837	7,961	28,080	523,153	510,201	54,834	–	401,524	320,217
2014 Jan	716,868	149,930	100,432	13,030	8,080	28,388	512,785	500,357	54,153	–	405,409	311,459
Feb	718,317	152,432	104,678	12,862	7,728	27,165	511,660	499,232	54,225	–	394,012	324,305
Mar	687,557	150,615	102,179	12,866	7,720	27,850	482,503	470,075	54,440	–	382,743	304,814
Apr	692,956	150,048	101,564	13,057	7,893	27,534	490,117	477,688	52,792	–	403,530	289,426
May	680,888	148,949	100,274	13,213	7,912	27,550	479,290	466,862	52,649	–	406,416	274,472
June	678,136	153,017	104,600	13,213	7,582	27,622	474,245	461,817	50,874	–	399,788	278,348
July	660,521	154,885	105,317	13,497	7,665	28,406	455,977	443,548	49,659	–	378,120	282,401
Aug	681,324	156,411	106,079	13,794	7,339	29,199	476,732	464,303	48,181	–	380,001	301,323
Sep	696,802	156,367	104,629	14,113	7,751	29,873	492,348	479,920	48,087	–	386,216	310,586
Oct	681,790	154,133	101,929	14,125	7,628	30,450	481,136	468,708	46,521	–	396,445	285,345
Nov	682,969	155,424	103,245	14,045	7,520	30,615	480,294	467,866	47,250	–	400,850	282,119
Dec	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	–	396,623	282,181
2015 Jan	751,062	176,741	121,607	14,895	6,488	33,751	527,698	515,266	46,623	–	452,230	298,833
Feb	744,552	172,120	116,647	14,956	6,361	34,157	525,795	513,365	44,637	–	444,069	300,483
Mar	767,856	176,922	119,988	15,311	5,944	35,679	544,130	531,701	46,804	–	435,366	332,490
Apr	762,437	171,758	116,812	14,967	5,796	34,184	544,620	532,192	46,058	–	436,617	325,820
May	758,500	173,842	118,141	15,124	5,744	34,833	538,619	526,191	46,039	–	437,079	321,421
June	756,263	168,299	113,838	15,000	5,617	33,844	543,502	531,074	44,461	–	440,233	316,029
July	763,247	163,071	108,872	15,172	4,919	34,107	555,013	542,585	45,162	–	446,157	317,090
Aug	781,286	162,917	110,012	14,934	5,164	32,807	573,712	561,284	44,657	–	443,522	337,764
Sep	774,428	161,922	108,959	14,941	5,191	32,831	567,602	555,174	44,903	–	466,216	308,212
Oct	786,694	166,664	112,836	15,126	5,199	33,503	575,246	562,818	44,784	–	474,882	311,811
Nov	813,320	163,816	108,820	15,475	5,217	34,303	604,946	592,518	44,558	–	491,813	321,506
Dec	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	–	493,509	307,199
2016 Jan	807,971	164,656	111,126	15,055	5,197	33,278	599,427	587,000	43,888	–	482,988	324,983
Feb	839,336	177,917	122,535	15,109	6,899	33,374	617,434	605,006	43,985	–	500,440	338,895
Mar	837,375	171,266	117,844	14,730	6,730	31,962	621,617	609,190	44,491	–	504,187	333,188
Apr	856,266	175,738	121,562	14,793	6,759	32,623	638,201	625,774	42,327	–	508,944	347,323
May	884,887	173,927	118,133	14,970	6,839	33,984	667,972	655,544	42,988	–	519,210	365,677

