



# Monthly Report December 2023

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### Abbreviations and symbols

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 Data unknown, not to be published or not meaningful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

Discrepancies in the totals are due to rounding.

## Commentaries

### Economic conditions

#### Underlying trends

*German economic output likely to dip again slightly in Q4 2023*

Real gross domestic product (GDP) in Germany is likely to decline again slightly in the fourth quarter of 2023, mainly on account of the slowdown in industry and construction. Both sectors had a weak start to the quarter, with output in October significantly lower than the average over the three months preceding. They continue to suffer from weak demand. Order backlogs are acting as less and less of a buffer. Industrial output is also being depressed by the previous rise in energy prices. Higher financing costs continue to dampen investment, particularly in housing construction. On average across all sectors, firms assessed their business situation averaged over October and November to be somewhat worse still than in the previous quarter, according to the ifo Institute. By contrast, private consumption is likely to be recovering slowly. In October, for example, households increased their spending in the retail sector and on motor vehicles. Their real disposable income is currently improving as wages continue to rise steeply and inflation moderates. The stable labour market is underpinning this development. At the beginning of next year, the German economy is likely to see slight growth again.<sup>1</sup>

#### Industry

*Weak demand continues to weigh on industry*

At the beginning of the current quarter, industry was still in the midst of a weak spell. It continues to navigate a difficult competitive environment and is struggling with the consequences of the probably permanent increase in energy costs in Germany. On top of this, demand remains sluggish and order backlogs are dwindling. This is reflected in industrial output, which after seasonal adjustment was down somewhat in October compared with September,

and was well below the third-quarter level.<sup>2</sup> The decline was broadly based across sectors. For November, the German Association of the Automotive Industry (VDA) reported a stable number of motor vehicles produced. Industry as a whole is seeing the first tentative signs of an imminent recovery in export business. Export expectations as surveyed by the ifo Institute improved again. Business expectations were also somewhat less pessimistic, and production plans at least showed no further deterioration. In October, industrial new orders from the domestic market and abroad fell for another month in succession across all sectors. However, excluding large orders, which fluctuate strongly and also generally do not have a direct impact on output, new orders from abroad have been fairly stable in recent months. In October, they increased slightly on the quarter at a low level. Domestic orders were somewhat down on the quarter, by contrast. This was mainly due to significantly lower new orders for capital goods. The subdued domestic propensity to invest is likely to reflect not only weak industrial activity but also higher financing costs. Greater uncertainty about future fiscal and climate policy following the ruling by the Federal Constitutional Court on the second supplementary budget for 2021 could create additional headwinds.

#### Private consumption and service providers

Private consumption is likely to slowly embark on a recovery path in the current quarter, thus supporting the consumption-related services sector. In the retail sector, price and seasonally adjusted sales in October were significantly

*Private consumption likely to slowly embark on recovery path and support service providers*

<sup>1</sup> For the outlook for the German economy up to 2026, see Deutsche Bundesbank (2023a).

<sup>2</sup> Seasonal adjustment here and in the remainder of this text also includes adjustment for calendar variations, provided they can be verified and quantified.

## Economic conditions in Germany\*

Seasonally and calendar adjusted

Period	Orders received (volume); 2015 = 100			
	Industry			Main construction
	Total	of which:		
Domestic		Foreign		
2023 Q1	101.3	94.7	106.3	102.6
Q2	101.8	96.6	105.7	104.6
Q3	97.9	89.7	104.2	119.5
Aug.	98.3	92.2	103.0	126.7
Sep.	99.0	86.9	108.2	117.5
Oct.	95.3	89.0	100.0	...
Output; 2015 = 100				
Industry				
Period	Total	of which:		Construction
		Intermediate goods	Capital goods	
2023 Q1	97.6	96.9	97.9	114.2
Q2	96.9	95.3	98.0	112.9
Q3	94.9	94.2	95.2	112.5
Aug.	95.6	95.0	95.7	110.9
Sep.	94.0	93.1	95.4	112.6
Oct.	93.5	92.7	94.4	110.1
Foreign trade; € billion				Memo item: Current account balance in € billion
Exports	Imports	Balance		
2023 Q1	398.72	352.14	46.58	59.97
Q2	393.61	343.42	50.18	69.34
Q3	385.91	334.22	51.68	73.89
Aug.	129.80	112.07	17.73	27.74
Sep.	126.61	109.89	16.71	25.26
Oct.	126.47	108.77	17.71	23.59
Labour market				
Period	Employment	Vacancies <sup>1</sup>	Un-employment	Un-employment rate %
	Number in thousands			
2023 Q1	45,876	801	2,524	5.5
Q2	45,963	771	2,586	5.6
Q3	45,973	741	2,634	5.7
Sep.	45,973	733	2,649	5.7
Oct.	45,988	731	2,680	5.8
Nov.	...	729	2,702	5.9
Prices; 2015 = 100				
Period	Import prices	Producer prices of industrial products	Construction prices <sup>2</sup>	Harmonised consumer prices
2023 Q1	132.6	152.8	159.7	124.3
Q2	126.5	149.4	161.0	125.5
Q3	125.2	147.1	161.6	126.5
Sep.	126.7	147.1	.	127.0
Oct.	127.2	147.1	.	126.8
Nov.	...	...	.	126.6

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

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higher on both the month and the quarter. The increase was fairly broad-based across segments. According to ifo Institute surveys, assessments of the current situation in the retail sector have also improved recently, even though they remained largely pessimistic. In the accommodation and food services sector, by contrast, the assessments deteriorated somewhat. In both of these consumption-related services sectors, expectations for the next six months brightened slightly averaged over October and November compared with the previous quarter. Household car purchases also increased, as indicated by data on new passenger car registrations, which are provided by the German Association of the Automotive Industry and available up to November. For most business-related service providers, including wholesale trade, the assessment of the current situation brightened somewhat in November. Overall, the services sector (excluding trade) is likely to remain relatively robust in the current quarter. Averaged over October and November, enterprises assessed their business situation to be the same as in the third quarter, according to the ifo Institute. The S&P Global Purchasing Managers' Index (PMI) for the services sector remained below the average of the previous quarter and also a little below the expansion threshold, but improved slightly in November.

## Labour market

Employment has seen slightly positive developments recently despite the ongoing cyclical weakness. In October, the number of persons in employment increased by a seasonally adjusted 15,000 compared with September, after having stagnated in the summer months. As regards employment subject to social security contributions – for which the Federal Employment Agency's initial estimates reach up to September – additional jobs were filled mainly in human health and social work and in the public sector. Neither of these sectors face cyclical fluctuations in demand, though. Employ-

*Slight employment growth in October, outlook stable*

ment declined significantly in wholesale and retail trade and in temporary agency work, however. The latter often serves as an adjustment reserve in industry. By contrast, the manufacturing and construction sectors were more or less able to retain their core staff. The number of employees affected by short-time work for economic reasons rose again markedly in September after the end of the summer holidays. However, short-time work continues to play a minor role in the economy as a whole. Leading indicators of employment remained stable in November. The ifo employment barometer for trade and industry is showing signs of bottoming out in slightly negative territory, while the outlook for the economy as a whole remains neutral.

*Unemployment distinctly higher in November, too*

Registered unemployment went up in November by a seasonally adjusted 22,000 persons to 2.70 million, having already risen distinctly in October. The unemployment rate climbed to 5.9%. The slight increase in employment was not enough to fully absorb the high number of immigrants – many of whom are refugees – at present. That said, cyclical factors likewise played a role. The number of benefit recipients under the statutory unemployment insurance scheme increased somewhat. Unemployment is set to rise further over the next three months as well according to the unemployment barometer of the Institute for Employment Research.

## Commodity prices

*Energy prices recently much lower*

Commodity prices for energy have come down significantly of late. As this report went to press, a barrel of Brent crude oil cost US\$74, just under 20% less than in October. Concerns about future oil demand had a dampening effect on prices. In addition, fears that the conflict in the Middle East could spread to other regions receded. Market participants also had doubts about whether further production cuts by some OPEC countries and their partners will be fully implemented. European gas and elec-

tricity prices saw a marked drop as well, probably due to stable gas deliveries to Europe, favourable weather conditions overall and well-stocked European gas storage facilities.

## Inflation rate

Prices at the upstream stages of the economy changed only marginally in October. While producer prices remained unchanged on the month in seasonally adjusted terms, import prices rose only slightly by 0.4%. Nevertheless, prices at the upstream stages were significantly lower than their prior-year level overall, but less so than in August and September. Prices of imports were down by 13% on the year, and of domestic industrial products by 11%. This decline is mainly attributable to lower energy prices. Taking the latter out of the equation, import prices fell by 3.5% and industrial producer prices rose by 0.5%.

*No further easing of price pressures at upstream stages recently*

The Harmonised Index of Consumer Prices (HICP) continued to fall in November. At 0.2%, the seasonally adjusted month-on-month decline in prices was just as strong as in October. Energy prices saw another distinct drop, as did services prices. However, the latter was mainly down to volatile travel services. Prices for industrial goods remained unchanged, while food became significantly more expensive again. HICP inflation came down considerably year on year, from 3.0% in October to 2.3% in November.<sup>3</sup> As in previous months, this was partly due to the base effect stemming from the significant inflation one year ago. The core rate (HICP excluding energy and food) also dropped, to 3.5%. (October: 4.2%).

*Inflation continued to cool substantially in November, ...*

Inflation is expected to climb to around 4% again in December, however. This is because of

<sup>3</sup> The annual rate of consumer inflation according to the national consumer price index (CPI) declined from 3.8% to 3.2%. The differences between the national CPI and the HICP rates are mainly due to the lower share of energy in the CPI. Declining energy prices are thus having less of an impact in the CPI.

*... but likely to be higher again in coming months*

the immediate government assistance for gas and district heating payments granted as a one-off in December 2022. Twelve months on, this has given rise to a temporary price-driving base effect. At the beginning of 2024, too, when this base effect is eliminated, inflation will probably be higher than in November. The increase in the carbon price for fossil fuels is likely to be a contributing factor in this. Price pressures in the services sector remain elevated amidst substantial wage growth.

## ■ Public finances<sup>4</sup>

### Statutory health insurance scheme

*Deficit in Q3 2023 after surplus a year earlier*

The statutory health insurance (SHI) scheme (comprising the health insurance institutions and the health fund) posted a deficit of €1½ billion in the third quarter (third quarter of 2022: surplus of €½ billion). The bulk of the deficit was attributable to the health fund. According to current legislation, health insurance institutions and the health fund are required to use reserves this year to limit the increase in average supplementary contribution rates.

*Strong growth in contribution receipts; central government funds for non-recurring burdens down sharply on balance*

SHI scheme revenue remained virtually unchanged on the same quarter of the previous year. Contribution receipts experienced continued strong growth (6%). One percentage point of this is due to the fact that supplementary contribution rates rose by just under 0.2 percentage point on average to 1.5%. However, compared with the same quarter of the previous year, central government spent significantly less on the health fund on balance:

- Central government's special funds to stabilise contributions were reduced significantly (down by €3 billion to €½ billion).
- Owing to the fact that pandemic-related payments have effectively ceased, the refunds of these (just over €2½ billion) were now absent.

- Meanwhile, central government provided additional funds to hospitals to ease the burden of high energy costs (+€1 billion).

SHI scheme expenditure was 2½% higher than in the same quarter of the previous year. Lower special payments from the health fund to service providers had a net dampening effect: while the fund passed on the new energy crisis-related funds for hospitals, larger pandemic-related payments were then no longer made. Meanwhile, health insurance institutions' expenditure on benefits rose sharply (+6%). Spending on hospital treatment, a particularly large expenditure item, grew by 7%. Payments for remedies and therapeutic appliances and for dental treatment increased even more steeply (+11% and +10%, respectively). Growth in outlays for medical treatment and pharmaceuticals, meanwhile, was below average (+1% and +2½%, respectively). This meant that increases were markedly lower than in the past; in the latter case, this was due in part to various expenditure-reducing measures.