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

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

## XII External sector

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

€ million

End of year or month	Claims on non-residents						Liabilities vis-à-vis non-residents							
	Total	Balances with foreign banks	Claims on foreign non-banks				Total	Loans from foreign banks	Liabilities vis-à-vis foreign non-banks					
			Total	from financial operations	from trade credits				Total	from financial operations	from trade credits			
					Total	Credit terms granted					Advance payments effected	Total	Credit terms used	Advance payments received
<b>All countries</b>														
2012	740,809	271,964	468,845	294,248	174,597	158,825	15,772	910,837	170,262	740,575	578,391	162,184	94,292	67,892
2013	785,507	281,970	503,537	323,869	179,668	164,454	15,214	936,110	143,112	792,998	630,740	162,258	95,301	66,957
2014	822,028	278,523	543,506	357,855	185,651	170,854	14,797	939,809	150,429	789,379	624,860	164,519	98,104	66,415
2015	852,363	264,278	588,085	395,013	193,072	178,495	14,576	976,497	142,494	834,003	652,968	181,035	108,750	72,285
2015 Nov	886,264	291,045	595,219	400,079	195,140	180,542	14,599	986,732	142,753	843,979	664,312	179,668	105,052	74,615
Dec	852,363	264,278	588,085	395,013	193,072	178,495	14,576	976,497	142,494	834,003	652,968	181,035	108,750	72,285
2016 Jan	846,398	273,154	573,244	388,749	184,495	169,786	14,708	974,421	146,162	828,259	654,534	173,725	100,803	72,922
Feb	874,773	291,586	583,187	393,091	190,095	175,332	14,763	1,009,838	164,012	845,826	667,275	178,551	103,967	74,583
Mar <sup>r</sup>	883,207	287,250	595,957	400,697	195,260	180,437	14,822	1,027,771	165,906	861,865	679,384	182,481	108,046	74,435
Apr	894,396	301,532	592,864	397,874	194,990	179,815	15,175	1,028,702	167,035	861,667	681,689	179,978	105,506	74,472
<b>Industrial countries<sup>1</sup></b>														
2012	653,244	269,560	383,684	265,387	118,297	104,957	13,339	824,118	167,853	656,265	542,976	113,289	79,107	34,181
2013	694,860	278,667	416,194	294,116	122,077	108,620	13,458	849,161	141,744	707,417	593,197	114,219	79,543	34,676
2014	720,924	273,624	447,300	321,894	125,406	112,308	13,098	851,172	149,212	701,960	585,678	116,282	81,103	35,179
2015	747,289	260,378	486,912	354,225	132,687	119,558	13,129	881,625	137,526	744,099	617,932	126,168	89,593	36,575
2015 Nov	779,059	286,827	492,232	358,416	133,815	120,809	13,007	893,328	140,340	752,987	628,778	124,209	86,444	37,766
Dec	747,289	260,378	486,912	354,225	132,687	119,558	13,129	881,625	137,526	744,099	617,932	126,168	89,593	36,575
2016 Jan	743,124	269,139	473,986	347,306	126,680	113,404	13,276	882,924	143,944	738,981	620,048	118,932	82,347	36,585
Feb	770,595	287,714	482,881	351,585	131,297	118,011	13,286	913,388	156,995	756,393	633,157	123,236	85,904	37,332
Mar <sup>r</sup>	778,357	283,324	495,033	359,834	135,199	121,844	13,355	927,197	154,259	772,937	645,563	127,374	89,901	37,474
Apr	787,488	298,017	489,471	355,608	133,863	120,181	13,682	931,397	158,340	773,058	647,702	125,355	87,621	37,734
<b>EU member states<sup>2</sup></b>														
2012	541,602	247,534	294,068	209,426	84,642	74,167	10,474	695,152	156,550	538,602	458,488	80,114	53,607	26,507