*Strong growth in spending on benefits; payments relating to pandemic and energy crisis considerably lower on balance*

The SHI scheme will probably post a marked deficit for 2023 as a whole. While contribution receipts are up sharply on the year, the additional central government funds to stabilise contributions are down considerably, decreasing by just over €11 billion. Moreover, expenditure on benefits is recording strong growth. In the first three quarters, it went up by 5½%. If revenue and expenditure increases continue at a similar pace in the final quarter, the SHI scheme will have a deficit of around €3 billion for the year as a whole. The outturn would thus be considerably less favourable than expected based on the assumptions made by the

*2023 as a whole: deficit in SHI scheme could reach around €3 billion*

<sup>4</sup> In the short commentaries on public finances, the emphasis is on recent outturns. The quarterly editions of the Monthly Report (published in February, May, August and November), meanwhile, contain a comprehensive account of the current state of government finances. For detailed data on budgetary developments and debt, see the statistical section of this report.



group of SHI estimators in autumn 2023 (deficit of €1½ billion).<sup>5</sup>

*2024: larger deficit in health fund due to use of fund reserves*

Based on the assumptions made by the group of SHI estimators in autumn 2023, the SHI scheme is expected to post a significant deficit of €4 billion in 2024. This will be entirely due to health fund expenditure. It will transfer funds of just over €2½ billion from its reserve to the health insurance institutions so that they do not need to raise their supplementary contribution rates more than necessary. Moreover, the health insurance institutions will receive €½ billion from this reserve for improvements in the areas of obstetrics and paediatrics. Finally, the health fund will pay €1 billion from its liquidity reserve to the Innovation and Structural Fund.<sup>6</sup>

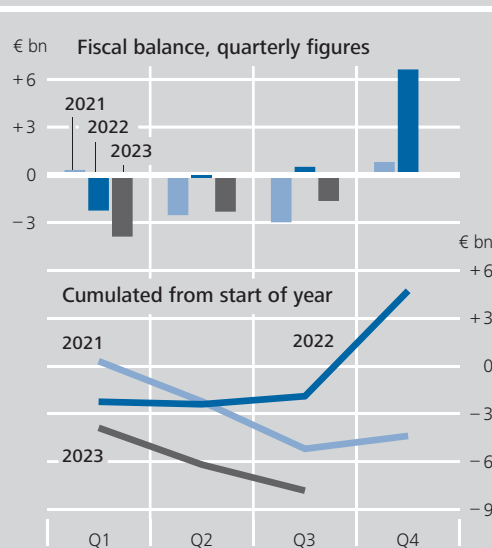
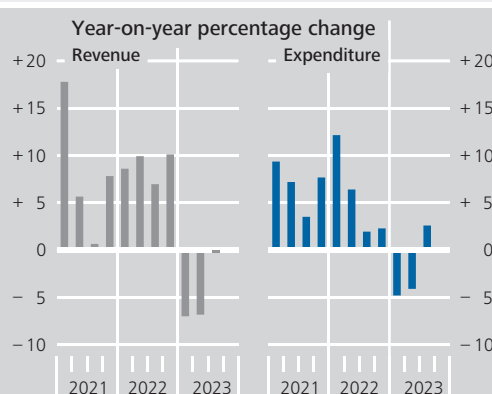
*2024: upward pressure on supplementary contribution rates*

Looking at the health insurance institutions, the group of SHI estimators expects a larger shortfall than in 2023, putting pressure on the supplementary contribution rate. Expenditure will be up by 6% on the projected annual result for 2023. This is likely to be due, amongst other things, to lagged inflationary effects on service charges. Based on the assumptions, contribution-based revenue (excluding supplementary contributions) will increase sharply (+5½%), but not by quite as much as expenditure. In addition, reduced funds from central government and from the reserves of the health fund and the health insurance institutions will cause the shortfall to expand further. Accordingly, the Federal Ministry of Health raised the calculated supplementary contribution rate to 1.7% for 2024; at present, the actual rate charged by the health insurance institutions is 1.5% on average.

*Use reserves to limit increase in supplementary contribution rates*

The health insurance institutions set their supplementary contribution rates individually. In doing so, they take into account their own financial situation, including any reserves. If they make use of these, it results in a deficit. It would be advisable for health insurance institutions with more sizeable reserves to use these first in order to limit an increase in their supplementary contribution rates.

### Finances of the statutory health insurance scheme\*



Source: Federal Ministry of Health. \* Health fund and health insurance institutions (consolidated). Preliminary quarterly figures. The final annual figures differ from the total of the reported quarterly figures as the latter are not revised.  
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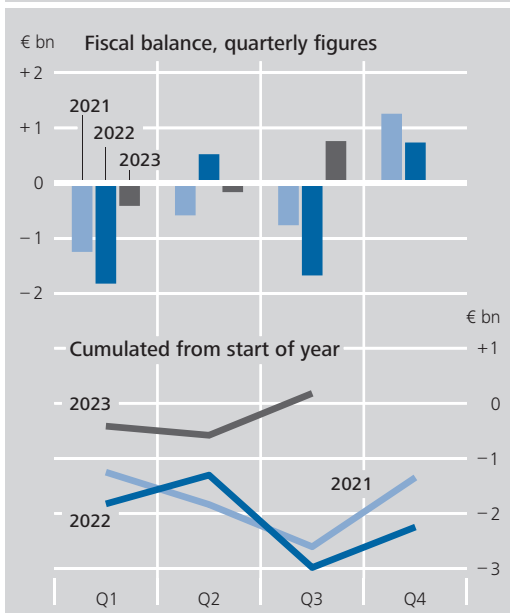
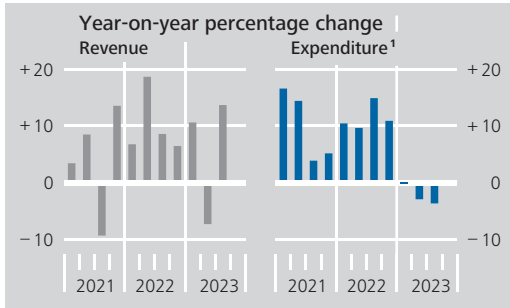
## Public long-term care insurance scheme

The public long-term care insurance scheme posted a surplus of almost €1 billion in the

<sup>5</sup> In autumn 2022, the group of SHI estimators had expected a significantly larger deficit for 2023 (almost €8 billion). However, 2022 closed much more favourably. In addition, revenue growth is significantly stronger than had been assumed at that time.

<sup>6</sup> The group of SHI estimators does not take account of the transfers to the Innovation and Structural Fund in the balance.

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



Source: Federal Ministry of Health. \* Preliminary quarterly figures. The final annual figures differ from the total of the reported quarterly figures as the latter are not revised. <sup>1</sup> Including transfers to the long-term care provident fund. The transfer to the long-term care provident fund (almost 3% of expenditure) has been deferred in 2023.  
 Deutsche Bundesbank

The long-term care insurance scheme's regular expenditure on benefits (excluding pandemic-related payments) continued to rise sharply, climbing by 10%. This increase is much stronger than that of the contribution base. Expenditure on inpatient care, in particular, saw continued strong growth (+11%). Cash benefits also expanded sharply (+9%), with benefit rates unchanged. By contrast, pandemic-related payments were now absent (-€1½ billion). In addition, transfers to the long-term care provident fund have been deferred to 2024 (-€½ billion). Overall, expenditure thus fell by 3½%.

*Regular expenditure on benefits up by much more than contribution base*

A marked surplus is on the cards for 2023 as a whole, following a deficit of just over €2 billion in the previous year. The long-term care insurance scheme had already recorded a small surplus after the first three quarters, and the relief provided by the increase in the contribution rate and the deferred transfer to the long-term care provident fund will continue into the final quarter. The fourth quarter usually closes out the most favourably because special payments boost the contribution base.

*2023 as a whole: significant surplus on the cards*

A surplus on the same scale as in 2023 could be recorded again next year. Core expenditure is likely to see further strong growth, due in part to benefit expansions and adjustments. In addition, the long-term care insurance scheme will catch up on the transfers to the long-term care provident fund from 2023. However, revenue will also rise sharply on account of the higher contribution rates: revenue is expected to be up by just over €3 billion on 2023. Ac-

*2024: higher expenditure on benefits and larger transfers to long-term care provident fund*

*Surplus in Q3 due to higher contribution rates and non-recurring expenditure effects*

third quarter of 2023.<sup>7</sup> This constituted a year-on-year improvement of €2½ billion. Relief was provided by two main factors. At mid-year, the contribution rate rose by 0.35 percentage point to 3.4%.<sup>8</sup> This generated additional revenue of €1½ billion. Furthermore, coronavirus-related expenditure was now largely absent (-€1½ billion).

*Contribution base up sharply*

Total receipts went up by 14%. Contribution receipts increased at a somewhat faster pace. Adjusted for the higher contribution rate, receipts were up by around 5%. Last year's special grants from central government were now largely absent (-€½ billion).

<sup>7</sup> This refers to the core area, i.e. excluding the long-term care provident fund. In most years since 2015, this fund has received transfers from the core area corresponding to receipts of 0.1 percentage point of the contribution rate applicable in that year. Assets accumulated in this way are to be depleted in the 2030s to dampen the expected rise in the contribution rate.

<sup>8</sup> This contribution rate now applies to persons subject to contributions who have one child. There is a higher contribution rate for childless persons, which was raised more sharply, to 4%. The contribution rate for insured persons with a particularly large number of children (five or more children under the age of 25) was lowered to 2.4%. For more information on this and other elements of the legislative amendment, see Deutsche Bundesbank (2023b).

According to current plans, the regular transfer to the long-term care provident fund will be reduced by €1 billion and, in return, the annual central government grant of €1 billion will be cancelled.

*Growing financing pressure – reform proposals announced*

The further dynamic adjustment of benefits and, increasingly, demographic developments will put pressure on the long-term care insurance scheme's finances in the years to come. If constantly rising contribution rates are to be prevented, comprehensive reform will be needed. The Federal Ministry of Health intends to present proposals on this matter by the end of May 2024.

## ■ Securities markets

### Bond market

*Net redemptions in the German bond market in October 2023*

At €129.2 billion, gross issuance in the German bond market in October 2023 was down markedly on the previous month (€150.4 billion). After deducting redemptions, which were somewhat higher than in September, and taking account of changes in issuers' holdings of their own debt securities, net redemptions of domestic debt securities came to €20.3 billion. The outstanding volume of foreign debt securities in Germany declined by €3.2 billion during the reporting month, which meant that the outstanding volume of debt instruments in the German market decreased by €23.5 billion overall.

*Fall in enterprises' capital market debt*

In October, domestic enterprises redeemed bonds worth a net €11.3 billion, following net issuance amounting to €6.5 billion in the previous month. Overall, this was almost entirely attributable to other financial institutions, which on balance solely redeemed bonds with maturities of up to one year.

*Net public sector redemptions*

During the reporting month, the public sector pared back its capital market debt by €10.1 billion net (following net issuance of €16.9 billion in September). On balance, central government

### Sales and purchases of debt securities

€ billion

Item	2022	2023	
	Oct.	Sep.	Oct.
Sales of domestic debt securities <sup>1</sup>	- 3.9	16.3	- 20.3
of which:			
Bank debt securities	- 6.1	- 7.1	1.0
Public debt securities	4.8	16.9	- 10.1
Foreign debt securities <sup>2</sup>	2.3	0.3	- 3.2
Purchases			
Residents	17.8	- 5.4	- 15.2
Credit institutions <sup>3</sup>	4.3	- 8.0	- 4.9
Deutsche Bundesbank	3.6	- 11.3	- 6.8
Other sectors <sup>4</sup>	9.9	13.9	- 3.6
of which:			
Domestic debt securities	7.8	10.9	- 6.5
Non-residents <sup>2</sup>	- 19.4	22.0	- 8.3
Total sales/purchases	- 1.6	16.6	- 23.5

<sup>1</sup> Net sales at market values adjusted for 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.  
 Deutsche Bundesbank

principally redeemed five-year Federal notes (Bobls; -€13.3 billion) and Treasury discount paper (Bubills; -€6.3 billion). This contrasted with net issuance of two-year Federal Treasury notes (Schätze; €4.6 billion) and 10-year Federal bonds (Bunds; €4.1 billion). State and local governments issued bonds worth €0.4 billion net.

Domestic credit institutions raised their capital market debt by €1.0 billion in the reporting month, following net redemptions of €7.1 billion in the previous month. In this context, the outstanding volume of other bank debt securities that can be structured flexibly and public Pfandbriefe increased by €2.5 billion and €1.9 billion, respectively. By contrast, mortgage Pfandbriefe and debt securities issued by specialised credit institutions, which include public promotional banks, were redeemed in net terms for €2.0 billion and €1.4 billion respectively.

*Net issuance by credit institutions*

*Purchases of  
debt securities*

On the buyers' side, all categories of buyer off-loaded bonds on balance in the reporting month. Non-resident investors trimmed their holdings of domestic bonds by €8.3 billion net. Holdings of bonds in the Bundesbank's portfolio decreased by €6.8 billion net, mainly due to maturing bonds under the Eurosystem's purchase programmes. Domestic credit institutions scaled back their bond portfolios by €4.9 billion, primarily by selling foreign securities. Domestic non-banks sold debt securities for €3.6 billion in net terms. On balance, this solely involved domestic paper.

## Equity market

*Negligible net  
issuance of  
German equities*

In October, domestic enterprises placed only small quantities of new shares in the German equity market (€0.6 billion, following €0.7 billion in the previous month). The volume of foreign equities in the German market fell by €0.6 billion during the same period. Domestic non-banks were the sole net buyers of shares (€2.4 billion). On balance, non-resident investors and domestic banks sold shares for €2.4 billion and €0.1 billion respectively.

## Mutual funds

*Mutual funds  
record outflows  
of funds*

Domestic mutual funds recorded net outflows of €2.4 billion in October (previous month: inflows of €2.1 billion). This affected retail funds and specialised funds reserved for institutional investors in almost equal measure. Among the fund providers, the main redeemers of fund units were mixed securities funds (-€1.7 billion), followed to a lesser extent by equity funds (-€0.6 billion) and funds of funds (-€0.5 billion). The outstanding volume of foreign mutual fund shares distributed in Germany increased by €0.7 billion in October. Domestic credit institutions were virtually the only buyers of mutual fund shares on balance (€0.8 billion). Foreign investors purchased German mutual fund shares worth a net €0.1 billion, while domestic

non-banks scaled back their investment in funds by €2.6 billion on balance.

## German balance of payments in October 2023

Germany's current account recorded a surplus of €21.4 billion in October 2023, down €6.6 billion on the previous month's level. The surplus in the goods account increased slightly, but this was significantly outweighed by the fact that the balance in invisible current transactions, which comprise services as well as primary and secondary income, moved into negative territory.

*Current account  
surplus down*

In October, the surplus in the goods account grew by €0.6 billion to €23.1 billion because receipts outpaced expenditure.

*Trade surplus up  
slightly*

Invisible current transactions shifted from a surplus of €5.5 billion in September into a deficit of €1.7 billion, a contributing factor being the expansion of the deficit in the services account by €3.0 billion to €9.2 billion. This was mainly due to a rise in spending, primarily owing to higher expenditure on travel as well as on charges for the use of intellectual property. In addition, the declines recorded in several items dominated the revenue side overall. Moreover, the deficit in the secondary income account expanded by €2.2 billion to €6.3 billion. Receipts fell, with declining government revenue from current taxes on income and wealth making a contribution. In addition, expenditure grew, with higher general government expenditure on current transfers relating to international cooperation playing a prominent role. Furthermore, net receipts in primary income contracted by €2.0 billion to €13.8 billion. This figure was likewise dampened by lower revenues, mainly as a result of residents' reduced receipts from direct investment, and higher expenditure, primarily owing to higher payments of other investment income to non-residents.

*Invisible current  
transactions  
show deficit  
owing to lower  
balances in the  
three sub-  
accounts*

*Portfolio investment sees net capital exports*

In October, international financial markets were influenced by the conflict in the Middle East; on balance, however, differences in the economic outlook in the United States and Europe had the largest impact on German capital flows. Germany's cross-border portfolio investment recorded net capital exports of €7.9 billion, after net capital imports of €23.0 billion in September. The crucial factor here was that foreign investors reduced their holdings of German securities more sharply than German investors scaled back their holdings of foreign paper. Foreign investors sold German instruments to the tune of €10.9 billion net. In particular, they reduced their holdings of German money market paper (€17.3 billion), but added bonds to their portfolios (€9.0 billion). They also parted with shares issued in Germany (€2.7 billion), but left their holdings of mutual fund shares virtually unchanged on balance (+€0.1 billion). Domestic investors offloaded foreign securities in the amount of €3.0 billion in October. In particular, they reduced the volume of foreign bonds in their portfolios (€3.3 billion), but barely adjusted their holdings of money market paper overall (+€0.1 billion). Domestic investors also sold foreign shares (€0.6 billion), but acquired additional mutual fund shares (€0.7 billion).

In October, transactions in financial derivatives resulted in net outflows of €11.7 billion (following outflows of €1.5 billion in September).

*Net capital exports in direct investment*

Direct investment generated net capital exports of €2.7 billion in October (following net capital exports of €19.3 billion in September). Enterprises domiciled in Germany invested €12.0 billion abroad in October. They provided affiliated enterprises abroad with €7.9 billion via intra-group credit transactions, mainly in the form of trade credits. They boosted their equity capital by €4.1 billion. Conversely, foreign enterprises invested €9.3 billion in their affiliates in Germany, providing funds primarily through intra-group lending (€7.1 billion). They stepped up their equity capital in enterprises in Germany by €2.1 billion.

**Major items of the balance of payments**

€ billion			
Item	2022		2023
	Oct.	Sep.	Oct.P
I. Current account	+ 9.6	+ 28.0	+ 21.4
1. Goods	+ 7.3	+ 22.5	+ 23.1
Receipts	135.0	129.6	132.6
Expenditure	127.7	107.1	109.6
Memo item:			
Foreign trade <sup>1</sup>	+ 6.1	+ 19.2	+ 18.1
Exports	137.7	129.3	130.8
Imports	131.6	110.1	112.7
2. Services	- 5.3	- 6.2	- 9.2
Receipts	34.2	33.8	33.2
Expenditure	39.5	40.0	42.4
3. Primary income	+ 13.1	+ 15.8	+ 13.8
Receipts	23.9	30.7	29.5
Expenditure	10.8	14.9	15.6
4. Secondary income	- 5.4	- 4.1	- 6.3
II. Capital account	- 2.2	+ 1.5	- 4.2
III. Financial account			
(increase: +)	+ 45.0	+ 22.2	+ 24.3
1. Direct investment	+ 14.0	+ 19.3	+ 2.7
Domestic investment			
abroad	+ 14.1	+ 22.0	+ 12.0
Foreign investment			
in the reporting country	+ 0.2	+ 2.7	+ 9.3
2. Portfolio investment	+ 20.2	- 23.0	+ 7.9
Domestic investment			
in foreign securities	+ 2.4	- 2.9	- 3.0
Shares <sup>2</sup>	- 2.3	- 6.8	- 0.6
Investment fund shares <sup>3</sup>	+ 2.4	+ 3.6	+ 0.7
Short-term debt securities <sup>4</sup>	+ 0.4	- 0.0	+ 0.1
Long-term debt securities <sup>5</sup>	+ 1.9	+ 0.3	- 3.3
Foreign investment			
in domestic securities	- 17.8	+ 20.1	- 10.9
Shares <sup>2</sup>	+ 2.4	- 1.1	- 2.7
Investment fund shares	- 0.9	- 0.8	+ 0.1
Short-term debt securities <sup>4</sup>	- 17.5	- 8.5	- 17.3
Long-term debt securities <sup>5</sup>	- 2.0	+ 30.5	+ 9.0
3. Financial derivatives <sup>6</sup>	+ 5.2	+ 1.5	+ 11.7
4. Other investment <sup>7</sup>	+ 4.9	+ 25.0	+ 1.2
Monetary financial institutions <sup>8</sup>			
of which:			
Short-term	- 0.6	+ 31.6	- 26.8
Enterprises and households <sup>9</sup>	+ 26.1	+ 38.0	- 9.7
General government	+ 2.9	- 2.6	- 3.1
Bundesbank	- 20.0	- 36.1	+ 35.0
5. Reserve assets	+ 0.7	- 0.6	+ 0.9
IV. Errors and omissions <sup>10</sup>	37.5	- 7.3	+ 7.1

<sup>1</sup> Special trade according to the official foreign trade statistics (source: Federal Statistical Office). <sup>2</sup> Including participation certificates. <sup>3</sup> Including reinvestment of earnings. <sup>4</sup> Short-term: original maturity of up to one year. <sup>5</sup> Long-term: original maturity of more than one year or unlimited. <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 and trade credits as well as currency and deposits. <sup>8</sup> Excluding the 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. <sup>10</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.

*Other investment also sees net capital exports*

Other statistically recorded investment – which comprises loans and trade credits (where these do not constitute direct investment), bank deposits and other investments – registered net outflows of capital amounting to €1.2 billion in October (following €25.0 billion in September). The Bundesbank's net claims on non-residents went up by €35.0 billion. A decline in the Bundesbank's liabilities owing to lower deposits from foreign counterparties and a €10.9 billion

increase in TARGET claims on the ECB contributed to this. In October, transactions in the other sectors resulted in net inflows of funds amounting to €21.0 billion for monetary financial institutions excluding the Bundesbank, €3.1 billion for government and €9.7 billion for enterprises and individuals.

The Bundesbank's reserve assets rose – at *Reserve assets* transaction values – by €0.9 billion in October.

## ■ List of references

Deutsche Bundesbank (2023a), Falling inflation, but not yet time to sound the all-clear – outlook for the German economy up to 2026, Monthly Report, December 2023, pp. 15 ff.

Deutsche Bundesbank (2023b), Public finances, Monthly Report, March 2023, pp. 12 f.