2013	586,790	264,116	322,674	235,608	87,066	76,539	10,527	710,428	127,372	583,057	503,394	79,662	53,339	26,323
2014	606,568	258,507	348,061	259,475	88,585	77,975	10,611	712,497	134,943	577,555	496,878	80,677	53,797	26,880
2015	613,734	242,218	371,516	276,868	94,648	84,071	10,577	725,496	127,114	598,383	513,560	84,823	58,469	26,354
2015 Nov	645,536	269,094	376,442	280,124	96,318	85,901	10,416	735,959	130,231	605,727	519,365	86,362	58,889	27,473
Dec	613,734	242,218	371,516	276,868	94,648	84,071	10,577	725,496	127,114	598,383	513,560	84,823	58,469	26,354
2016 Jan	613,335	250,758	362,577	271,602	90,975	80,300	10,675	730,367	134,847	595,520	515,261	80,259	54,071	26,188
Feb	639,193	271,325	367,868	273,949	93,919	83,284	10,635	754,032	148,517	605,515	521,753	83,762	56,972	26,790
Mar <sup>r</sup>	643,718	266,225	377,494	281,292	96,201	85,399	10,803	768,240	145,494	622,746	536,094	86,652	59,707	26,945
Apr	658,801	281,670	377,131	281,636	95,495	84,408	11,087	768,625	147,604	621,020	536,903	84,118	57,052	27,065
<b>of which: Euro-area member states<sup>2</sup></b>														
2012	392,642	188,317	204,325	149,452	54,873	48,975	5,898	572,475	110,053	462,423	408,485	53,937	36,741	17,196
2013	427,049	197,297	229,752	173,609	56,143	49,968	6,175	602,056	101,150	500,906	447,404	53,502	36,670	16,832
2014	449,392	203,069	246,323	189,755	56,568	50,348	6,220	598,660	105,883	492,777	440,290	52,487	35,568	16,919
2015	457,947	195,011	262,936	201,414	61,522	54,913	6,609	589,407	91,735	497,672	444,542	53,130	37,976	15,155
2015 Nov	479,088	213,372	265,716	204,196	61,520	55,037	6,483	606,652	97,176	509,476	454,842	54,634	38,880	15,754
Dec	457,947	195,011	262,936	201,414	61,522	54,913	6,609	589,407	91,735	497,672	444,542	53,130	37,976	15,155
2016 Jan	461,143	200,677	260,466	200,521	59,946	53,194	6,751	598,659	101,003	497,656	446,583	51,072	36,016	15,056
Feb	475,470	214,552	260,918	199,605	61,313	54,582	6,731	612,509	109,540	502,969	449,528	53,441	38,143	15,299
Mar <sup>r</sup>	472,348	204,988	267,360	205,072	62,289	55,497	6,792	620,115	100,578	519,537	464,419	55,118	39,855	15,263
Apr	480,463	210,056	270,407	207,663	62,744	55,743	7,001	624,684	106,117	518,567	465,024	53,542	38,321	15,222
<b>Emerging economies and developing countries<sup>3</sup></b>														
2012	87,552	2,404	85,147	28,858	56,289	53,856	2,432	86,688	2,409	84,279	35,415	48,864	15,181	33,683
2013	90,640	3,303	87,337	29,751	57,586	55,829	1,757	86,946	1,368	85,578	37,543	48,035	15,755	32,280
2014	101,101	4,899	96,202	35,957	60,244	58,546	1,699	88,634	1,217	87,417	39,182	48,235	17,001	31,234
2015	104,086	3,093	100,994	40,788	60,205	58,758	1,448	90,701	997	89,704	34,836	54,868	19,157	35,710
2015 Nov	106,268	3,474	102,795	41,662	61,133	59,541	1,592	92,003	1,012	90,991	35,534	55,458	18,608	36,850
Dec	104,086	3,093	100,994	40,788	60,205	58,758	1,448	90,701	997	89,704	34,836	54,868	19,157	35,710
2016 Jan	102,303	3,206	99,097	41,431	57,666	56,233	1,432	90,088	1,010	89,079	34,286	54,793	18,456	36,336
Feb	103,209	3,062	100,147	41,494	58,653	57,175	1,478	90,274	1,041	89,233	33,918	55,315	18,064	37,251
Mar <sup>r</sup>	103,883	3,114	100,769	40,851	59,917	58,450	1,467	89,814	1,087	88,728	33,621	55,106	18,145	36,961
Apr	105,929	2,701	103,227	42,254	60,973	59,480	1,493	89,710	1,301	88,409	33,787	54,623	17,884	36,738

\* 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. From December 2012 onwards, the results base on an extended survey and a new calculation method. <sup>1</sup> From July 2013 including

Croatia. <sup>2</sup> From January 2011 including Estonia; from January 2014 including Latvia; from January 2015 including Lithuania. <sup>3</sup> All countries that are not regarded as industrial countries. From January 2011 including Bonaire, St.Eustatius, Saba and Curacao and St.Martin (Dutch part); up to June 2013 including Croatia. <sup>r</sup> Corrected.

## XII External sector

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

EUR 1 = currency units ...

Yearly or monthly average	Australia	Canada	China	Denmark	Japan	Norway	Sweden	Switzerland	United Kingdom	United States
	AUD	CAD	CNY <sup>1</sup>	DKK	JPY	NOK	SEK	CHF	GBP	USD
1999	1.6523	1.5840	.	7.4355	121.32	8.3104	8.8075	1.6003	0.65874	1.0658
2000	1.5889	1.3706	<sup>2</sup> 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
2015 June	1.4530	1.3854	6.9587	7.4603	138.74	8.7550	9.2722	1.0455	0.72078	1.1213
July	1.4844	1.4124	6.8269	7.4616	135.68	8.9357	9.3860	1.0492	0.70685	1.0996
Aug	1.5269	1.4637	7.0626	7.4627	137.12	9.1815	9.5155	1.0777	0.71423	1.1139
Sep	1.5900	1.4882	7.1462	7.4610	134.85	9.3075	9.3924	1.0913	0.73129	1.1221
Oct	1.5586	1.4685	7.1346	7.4601	134.84	9.2892	9.3485	1.0882	0.73287	1.1235
Nov	1.5011	1.4248	6.8398	7.4602	131.60	9.2572	9.3133	1.0833	0.70658	1.0736
Dec	1.5009	1.4904	7.0193	7.4612	132.36	9.4642	9.2451	1.0827	0.72595	1.0877
2016 Jan	1.5510	1.5447	7.1393	7.4619	128.32	9.5899	9.2826	1.0941	0.75459	1.0860
Feb	1.5556	1.5317	7.2658	7.4628	127.35	9.5628	9.4105	1.1018	0.77559	1.1093
Mar	1.4823	1.4697	7.2220	7.4569	125.39	9.4300	9.2848	1.0920	0.78020	1.1100
Apr	1.4802	1.4559	7.3461	7.4427	124.29	9.3224	9.2027	1.0930	0.79230	1.1339
May	1.5461	1.4626	7.3864	7.4386	123.21	9.3036	9.2948	1.1059	0.77779	1.1311

\* 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. <sup>1</sup> Up to March 2005, ECB indicative rates. <sup>2</sup> Average from 13 January to 29 December 2000.