## Falling inflation, but not yet time to sound the all-clear – outlook for the German economy up to 2026

*The German economy will recover in the coming years, albeit with a time lag. At present, the main factors still slowing growth are weak foreign demand in industry, hesitant private consumption, and higher financing costs for investment brought about by monetary policy tightening. As from the beginning of 2024, though, the German economy is likely to return to an expansion path and gradually pick up speed. Exports will increase on the back of expanding foreign sales markets, and households will increase their consumption expenditure as their real incomes rise significantly thanks to a stable labour market, strong wage growth and falling inflation. On the other hand, private investment will initially continue to decline, not providing moderate stimulus again until 2026.*

*The current projection assumes that calendar-adjusted real gross domestic product (GDP) will increase by 0.4% in 2024 following a slight contraction of 0.1% this year. In 2025 and 2026, the economy will grow by 1.2% and 1.3%, respectively. Compared with the June projection, the GDP rate has been lowered significantly for 2024 and slightly for 2025. Key factors are weaker foreign demand, slower growth in consumption and tighter financing conditions.*

*Inflation in Germany is on the decline, but it is still too early to sound the general all-clear. As measured by the Harmonised Index of Consumer Prices (HICP), inflation is likely to come down to an annual average of 6.1% this year before dropping to 2.7%, less than one-half of the current figure, in 2024. Energy price inflation will decline sharply and food price inflation will also go down considerably. It is only this year that core inflation (excluding energy and food) will peak at 5.1%. It, too, will fall significantly to 3.0% next year. Supply bottlenecks will then no longer be such a major problem and profit margins will normalise. Monetary policy tightening is increasingly taking effect. From 2025 onwards, the strong wage growth will decline more markedly, although it will remain high. This will see the core rate gradually continue to fall to 2.3% in 2026. The headline rate will diminish to 2.2%, which is nonetheless still high. Compared with the June projection, the inflation rate was revised downwards noticeably for 2024 and slightly for 2025.*

*Public finances will benefit from temporary support measures gradually expiring. This will have a greater impact than rising expenditure in areas such as defence and pensions. The deficit ratio will therefore fall to 2% in 2023 and 1.3% in 2024. It will remain unchanged in the subsequent years. The debt ratio will decline, approaching 60% again in 2026. Following the Federal Constitutional Court's ruling on the debt brake, the fiscal policy stance and its impact on the economy are still uncertain, especially from 2025 onwards.*

*Beyond this, there are other risks owing, in particular, to geopolitical conflicts. Tighter monetary policy has reduced, but not yet eliminated, the risk of a more persistent inflation process. Overall, risks to economic growth currently remain tilted to the downside, and those to inflation to the upside.*

*German economy not yet on recovery path in Q2 and Q3 2023*

## Economic outlook<sup>1</sup>

After rising slightly in the second quarter, seasonally adjusted real GDP fell again by the same amount in the third quarter.<sup>2</sup> The German economy thus merely stagnated in the 2023 summer half-year. By contrast, the June projection had anticipated a continuous expansion that would gradually intensify.<sup>3</sup> One reason why the recovery initially failed to materialise was the unexpectedly weak foreign demand in industry, which dampened production and exports. Moreover, households were more hesitant than expected when it came to discretionary spending. Although their real disposable

income actually rose somewhat more strongly in the summer half-year than assumed in June, they merely kept their consumption stable. This increased their saving ratio. Enterprises, meanwhile, expanded their investment moderately in line with the June projection. Housing investment declined, albeit less sharply than predicted. The construction sector performed surprisingly well overall. Order books were still fairly well filled; this probably bolstered production more strongly than expected.

Economic output is likely to fall again slightly in the current quarter, as suggested by the depressed survey indicators. According to the ifo Institute, enterprises' assessment of their business situation was somewhat more negative averaged over October and November than in the third quarter. The S&P Global Purchasing Managers' Index was in contractionary territory. The industrial sector, in particular, will probably scale back its production further. It continues to suffer from subdued demand and high energy costs. Both these factors are also a drag on exports. Furthermore, weak industrial activity is clouding the outlook for business investment, which is additionally being dampened by higher financing costs and possibly also by increased uncertainty surrounding government subsidies in the area of transition and climate change mitigation measures. Higher interest rates are having an even stronger impact on housing construction. The construction industry will probably have to continue adjusting its output to the depressed level of new orders. At all events, households are benefiting from further gains in purchasing power and a stable labour market. They will probably step up their consumption again slightly.

*Economic output likely to fall slightly in current quarter*

### December 2023 projection

Year-on-year percentage change

Item	2023	2024	2025	2026
Real GDP, calendar adjusted	-0.1	0.4	1.2	1.3
Real GDP, unadjusted	-0.3	0.3	1.1	1.6
Harmonised Index of Consumer Prices	6.1	2.7	2.5	2.2
Excluding energy and food	5.1	3.0	2.6	2.3

Source: Federal Statistical Office (up to Q3 2023). Annual figures for 2023 to 2026 are Bundesbank projections.  
 Deutsche Bundesbank

### Business situation and expectations in the economy as a whole

Balances, seasonally and calendar adjusted



Source: ifo Institute.  
 Deutsche Bundesbank

<sup>1</sup> This projection for Germany was finalised on 30 November 2023. It was incorporated into the projections for the euro area published by the European Central Bank (ECB) on 14 December 2023.

<sup>2</sup> Seasonal adjustment here and in the remainder of this text also includes adjustment for calendar variations, provided they can be verified and quantified.

<sup>3</sup> See Deutsche Bundesbank (2023a).



*First signs of tentative improvement from Q1 2024*

At the beginning of 2024, the German economy is likely to return to an expansion path given that there are initial signs of a slight improvement. Business expectations as surveyed by the ifo Institute brightened somewhat in October and November. Sentiment in trade and manufacturing, in particular, was less pessimistic. In the industrial sector, foreign demand may have bottomed out. Export expectations have risen of late. Moreover, households' income situation should continue to improve. The labour market remains robust, wages are rising sharply and inflation is easing slightly. Private consumption is therefore likely to pick up somewhat more strongly in the first quarter.

*Growth will pick up over 2024, continuing to accelerate slightly until 2026*

The projection sees growth gradually picking up over the course of 2024. It will continue at a slightly accelerated pace over the following two years. The economic recovery is based on two key pillars. First, exports are rising on the back of burgeoning demand in German exporters' sales markets. Second, households are expanding their consumption expenditure as real incomes rise. Moreover, the saving ratio is gradually receding, which is providing consumption with an additional boost. By contrast, housing and business investment will decline in 2024 and will not provide any stimulus in 2025, either. It is not until 2026 that they will increase moderately again.

*Compared with the June projection, GDP rate for 2024 revised downwards, in particular*

On the whole, the German economy is therefore slowly emerging from the bout of weakness since the outbreak of the Russian war of aggression against Ukraine. Calendar-adjusted real GDP will increase by 0.4% in 2024 following a slight contraction of 0.1% this year. In 2025 and 2026, German economic output will then expand more sharply, at rates of 1.2% and 1.3%, respectively.<sup>4</sup> The recovery will thus take place roughly three quarters later than anticipated in the June projection. Nevertheless, the GDP rate for 2023 will turn out to be slightly higher since the results for the fourth quarter of 2022 and the first quarter of 2023 have been revised upward. This more than compensates for the weaker second half of 2023.

### Technical components of the GDP growth projection

% or percentage points

Item	2023	2024	2025	2026
Statistical carry-over at the end of the previous year <sup>1</sup>	-0.2	-0.1	0.4	0.5
Fourth-quarter rate <sup>2</sup>	-0.1	0.9	1.3	1.3
Average annual GDP growth rate, calendar adjusted	-0.1	0.4	1.2	1.3
Calendar effect <sup>3</sup>	-0.2	0.0	-0.1	0.3
Average annual GDP growth rate <sup>4</sup>	-0.3	0.3	1.1	1.6

Source: Federal Statistical Office (up to Q3 2023). Annual figures for 2023 to 2026 are Bundesbank projections. **1** 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. **2** Annual rate of change in the fourth quarter, seasonally and calendar adjusted. **3** As a percentage of GDP. **4** Discrepancies in the totals are due to rounding.

Deutsche Bundesbank

### Revisions since the June 2023 projection

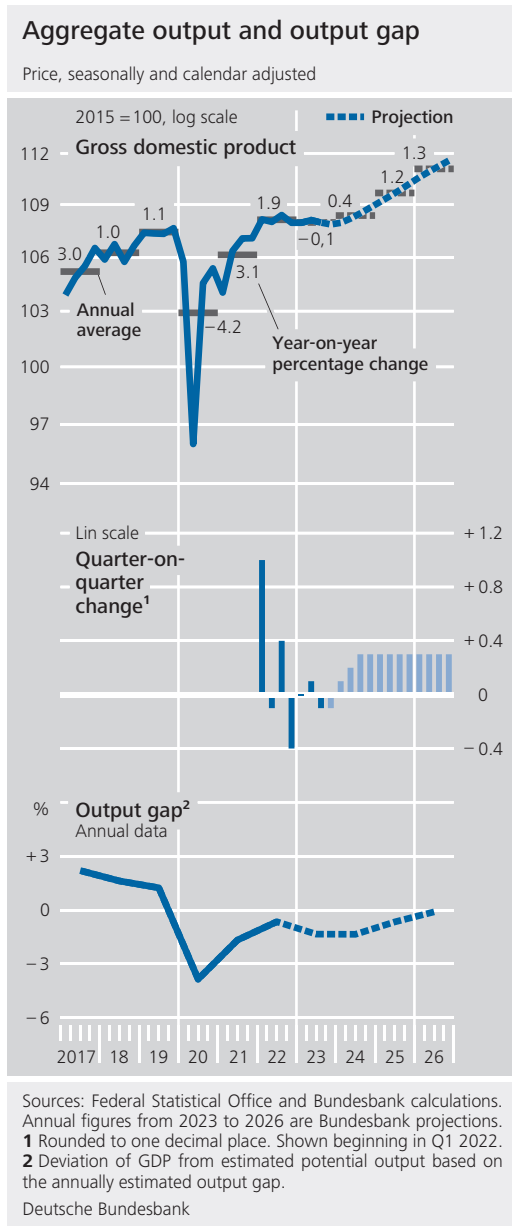
Year-on-year percentage change

Item	2023	2024	2025
GDP (real, calendar adjusted)			
December 2023 projection	-0.1	0.4	1.2
June 2023 projection	-0.3	1.2	1.3
Difference (in percentage points)	0.2	-0.8	-0.1
Harmonised Index of Consumer Prices			
December 2023 projection	6.1	2.7	2.5
June 2023 projection	6.0	3.1	2.7
Difference (in percentage points)	0.1	-0.4	-0.2

Deutsche Bundesbank

However, the delayed recovery has been reflected in a significant downward revision of the GDP rate for 2024. The rate for 2025 has also been lowered slightly. The deterioration in the economic outlook compared with the June projection is due to weaker external demand,

<sup>4</sup> In unadjusted terms, the growth profile is even more pronounced, with unadjusted GDP dropping by 0.3% because of the relatively small number of working days in 2023. Next year, the unadjusted rate will be slightly lower, coming in at +0.3% when rounded to one decimal place. 2025 will have somewhat fewer working days compared to the previous year, but then 2026 will have considerably more working days than 2025. At +1.1% and +1.6%, the unadjusted GDP rates will therefore be first slightly lower and then noticeably higher than the calendar-adjusted figures (see the upper table on this page).



slower growth in private consumption owing to the current consumer restraint, and lower investment. The latter is affected by the further tightening of financing conditions as a result of tighter monetary policy. Another factor is that government support for private investment in the areas of climate change and transformation is now expected to be lower.<sup>5</sup>

The German economy will not come close to its potential output again until 2026. Potential growth rates are expected to be subdued compared with the pre-pandemic period. After +0.6% in 2023, +0.4% in 2024 and +0.5% in 2025, a potential rate of +0.7% is estimated for

*German economy will not reach potential output until 2026*

2026.<sup>6</sup> These low rates are mainly due to the impact of the persistently higher energy costs caused by Russia's attack on Ukraine.<sup>7</sup> In addition, demographics are having a dampening effect. However, in the current high inflation environment, the fact that economic output will remain below its potential for such a long time is not an indication of a widespread absence of aggregate demand. Instead, the spate of recent supply disruptions has weighed even more heavily on economic activity than on potential output for some time now.<sup>8</sup>

## Economic activity in detail

Exports are likely to decline again in the current quarter. This is indicated by ifo export expectations, which improved in October and November but remained predominantly pessimistic. In addition, industrial new orders from abroad continued to decline in the third quarter, even though the underlying trend, at least, is showing signs of bottoming out.<sup>9</sup> Persistently weak external demand is weighing on the export-driven industrial sector. This sector is also having to hold its own in a challenging international competitive environment, not least because of the considerable rise in energy costs in Germany in the wake of the Ukraine war. Nonetheless, surveys by the ifo Institute suggest that supply bottlenecks have eased significantly. From the first quarter of 2024 onwards, exports are expected to slowly return to a recovery path as the global economic recov-

*Exports back on recovery path from Q1 2024*

<sup>5</sup> The background to this is the Federal Constitutional Court's ruling on the debt brake. See pp. 21f. for more on how the fiscal repercussions of the ruling have been factored into the projection.

<sup>6</sup> The estimate for potential output is thus virtually unchanged from the June projection. In chronological context: the estimated potential rate for Germany for the period from 2015 to 2019 averaged 1.6%.

<sup>7</sup> See Deutsche Bundesbank (2022a).

<sup>8</sup> This is because the Bundesbank's concept of potential output is based on sustainable economic performance on the supply side. It is therefore only dampened by the permanent consequences of the supply shocks rather than the temporary effects which do, however, dampen GDP itself. See Deutsche Bundesbank (2023a), pp. 15 ff.

<sup>9</sup> See Deutsche Bundesbank (2023e).

## Underlying conditions for macroeconomic projections

The projection is based on assumptions by Eurosystem experts about the global economy, exchange rates, commodity prices and interest rates. These assumptions are based on information that was available on 23 November 2023. The projection incorporates fiscal policy measures as soon as they are sufficiently specified and their implementation is considered likely.

### Restrained global economic growth

Global economic activity expanded somewhat more materially in the second and third quarters of the current year than expected in the June projection. This was associated with, in particular, robust domestic activity in the United States. In the final quarter of this year, however, momentum is likely to weaken visibly. Global economic growth will therefore be slightly lower than in the summer half-year.<sup>1</sup> The central banks' tighter monetary policy is contributing to the declining inflation rates in numerous countries. At the same time, the higher financing costs are a negative factor for the global economy. In contrast, robust labour market developments and prospects of further real income growth are underpinning demand. The consequences of China's structural challenges, such as the problems on its property market, are also having a ripple effect on the global economy. Overall, global economic activity is expected to be similarly subdued over the projection horizon as in the June projection. Following 3.3% growth in the current year, the global economy excluding the euro area will grow at a slightly lower rate of 3.1% in the coming year. Growth rates of 3.2% are expected for both 2025 and 2026.

is based are derived from the forecasts of the national central banks, which were incorporated into the projection for the euro area published by the ECB on 14 December 2023.<sup>2</sup> Economic growth for the euro area excluding Germany is therefore expected to be slightly weaker than in the June projection, with rates of 0.8% in 2023 and 1.0% in 2024. Following 1.7% growth in 2025, largely in line with the June projection, economic activity is expected to rise by 1.6% in 2026.

As some advanced economies posted lower-than-expected imports in the 2023 summer half-year, the outlook for international trade is slightly below the June projection. Import demand from the emerging economies was also estimated to be lower. The average growth rate of 1.1% for global trade (excluding the euro area) in the current year is also being dampened by the decline in the 2022-23 winter half-year. A growth rate of 3.0% is estimated for each of the years 2024 and 2025. At a rate of 3.2%, slightly higher momentum is expected in 2026. The sales markets of German exporters are likely to expand even more slowly than global trade in the coming year. This is because import growth of trading partners within the euro area and some other advanced economies, which account for a large proportion of German export markets, is lagging somewhat behind the momentum of global trade as a whole. Somewhat higher export market growth is expected in 2025 and 2026, which will then turn out to be similar to growth of global trade.

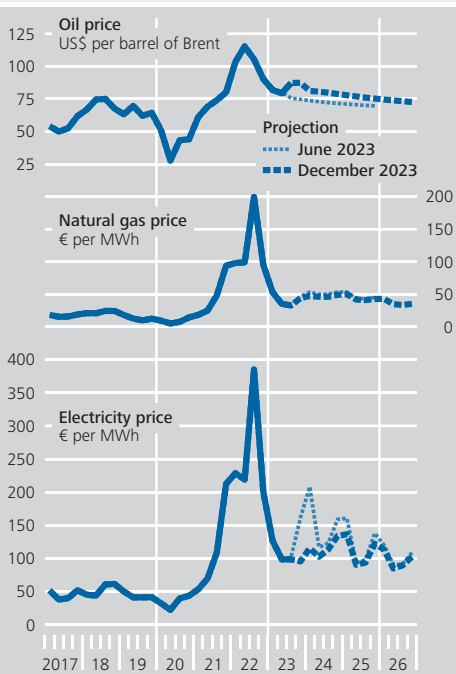
Economic development figures in the other euro area countries on which the projection

<sup>1</sup> See Deutsche Bundesbank (2023b).

<sup>2</sup> See European Central Bank (2023).

### Oil, natural gas and electricity prices

Quarterly averages



Sources: Bloomberg, European Energy Exchange and ECB staff. Projections derived from forward quotations. Deutsche Bundesbank

### Technical assumptions of the projection

Energy commodity prices rose again over the summer. Production cuts by Saudi Arabia and Russia, in particular, led to higher prices in the crude oil markets. Whereas forward quotations suggest that prices will fall over the next three years, the crude oil price assumptions remain above those of the June projection. Thanks to well-filled gas storage facilities, the expected rise in wholesale gas prices in Europe for the colder months of the year has so far been slightly lower than estimated in June.<sup>3</sup> Forward quotations suggest a gradual decline in European gas prices after the winter of 2024-25. Over the next two years, they will remain slightly below the trajectory assumed for the June projection. European electricity prices, which are closely linked to gas prices, also rose far less considerably in the second half of this year than expected in June and have even declined recently. For

the European electricity markets, futures indicate higher prices for the winter months up to the end of the projection period, although the increases will be lower than assumed in the June projection.

In view of the weaker economic outlook, other commodity prices have fallen more sharply in recent months than expected in June. It is assumed that prices will rise again slightly on average in 2025 and 2026. Agricultural producer prices in the euro area have fallen more persistently in recent months than estimated in the June projection. The more stable trend in gas prices, which has an impact inter alia on fertiliser prices, is also likely to have contributed to this development. Forward quotations suggest that producer prices for food will remain largely unchanged until 2026.

According to the June projection and the ECB's September projection, inflation in the euro area will remain too high for too long. At each of its monetary policy meetings in June, July and September, the ECB Governing Council therefore decided to raise key interest rates by a further 25 basis points in order to bring inflation back to its medium-term target without delay. In addition, principal payments from maturing securities under the asset purchase programme (APP) have no longer been reinvested since July 2023. In October, the ECB Governing Council left its key interest rates unchanged. The Governing Council's decisions on the appropriate level of the key interest rate will remain data-driven. Against the backdrop of the additional tightening of monetary policy, money market rates have continued to rise in recent months. For the next two years, however, the EURIBOR futures rates will be on a downward trend before indicating a largely steady level for 2026. The

<sup>3</sup> For more on the driving forces behind European gas prices, see Deutsche Bundesbank (2023c).

EURIBOR will therefore be slightly higher next year than assumed in the June projection and then marginally lower in 2025. After the June projection was finalised, 10-year German government bond yields also initially continued to rise, but then fell again in November. Forward quotations indicate a largely constant yield for the next two years, which will rise again slightly in 2026. The yield level will therefore be above the June projection in the next two years. Financing costs for bank loans are also expected to be higher than in the June projection.

Changing expectations among market participants regarding the US Federal Reserve's monetary policy stance as well as incoming US and euro area economic data caused the external value of the euro to rise initially in the summer and then fall again. In the period relevant for deriving exchange rate assumptions, the euro was trading at US\$1.08, largely unchanged from the June assumption. However, gains by the euro against some central European currencies, the yen and the renminbi contributed to a 1.6% appreciation of the euro against 41 currencies of importance to German foreign trade.

**Fiscal projection for Germany:  
 schematic adjustment to the ruling  
 on the debt brake**

The Federal Government and some Federal states are currently revising their financial plans in order to align them with the ruling handed down by the Federal Constitutional Court on the debt brake.<sup>4</sup> Consultations in this context were still under way when the projection was finalised (see p. 20 on the latest agreements concerning central government finances for 2024). For 2023, the projection takes into account the information in the draft supplementary budget for 2023. For 2024, it no longer contains any measures that the Economic Stabilisation

**Major assumptions of the projection**

Item	2023	2024	2025	2026
Exchange rates of the euro				
US dollar/euro	1.08	1.08	1.08	1.08
Effective <sup>1</sup>	121.9	123.5	123.5	123.5
Interest rates				
Three-month EURIBOR	3.4	3.6	2.8	2.7
Yield on government bonds outstanding <sup>2</sup>	2.5	2.6	2.6	2.7
Prices				
Crude oil <sup>3</sup>	84.0	80.1	76.5	73.6
Natural gas <sup>4</sup>	41.5	47.4	44.2	36.9
Electricity <sup>4,5</sup>	105.0	116.5	110.8	97.7
Other commodities <sup>6,7</sup>	- 13.2	- 2.3	2.4	1.7
Food <sup>7,8</sup>	- 2.4	- 3.6	0.2	- 0.3
German exporters' sales markets <sup>7,9</sup>	0.4	2.4	3.1	3.1

<sup>1</sup> Compared with 42 currencies of major trading partners of the euro area (EER-42 group of currencies); Q1 1999 = 100. <sup>2</sup> Yield on German government bonds 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> Euro per MWh. <sup>5</sup> Wholesale prices in the euro area based on data from the European Central Bank. <sup>6</sup> In US dollars. <sup>7</sup> Year-on-year percentage change. <sup>8</sup> Producer prices for food in the euro area based on data from the European Commission. In euro. <sup>9</sup> Calendar adjusted.

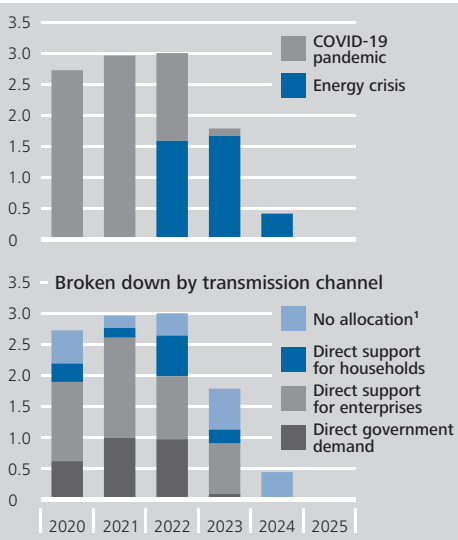
Deutsche Bundesbank

Fund for Energy Assistance (ESF-E) should finance. In particular, the energy price brakes will expire at the end of 2023 and central government will no longer stabilise the grid fees in 2024. In addition, €60 billion of the reserve for the Climate and Transformation Fund (Climate Fund) will be immediately cancelled as a result of the ruling. This will be taken into account by schematically lowering the projected expenses prior to the ruling. Only those grants with which the Federal Government offsets the renewable energy levy on the electricity price are not affected. This is because a legislative amendment would be necessary to implement a reduction. As a result, the Climate Fund will only run annual deficits of less than €10 billion in the projection from 2024 to 2026.

<sup>4</sup> For more about the ruling, see Deutsche Bundesbank (2023d).