### 11 Euro-area member states 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 <sup>1</sup>				EER-38 <sup>2</sup>		Based on the deflators of total sales <sup>3</sup>				Based on consumer price indices			
	Nominal	In real terms based on consumer price indices	In real terms based on the deflators of gross domestic product <sup>3</sup>	In real terms based on unit labour costs of national economy <sup>3</sup>	Nominal	In real terms based on consumer price indices <sup>4</sup>	26 selected industrial countries <sup>5</sup>			37 countries <sup>6</sup>	26 selected industrial countries <sup>5</sup>	37 countries <sup>6</sup>	56 countries <sup>7</sup>	
							Total	Euro-area countries	Non-euro-area countries					
1999	96.3	96.0	96.0	95.9	96.5	95.8	97.8	99.5	95.7	97.5	98.2	98.0	97.7	
2000	87.1	86.5	85.8	84.9	87.9	85.8	91.6	97.3	85.0	90.7	92.9	91.9	90.8	
2001	87.8	87.1	86.4	85.8	90.5	86.9	91.4	96.3	85.8	90.0	92.9	91.4	90.8	
2002	90.1	90.2	89.3	89.2	95.0	90.5	92.1	95.3	88.3	90.5	93.5	91.9	91.7	
2003	100.7	101.2	100.2	100.5	106.9	101.4	95.5	94.4	97.4	94.7	97.1	96.5	96.7	
2004	104.5	105.0	103.0	104.0	111.5	105.1	95.7	93.2	99.7	94.9	98.5	98.0	98.3	
2005	102.9	103.5	100.8	102.1	109.5	102.5	94.5	91.9	98.7	92.8	98.5	96.9	96.6	
2006	102.8	103.5	100.1	100.9	109.4	101.9	93.3	90.2	98.2	91.1	98.6	96.5	95.9	
2007	106.3	106.2	101.9	103.2	112.9	103.9	94.2	89.4	102.1	91.3	100.9	97.9	97.1	
2008	109.4	108.3	103.3	106.4	117.1	105.8	94.4	88.0	105.2	90.4	102.2	97.8	97.1	
2009	110.8	109.0	104.0	111.2	120.0	106.8	94.6	88.8	104.3	90.9	101.8	98.0	97.5	
2010	103.6	101.3	95.6	103.1	111.5	97.9	92.0	88.4	97.6	87.0	98.8	93.6	92.0	
2011	103.3	100.2	93.5	101.8	112.2	97.3	91.6	88.2	97.0	86.2	98.2	92.8	91.4	
2012	97.6	95.0	88.0	95.5	107.0	92.4	89.8	88.2	92.1	83.6	95.9	89.8	88.3	
2013	101.2	98.2	91.1	98.6	111.9	95.6	92.2	88.7	97.9	85.6	98.3	91.6	90.3	
2014	101.8	97.8	91.3	100.2	114.7	96.1	92.9	89.5	98.4	86.3	98.5	91.8	91.0	
2015	92.4	88.4 P	83.4 P	91.2	106.5 P	87.9	90.5	90.6	90.2	83.0	94.7	86.9 P	86.4	
2013 May	100.1	97.2	90.6	97.9	109.7	93.9	92.0	88.6	97.4	85.2	98.1	91.1	89.4	
June	101.1	98.2			111.8	95.7					98.3	91.7	90.4	
July	101.0	98.2			111.8	95.6					98.6	91.7	90.4	
Aug	101.7	98.7	91.1	98.8	113.3	96.7	92.3	88.7	98.0	85.6	98.6	91.9	90.9	
Sep	101.6	98.4			113.2	96.5					98.5	91.7	90.8	
Oct	102.5	99.0			114.1	96.9					98.9	92.1	91.1	
Nov	102.2	98.7	92.2	99.6	114.1	96.7	93.1	89.0	99.7	86.5	98.8	92.1	91.1	
Dec	103.4	99.9			115.7	98.1					99.3	92.7	91.9	
2014 Jan	103.0	99.4			115.8	98.0					99.2	92.5	91.9	
Feb	103.2	99.6	92.9	101.9	116.3	98.3	93.3	89.2	100.1	86.9	99.0	92.6	92.0	
Mar	104.3	100.6			117.5	99.1					99.3	93.1	92.5	
Apr	104.2	100.3			117.0	98.5					99.2	93.1	92.2	
May	103.6	99.5	92.7	101.5	116.1	97.4	93.3	89.5	99.4	87.1	98.8	92.6	91.6	
June	102.7	98.7			115.1	96.6					98.7	92.3	91.2	
July	102.3	98.2			114.7	96.0					98.7	92.2	91.1	
Aug	101.5	97.5	90.6	99.7	114.0	95.4	92.6	89.5	97.5	86.0	98.4	91.8	90.7	
Sep	99.9	95.9			112.3	93.9					98.0	91.0	89.9	
Oct	99.1	94.9			111.8	93.2					97.6	90.4	89.5	
Nov	99.0	94.9	89.1	97.6	111.9	93.3	92.5	89.9	96.5	85.3	97.7	90.3	89.5	
Dec	99.0	94.8			113.1	93.9					97.6	90.2	89.8	
2015 Jan	95.2	91.0			108.9	90.2					95.7	88.2	87.6	
Feb	93.3	89.5	83.8 P	92.1	107.0	88.7	90.6	90.4	90.6	83.0	95.2	87.5	86.9	
Mar	90.6	86.9			103.8	86.0					94.2	86.1	85.3	
Apr	89.7	86.0			102.4	84.7					94.0	85.7	84.6	
May	91.6	87.8 P	82.2 P	90.1	104.7	86.6	90.2	90.5	89.4	82.3	94.6	86.6	85.7	
June	92.3	88.5			106.0	87.6					94.7	86.9	86.2	
July	91.3	87.5			105.1	86.7					94.3	86.3	85.6	
Aug	93.0	89.0 P	83.8 P	91.4	108.1	89.0	90.7	90.6	90.5	83.2	94.9	87.2	87.1	
Sep	93.8	89.6			109.6	90.2					95.1	87.6	87.8	
Oct	93.6	89.6			109.0	89.6					95.1	87.5	87.5	
Nov	91.1	87.1 P	83.9 P	91.0	106.0 P	86.9	90.8	90.9	90.3	83.4	94.1	86.2 P	85.9	
Dec	92.5	88.2			108.0 P	88.4					94.3	86.7 P	86.6	
2016 Jan	93.6	89.1			109.9 P	89.6					94.5	87.1 P	87.3	
Feb	94.7	90.0	...	...	111.3 P	90.9 P	91.2 P	91.1	91.3 P	84.1	94.9	87.5 P	87.8	
Mar	94.1	89.5			110.0 P	89.9					95.0	87.4 P	87.3	
Apr	94.8 P	90.0			110.6 P	90.2					P 95.4	P 87.9 P	87.6	
May	95.1 P	90.2	...	...	111.1 P	90.4	...	...	...	...	P 95.3 P	P 88.0 P	87.8	

\* 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 2015, pp 40-42). 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. <sup>1</sup> 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, Czech Republic, 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. <sup>2</sup> 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. <sup>3</sup> Annual and quarterly averages. <sup>4</sup> 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. <sup>5</sup> 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. <sup>6</sup> Euro-area countries and countries belonging to the EER-19 group. <sup>7</sup> 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 2015 see the index attached to the January 2016 Monthly Report.