**Temporary fiscal measures affecting the deficit that are directly linked to the COVID-19 pandemic and the energy crisis\***

As a percentage of GDP



\* Bundesbank estimate. This definition does not include longer-term fiscal projects, such as those for climate change mitigation. <sup>1</sup> VAT rate and energy tax rate cuts, revenue shortfalls due to employers' one-off payments being exempt from income tax and social contributions, and reduction in fares for local public transport (€9 ticket).  
 Deutsche Bundesbank

**Lapsing of crisis measures easing pressure on the general government budget**

Temporary crisis-related measures will weigh heavily on public finances for the last time in 2023, with the share of these measures in gross domestic product falling from 1¾% in the current year to ½% in the coming year. By 2025, these burdens will have lapsed altogether (see chart above). Among the energy price support measures, the transfers in the course of the electricity and gas price brakes are particularly significant. Moreover, the ESF-E pays supplementary aid to hospitals and care facilities in particular. Substantial government revenue shortfalls will result from the fact that remuneration components will be exempt from tax as inflation compensation premiums up to and including 2024. In addition, VAT on natural gas and district heating will remain reduced until the end of February 2024. In 2024, the crisis measures will mainly affect

the promotion of inflation compensation premiums.

**Other measures will have a net negative impact on the general government budget**

In addition to short-term crisis support, the projection includes a number of other fiscal policy measures. In terms of revenue, the income tax rate in particular will shift in 2023 and 2024 to compensate for the previous year's bracket creep.<sup>5</sup> It is assumed that legislators will continue this practice. The Growth Opportunities Act (*Wachstumschancengesetz*) and a lower electricity tax for companies in the manufacturing sector in 2024 and 2025 are also included – both are planned but have not yet been adopted. Social security contribution rates will increase significantly up until 2026. Above all, health insurance institutions are raising their supplementary contribution rates in order to close funding gaps. The truck toll will also generate significant additional revenue as of 2024 due to higher toll rates and an expanded toll obligation.

<sup>5</sup> Various measures are also taken into account regarding expenditure. However, the projected expenditure by central, regional and local authorities as well as social security organisations generally cannot be allocated to individual measures. They are addressed in the description of the projection where they are relevant for the respective development.



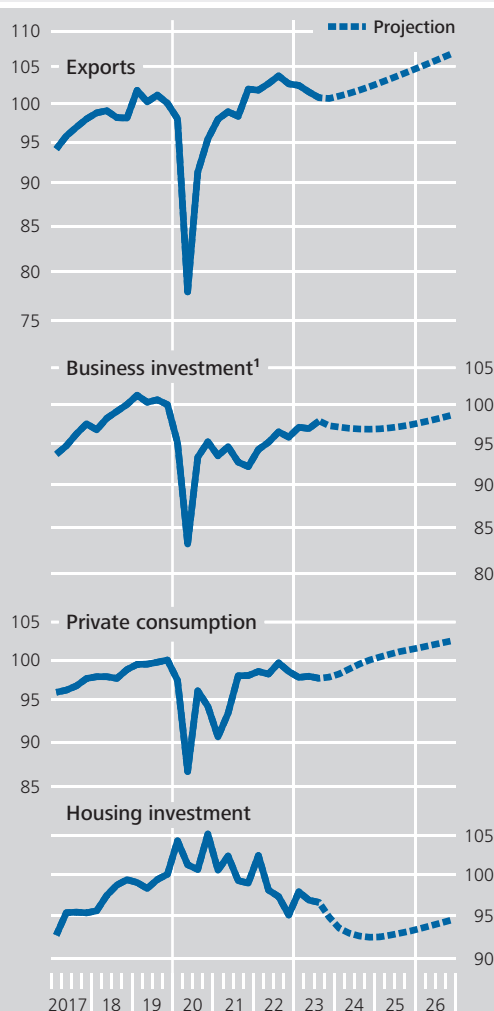
ery causes sales markets to grow.<sup>10</sup> Over the course of next year, exports will then pick up momentum, keeping a roughly constant pace over the remainder of the projection horizon. They will grow more slowly overall than the sales markets, since the comparatively sharp rise in labour costs in Germany is eroding the price competitiveness of German exporters. They will therefore be forced to sustain losses in market share, especially in trade with euro area partner countries.

*Weak industrial activity and monetary policy tightening weigh on business investment*

Despite adverse underlying conditions, business investment has so far been robust.<sup>11</sup> However, enterprises' spending on capital goods will probably already begin to fall during the current quarter. As a result of monetary policy tightening and the slowdown in economic activity, interest rates on loans to enterprises rose significantly, and commercial banks tightened their lending policies appreciably. In this setting, banks' net lending to enterprises fell into negative territory, meaning that the annual growth rate in October of this year was negative for the first time in more than eight years. This was also reflected in domestic demand for capital goods, which plummeted in the third quarter. According to the ifo Institute, sentiment among capital goods producers also deteriorated significantly. Heightened uncertainty surrounding future government support for investment in the areas of climate change mitigation and the transition to a low-carbon economy is likely to further dampen propensity to invest. A stronger slump is being prevented by what is still a considerable order backlog. The tightening of monetary policy, in particular, will probably curb investment activity for some time to come. Moreover, weak export dynamics are providing only a small boost to investment. All in all, the projection expects business investment to decline next year. Over the remainder of the projection horizon, however, the continuous improvement in foreign demand, in particular, will increasingly provide momentum. On an annual average, business investment will grow only marginally in 2025, but will then expand more significantly again in 2026.

### Expenditure components

Q4 2019 = 100, log scale, price, seasonally and calendar adjusted



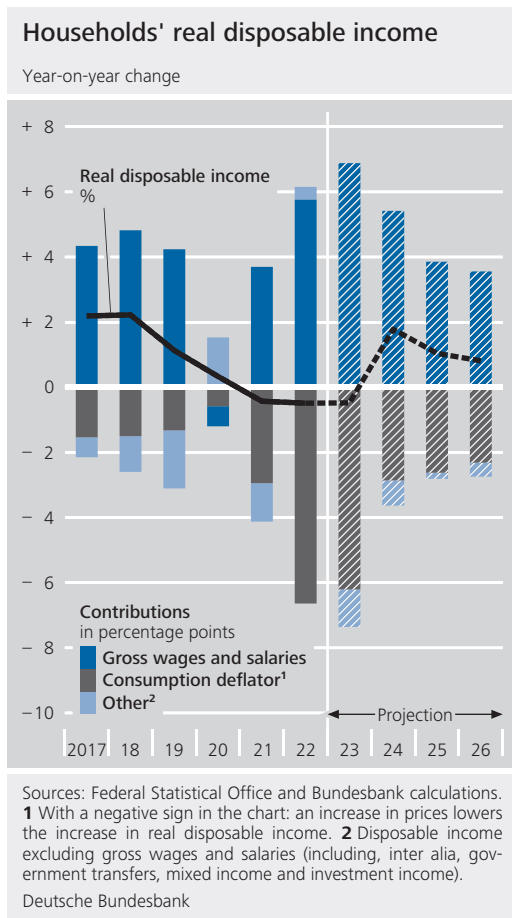
Sources: Federal Statistical Office and Bundesbank projections.  
<sup>1</sup> Private non-residential fixed capital formation.  
 Deutsche Bundesbank

The underlying conditions for private consumption will improve markedly over the projection horizon. This is because households' real disposable income is rising significantly thanks to a stable labour market, steep wage increases and subsiding inflation. The greatest improvement is expected to take place in 2024. After

*Private consumption recovering markedly thanks to rising real disposable income*

<sup>10</sup> For more information on the assumptions regarding the international environment, see pp. 19 ff.

<sup>11</sup> In 2023 so far, spending on machinery and equipment, commercial buildings and other investment, which mainly includes expenditure on research and development, has gone up markedly. Supporting factors are likely to have been the potential for catching up after the slump during the COVID-19 crisis as well as the significant improvement in the availability of some capital goods.



this, income growth will tail off slightly. Private consumption will probably already edge up again in the current quarter, as indicated by new private car registrations according to data from the German Association of the Automotive Industry (VDA) and real retail sales, which exceeded the previous quarter's level in October. However, according to the GfK survey, consumer sentiment remained weak of late, although it had at least stabilised. According to GfK, precautionary motives are playing a major role in the subdued propensity to consume.<sup>12</sup> Besides this, the latest increase in the saving ratio is also likely to have been driven by back-payments for electricity and heating for 2022.<sup>13</sup> Higher interest rates on savings deposits could also play a part. Against this backdrop, households are unlikely to fully channel the increase in their real income into higher consumer spending at first. The saving ratio will rise a little further until the first quarter of 2024. However, it will then gradually recede over the remainder of the projection horizon. This is

because the special factors associated with energy back-payments will expire, and precautionary motives will subside. From the middle of next year, private consumption will therefore increase slightly more strongly than real disposable income for some time. Towards the end of the projection horizon, both metrics will grow at a similar rate, with the saving ratio reaching more or less its long-term average.

Real income losses for households, soaring construction costs, higher financing costs and more restrictive lending policies have now pushed down demand for housing sharply. Net lending for housing practically came to a standstill. In the third quarter, both building permits and new orders for housing construction were significantly lower than their levels at the beginning of 2022. Large order backlogs in the construction sector have so far cushioned the drop in demand somewhat. According to surveys by the ifo Institute, the range of orders in housing construction was still above the long-term average in November. However, it has declined significantly compared to its peak. The share of firms with a shortage of orders actually rose to almost 50%. It should therefore be assumed that weaker demand will increasingly affect construction activity. Housing investment is already likely to fall significantly in the current quarter. According to the projection, it will continue to decline in the course of 2024, albeit at lower rates. It will not bottom out until the beginning of 2025. After this, a moderate recovery will set in. This is due to several factors. For example, the fundamental demand for housing remains intact and is being amplified by the high level of immigration. Furthermore, it is assumed that financing costs will not continue to rise, and real household income will recover significantly. Renovations to increase the energy efficiency of the existing housing

*Given subdued demand, housing investment will drop significantly at first, but will then go back up*

<sup>12</sup> These motives are attributed to general uncertainty among consumers owing to the (geo)political and economic situation; see GfK (2023).  
<sup>13</sup> Since energy back-payments are used in 2023 to pay for consumption expenditure for 2022, these appear in the national accounts in the form of higher household savings.



stock will probably provide support over the entire projection horizon. These will become more important in the light of higher heating costs and the heating transition as part of climate policy.

*Government demand set to rise steeply from 2024 onwards*

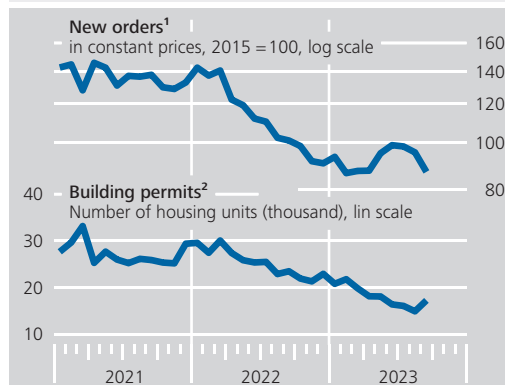
Real government consumption will fall significantly this year, owing to the fact that pandemic-related health spending has expired.<sup>14</sup> Higher spending on asylum seekers and the military, for example, will dampen the decline somewhat. From 2024 onwards, real government consumption will go back up steeply. This is mainly due to a significant increase in intermediate consumption and social transfers in kind. Real government investment will grow sharply over the entire projection horizon, with a particularly steep rise in investment in military machinery and equipment. By contrast, it is assumed that government investment in construction will edge up more slowly in the coming years than in the current year. This is because local government finances are coming under increasing strain.

*Stronger growth in imports than in exports; current account balance initially set to rise sharply before declining slightly*

As domestic demand recovers, imports will grow more strongly than exports, which are being held back by diminishing competitiveness. This will put downward pressure on the trade surplus and the current account surplus over the entire projection horizon. Nevertheless, these surpluses will initially rise sharply this year – probably to 6.7% of GDP in the current account. In the previous year, the current account balance totalled only 4.4% owing to the deterioration in the terms of trade on the back of a sharp rise in energy prices. The rebound this year is mainly due to the improved terms of trade as a result of lower prices for imported commodities (especially natural gas and other energy imports). This is likely to continue over the remainder of the projection horizon, albeit to a noticeably lesser degree. Although some commodity prices will presumably actually go back up, a gradual decline is likely, in particular for crude oil prices. Overall, import prices will therefore increase at only a comparatively moderate pace. By contrast, export prices will

### Demand indicators for housing construction

Seasonally and calendar adjusted



Source: Federal Statistical Office. **1** Main construction sector (housing construction). **2** Residential construction.  
 Deutsche Bundesbank

rise quite steeply in the coming years, mainly as a result of strong domestic wage pressures. All in all, the trade balance will decline slightly between 2024 and 2026 and the current account surplus will be slightly lower, too.

## Labour market

Despite the economy being mired in a downturn for over one and a half years now, the labour market has remained remarkably stable. Only in the third quarter of 2023 did the previously significant increase in employment come to a virtual halt. There is still a pronounced shortage of skilled workers in large parts of the economy. Although the number of job vacancies declined somewhat, it continues to be very high, with the time taken to fill vacancies still lengthy. Hours worked per worker recovered only slowly from the depressed levels of 2022. While at least high levels of sick leave eased somewhat, the economic slowdown was re-

*Labour market, despite weakening in current economic setting, remains remarkably stable overall*

<sup>14</sup> As of the second quarter of 2023, the national accounts no longer record local public transport in the corporate sector but in the government sector. However, this statistical reclassification does not play a role in the real path of government consumption described here. It only affects the deflator of government consumption. (Real) transport services remain part of private consumption. The deflator of government consumption will therefore show exceptionally strong growth this year, but this also reflects wage increases and the general upward pressure on prices.

## Key figures of the macroeconomic projection

Year-on-year percentage change, calendar adjusted<sup>1</sup>

Item	2023	2024	2025	2026
GDP (real)	-0.1	0.4	1.2	1.3
GDP (real, unadjusted)	-0.3	0.3	1.1	1.6
Components of real GDP				
Private consumption	-0.9	1.4	1.8	1.1
Memo item: Saving ratio	11.5	11.9	11.3	11.0
Government consumption	-2.4	0.8	2.0	2.1
Gross fixed capital formation	0.9	-0.8	0.8	1.8
Business investment <sup>2</sup>	1.9	-0.4	0.2	1.0
Private housing construction investment	-1.7	-3.8	-0.1	1.2
Exports	-1.3	0.2	1.9	2.2
Imports	-2.4	1.3	2.9	2.6
Memo item: Current account balance <sup>3</sup>	6.7	6.6	6.4	6.4
Contributions to GDP growth <sup>4</sup>				
Domestic final demand	-0.8	0.7	1.5	1.4
Changes in inventories	0.1	0.1	0.0	0.0
Exports	-0.7	0.1	0.9	1.0
Imports	1.2	-0.6	-1.2	-1.1
Labour market				
Total number of hours worked <sup>5</sup>	0.9	0.3	0.6	0.1
Employed persons <sup>5</sup>	0.8	0.1	0.2	0.0
Unemployed persons <sup>6</sup>	2.6	2.7	2.5	2.4
Unemployment rate <sup>7</sup>	5.7	5.8	5.5	5.3
Memo item: ILO unemployment rate <sup>8</sup>	3.0	3.2	3.1	3.0
Wages and wage costs				
Negotiated wages <sup>9</sup>	4.0	5.0	3.0	3.1
Gross wages and salaries per employee	5.9	5.3	3.6	3.5
Compensation per employee	5.7	5.3	3.8	3.6
Real GDP per employed person	-0.9	0.2	1.0	1.3
Unit labour costs <sup>10</sup>	6.7	5.0	2.8	2.2
Memo item: GDP deflator	6.2	2.9	2.6	2.1
Consumer prices <sup>11</sup>				
Excluding energy	6.1	2.7	2.5	2.2
Energy component	6.4	2.9	2.7	2.4
Excluding energy and food	5.2	1.3	0.8	0.2
Food component	5.1	3.0	2.6	2.3
Food component	11.7	2.4	3.0	3.0

Sources: Federal Statistical Office (up to Q3 2023); Federal Employment Agency; Eurostat. Annual figures for 2023 to 2026 are Bundesbank projections. **1** If calendar effects present. **2** Private non-residential fixed capital formation. **3** As a percentage of nominal GDP. **4** In arithmetical terms, in percentage points. Discrepancies in the totals are due to rounding. **5** Domestic concept. **6** In millions of persons (Federal Employment Agency definition). **7** As a percentage of the civilian labour force. **8** Internationally standardised as per ILO definition, Eurostat differentiation. **9** Unadjusted figures, monthly basis. Pursuant to the Bundesbank's negotiated wage index. **10** Ratio of domestic compensation per employee to real GDP per employed person. **11** Harmonised Index of Consumer Prices (HICP), unadjusted figures.

Deutsche Bundesbank

flected in relatively low overtime worked and the reduction of balances on working time accounts. Short-time work continues to be less relevant at the current time. By contrast, the weak economy left more significant but still limited traces in the form of a gradual rise in registered unemployment, but this is only partly related to cyclical weakness. A somewhat greater part of the increase since June 2022 is due to the gradual inclusion of immigrants, with the proportion of refugees being high.

Given the only lagged and slow economic recovery, no increase in total employment is to be expected in the current quarter or the first quarter of 2024. However, all leading indicators are suggesting that the high level of employment achieved can be maintained. According to the ifo Institute, recruitment plans of trade and industry, a sector that is particularly exposed to economic stress at present, tend to be in negative territory. However, extrapolated to the aggregate economy, the outlook is neutral. The risk of dismissal is very low by historical standards. The number of newly registered job seekers at the Federal Employment Agency (BA) soon to lose their jobs is still high at present. However, the probability of hiring unemployed persons is likewise relatively low at the current time. Unemployment is therefore likely to rise somewhat in the coming months, especially among job seekers who have completed language and integration courses.<sup>15</sup>

*Short-term indicators do not suggest major deterioration in labour market*

In the course of 2024, hours worked per worker will rise initially as the economic recovery takes hold. Employment will also shift back onto an upward path, with a slight time lag, but will grow only to a relatively small degree. Employment is already at a very high level and the shortage of skilled workers will increase again as soon as there is a significant rise in demand for labour. Despite the negative demographic impact, the labour force will expand

*Labour market to pick up over course of 2024 as economic recovery takes hold*

<sup>15</sup> This group of persons is not counted as unemployed while participating in the measures due to their unavailability.

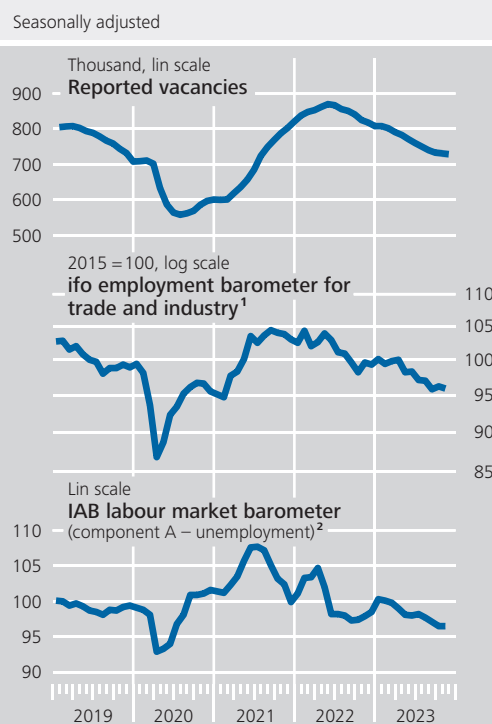
again markedly in 2024. The process of integrating the many immigrants who came in 2022 and 2023 is making itself felt here. However, integration into employment is particularly challenging for refugees, as they did not migrate for the purpose of work and the skills they bring with them often do not match labour demand, for example. This is another reason why registered unemployment is still expected to be slightly higher on average in 2024 than in the current year. On the other hand, unemployment will start to decline again in the second half of 2024 as the economic recovery accelerates.

*Labour supply is constraining factor for labour market in medium term*

Owing to demographic developments, labour supply will increasingly be the constraining factor for the labour market in the coming years. The rising labour force participation rate of the population and the high level of immigration in recent years have so far more than made up for the dampening impact of demographics. However, the labour force participation rate will stop rising in the medium term owing to the unfavourable age structure in Germany, although the individual propensity to work is likely to continue to increase. This is mainly due to the fact that “baby boomers” are leaving the prime-age bracket, where participation rates are highest. With regard to immigration, this projection assumes a balance of 300,000 persons per year in the medium term.<sup>16</sup> The massive influx of immigrants over the past 12 years has improved the demographic structure of the population, as it was mainly young people, including many children, who came to Germany. This development will also dampen the burdens of demographic change in Germany in the future. The majority of these people need to be successfully integrated into the labour market, however. Given the assumptions made here, the labour supply will not increase significantly overall in 2025 and will decline slightly in 2026.

In 2025, employment will continue to grow somewhat while the economy continues to recover, with unemployment declining at the

### Leading indicators for the labour market



Sources: Federal Employment Agency, ifo Institute and Institute for Employment Research (IAB). <sup>1</sup> Qualitative employment plans of 9,000 surveyed enterprises for the next three months. <sup>2</sup> Values below 100 correspond to rising unemployment. Deutsche Bundesbank

same time. Furthermore, hours worked per worker will also go up slightly via an increase in the number of overtime hours. However, there is not much upward headroom here either as, taking a longer-term perspective, hours worked will tend to decline due to the rise in the share of women and older persons, who are more often in part-time employment. The labour market will continue to become tighter overall. In 2026, both the increase in employment and the number of hours worked will largely come to a halt as a result of the shortage of labour supply. At the same time, unemployment will fall again slightly. As immigrants gain more work experience and enterprises boost their capacity utilisation, the economic recovery towards the end of the projection horizon will

*Tight labour market and recovering labour productivity in 2025-26*

<sup>16</sup> With regard to the Ukrainian refugees, this is due neither to large new inflows nor to a substantial emigration back to their home country. Significantly higher net immigration of 600,000 persons is expected for 2023, one-third more than in the June projection. A slight increase in immigration is also assumed for the coming year (400,000 persons in net terms).



mainly be supported by the recovery in previously subdued labour productivity.

## ■ Labour costs and prices

The wage agreements concluded so far this year were once again higher than the already strong results for 2022. The compensation of previous real wage losses continued to play a key role, a widespread combination being significant tax-free and social contribution-exempt inflation compensation bonuses and high permanent wage increases. The wage increases agreed after the June projection were well

*Substantial wage agreements and delays in wage negotiations this year*

above expectations, in particular in the smaller sectors. At the same time, negotiations in some major sectors proved to be very heavy going. As a case in point, negotiations in the retail sector as well as in wholesale and foreign trade that have been ongoing since April have still not been concluded. The expected pay rises in the retail sector will thus be shifted into 2024, as compared with the assumptions of the June projection. It was no longer possible to include the pay settlement in the public sector of the Federal states reached on 8 December 2023.<sup>17</sup> It is assumed that higher negotiated wages for the retail sector and public sector of the Federal states will no longer be disbursed this year. These postponements will affect around six million employees and lead to a somewhat smaller increase in overall negotiated rates of pay (4.0%) in 2023 than anticipated in the June projection.<sup>18</sup>

At the same time, the projection for 2024 was revised upwards substantially to 5.0%. The stronger than expected and, in some cases, delayed rise in wages in this year's pay round will outweigh the significantly lower assumptions for wage settlements in 2024 in view of the weaker economic outlook compared to the June projection. These will be considerably lower than in previous years but remain comparatively high. This is due to the fact that losses in purchasing power suffered in previous years have not yet been fully compensated for, while inflation is falling but still above-average and the labour market is robust overall. However, the decelerating wage growth will not be clearly visible in the projection of negotiated wages until 2025. In addition, no more inflation compensation bonuses will be awarded from that time. Overall, growth in negotiated

*Negotiated wages to rise sharply in 2024, then to ease off but still climb steeply*

<sup>17</sup> The settlement was accurately predicted in the projection in relation to composition and the time frame. However, it exceeded expectations in terms of volume.