### Monthly Report articles

#### July 2015

- Slowdown in growth in the emerging market economies
- Adjustment patterns of enterprises in the German labour market during the Great Recession – selected results of a special survey

#### August 2015

- The current economic situation in Germany

#### September 2015

- Recent developments in loans to euro-area non-financial corporations
- The performance of German credit institutions in 2014

#### October 2015

- German households' saving and investment behaviour in light of the low-interest-rate environment
- Government personnel expenditure: development and outlook

#### November 2015

- The current economic situation in Germany

#### December 2015

- Outlook for the German economy – macro-economic projections for 2016 and 2017
- German enterprises' profitability and financing in 2014
- Deposit protection in Germany

#### January 2016

- The impact of alternative indicators of price competitiveness on real exports of goods and services
- Investment in the euro area
- The supervision of less significant institutions in the Single Supervisory Mechanism

#### February 2016

- The current economic situation in Germany

#### March 2016

- On the weakness of global trade

- German balance of payments in 2015
- Household wealth and finances in Germany: results of the 2014 survey
- The role and effects of the Agreement on Net Financial Assets (ANFA) in the context of implementing monetary policy

#### April 2016

- Stock market valuations – theoretical basics and enhancing the metrics
- The Phillips curve as an instrument for analysing prices and forecasting inflation in Germany

#### May 2016

- The current economic situation in Germany

#### June 2016

- Outlook for the German economy – macro-economic projections for 2016 and 2017 and an outlook for 2018
- The macroeconomic impact of quantitative easing in the euro area
- Structure and dynamics of manufacturing production depth as reflected in the financial statements of German enterprises

## Statistical Supplements to the Monthly Report

- 1 Banking statistics<sup>1, 2</sup>
- 2 Capital market statistics<sup>1, 2</sup>
- 3 Balance of payments statistics<sup>1, 2</sup>
- 4 Seasonally adjusted business statistics<sup>1, 2</sup>
- 5 Exchange rate statistics<sup>2</sup>

## Special Publications

Makro-ökonomisches Mehr-Länder-Modell, November 1996<sup>3</sup>

Europäische Organisationen und Gremien im Bereich von Währung und Wirtschaft, May 1997<sup>3</sup>

Die Zahlungsbilanz der ehemaligen DDR 1975 bis 1989, August 1999<sup>3</sup>

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<sup>3</sup>

Die Europäische Union: Grundlagen und Politikbereiche außerhalb der Wirtschafts- und Währungsunion, April 2005<sup>3</sup>

Die Deutsche Bundesbank – Aufgabenfelder, rechtlicher Rahmen, Geschichte, April 2006<sup>3</sup>

European economic and monetary union, April 2008



## ■ Special Statistical Publications

- 1 Banking statistics guidelines, January 2016<sup>2, 4</sup>
- 2 Bankenstatistik Kundensystematik, January 2016<sup>2, 3</sup>
- 3 Aufbau der bankstatistischen Tabellen, July 2013<sup>2, 3</sup>
- 4 Financial accounts for Germany 2010 to 2015, May 2016<sup>2</sup>
- 5 Hochgerechnete Angaben aus Jahresabschlüssen deutscher Unternehmen von 1997 bis 2013, May 2015<sup>2, 3</sup>
- 6 Verhältniszahlen aus Jahresabschlüssen deutscher Unternehmen von 2012 bis 2013, May 2016<sup>2, 3</sup>
- 7 Notes on the coding list for the balance of payments statistics, September 2013<sup>2</sup>
- 8 The balance of payments statistics of the Federal Republic of Germany, 2nd edition, February 1991<sup>o</sup>
- 9 Securities deposits, August 2005
- 10 Foreign direct investment stock statistics, April 2016<sup>1, 2</sup>
- 11 Balance of payments by region, July 2013
- 12 Technologische Dienstleistungen in der Zahlungsbilanz, June 2011<sup>3</sup>

## ■ Discussion Papers\*

- 09/2016  
 Credit risk interconnectedness: what does the market really know?
- 10/2016  
 The rise of the added worker effect
- 11/2016  
 Traditional banks, shadow banks and the US credit boom – credit origination versus financing
- 12/2016  
 You're banned! The effect of sanctions on German cross-border financial flows
- 13/2016  
 The joint dynamics of sovereign ratings and government bond yields
- 14/2016  
 How central is central counterparty clearing? A deep dive into a European repo market during the crisis
- 15/2016  
 High-frequency trading in the futures market
- 16/2016  
 Interbank intermediation
- 17/2016  
 Asset encumbrance, bank funding and financial fragility
- 18/2016  
 Black Monday, globalization and trading behavior of stock investors

<sup>o</sup> 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<sup>2</sup>

2a Solvency Regulation, December 2006<sup>2</sup>  
Liquidity Regulation, December 2006<sup>2</sup>

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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.