<sup>18</sup> All past pay agreements included in the Bundesbank's negotiated wage statistics (around 500 collective wage agreements and provisions governing civil servant pay) are factored into the projections of negotiated wage increases. They are extrapolated beyond their contractual terms, taking into account the overall economic situation and industry-specific idiosyncrasies.

wages will fall to rates of around 3% for both 2025 and 2026, which still roughly corresponds to the level of 2018 and 2019, years characterised by a strong economy.

*Growth of actual earnings consistently outpaces that of negotiated wages*

Growth of actual earnings will consistently outpace that of negotiated wages over the projection horizon. Compensation for high inflation, staff shortages, longer working hours, higher performance bonuses and the strong wage increases among low earners triggered by the rise in the minimum wage in October 2022 are contributing factors this year.<sup>19</sup> At just under 6% in 2023, actual earnings will rise at their fastest rate in more than 30 years. In contrast to negotiated wages, their growth will already tail off somewhat in the coming year. The minimum wage increase from January 2024 will provide little stimulus. More importantly, there are the effects of the still subdued economic activity and the associated lower performance bonuses. Wage growth will then decline more significantly in 2025 and 2026. However, at rates of around 3½%, it will remain higher than the historical average since reunification. This is due to a combination of a high level of labour market tightness and pent-up demand from the period of high inflation. Compensation per employee will increase at a similar pace to actual earnings, possibly even somewhat more strongly in 2025 and 2026 when employers' social contributions rise.

*High level of domestic inflation declines as profit margins normalise*

Combined with declining economic activity and a stable labour market, unit labour costs will rise extremely sharply this year, with their growth a major factor in the high level of domestic inflation. In addition, enterprises will be able to expand their profit margins slightly on average this year. In previous years, margins had already risen steeply in an environment of strong and, in some cases, pent-up demand (in the form of higher order backlogs, for example), supply-side bottlenecks and high inflation rates. Recently, however, they have already eased off to a point. Unit labour costs will continue to exert very significant pressure next year, as the economy is set to recover only

### Negotiated wages and actual earnings

Year-on-year percentage change, monthly basis

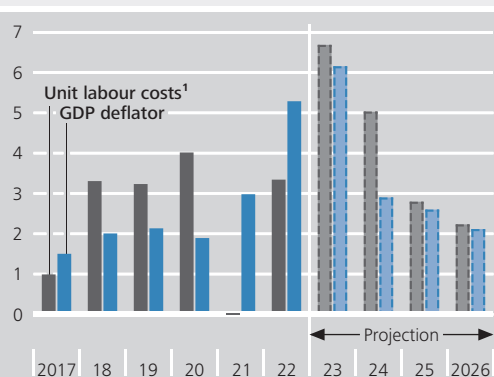


Sources: Federal Statistical Office and Bundesbank projections. **1** According to the Bundesbank's negotiated wage index. **2** Gross wages and salaries per employee.

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### Unit labour costs and GDP deflator

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



Sources: Federal Statistical Office, Bundesbank calculations and Bundesbank projections. **1** Ratio of domestic compensation per employee to real GDP per employed person.

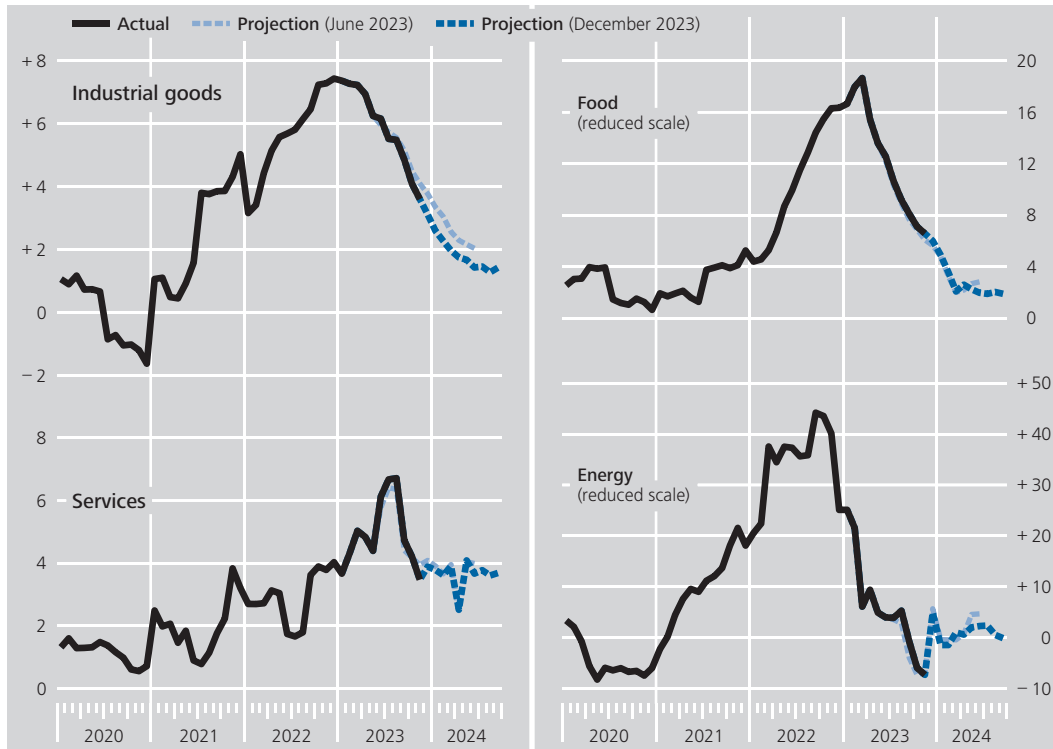
Deutsche Bundesbank

gradually, with robust employment but very high wage growth. Enterprises are likely to absorb this development through their profits, however. This is due to the fact that they enjoy a very satisfactory earnings situation, the supply bottlenecks will have largely dissipated in 2024 and pent-up demand is receding – also as a result of the tightening of monetary policy. Aggregate profit margins will therefore fall steeply in 2024 and return roughly to pre-

<sup>19</sup> The advance payments already made by some larger employers as a result of the long-overdue wage agreements in the retail sector will also increase wage drift in 2023. The delayed wage agreements will then have a counter-effect on wage drift in 2024.

### Latest revisions to projections for selected HICP components in Germany

Year-on-year percentage change



Sources: Federal Statistical Office and Bundesbank projections.  
 Deutsche Bundesbank

pandemic levels in 2025. From 2025 onwards, in addition to weaker wage growth, the recovery in labour productivity will contribute to unit labour costs rising at a markedly slower pace. Against this backdrop, domestic inflation as measured by the GDP deflator will fall markedly in 2024, from 6.2% this year to 2.9%, and over the remainder of the projection horizon will gradually decline to 2.1% in 2026.

*Headline rate declines in 2023, while core inflation is just reaching its peak*

After reaching an all-time high of 8.7% (as measured by the HICP) last year, inflation declined markedly during the course of this year. It is expected to reach 6.1% on average in 2023. The main reason for the easing of price pressures is the deceleration in energy price increases – which were initially dampened by government relief measures and lastly by lower fuel prices. By contrast, food inflation is likely to remain in double digits overall on average for 2023, even though it has already fallen steeply over the course of the year and some products have even seen prices slashed significantly.

Only this year will core inflation (excluding energy and food) reach its peak at 5.1%. It is particularly in services where it is up once again from the previous year. Continued pent-up demand for services that were not available during the pandemic has initially been a factor, allowing an increase in profit margins in some sectors. This is compounded by the steep hike in wages, lagged adjustments to the sharp increase in the general statutory minimum wage in October 2022 and repercussions following the considerable rise in energy prices last year. In the case of non-energy industrial goods, price inflation is again well above average for 2023. Supply chain disruptions initially still had an impact here, although they eased over the course of the year, causing consumer price inflation to drop in the second half of the year.

The June projection had assumed a steep decline in the inflation rate for the second half of 2023, partly because the sharp price rises in the same period last year were increasingly exempt



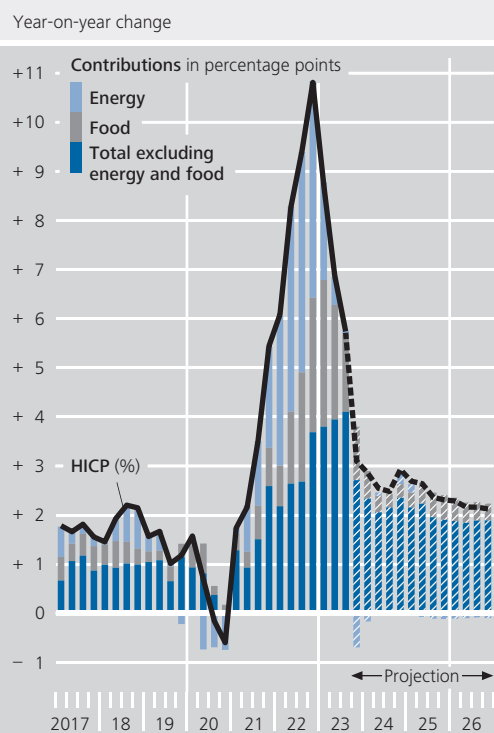
*Inflation rate declined sharply until November, but will rise again significantly in coming months*

from the calculation. Actual developments were even slightly more pronounced. At 2.3%, headline HICP inflation was 0.4 percentage point lower than expected in November and the core rate was even down by 0.5 percentage point. The fact that non-energy industrial goods price inflation weakened more rapidly than assumed in the wake of price developments at the upstream stages also played a role. However, this also largely reflected unexpectedly sharp price slumps for some services with fluctuating price patterns, such as air travel, which are unlikely to be permanent. The comparatively low rates should therefore not detract from the fact that underlying price pressures are still strong. The core rate was still 3.5% in November. Moreover, the headline rate will be significantly higher again in the coming months. A considerable surge is to be expected in December, in particular, as the government covering advance payments for gas and district heating bills a year ago had temporarily depressed price levels significantly.

*Headline and core rates set to fall markedly next year ...*

Next year, narrowing profit margins are likely to take the pressure out of core inflation. Particularly in the case of non-energy industrial goods, inflation will then fall to a sizeable extent. It will remain above average, however, as price pressures caused by rising labour costs will still be very high. As wages have a greater impact on services prices than on other price components, services price inflation will decline less significantly. For food prices, by contrast, the inflation rate will drop considerably despite the rise in wages, as agricultural producer prices in the euro area are assumed to be lower. Falling prices are also expected for energy commodities. However, the impact on energy price inflation will be softened somewhat by the expiry of government measures to dampen the rise in energy prices. This concerns, for example, the temporary cut in the VAT rate on gas and district heating and the price brakes on electricity and gas tariffs.<sup>20</sup> Second, the annual increase in the CO<sub>2</sub> price on fossil fuels, which was suspended in 2023, will be resumed. This will make a marked contribution to energy price in-

### Contributions to headline HICP inflation by component



Sources: Federal Statistical Office, Bundesbank calculations and Bundesbank projections.  
 Deutsche Bundesbank

flation over the next three years.<sup>21</sup> Overall, the inflation rate in 2024 is likely to decline by more than one-half to 2.7%. Core inflation is expected to fall to 3.0%.

According to the projection, energy prices will remain fairly stable in 2025 and 2026 and will thus hardly contribute to headline inflation any more.<sup>22</sup> This is in contrast to food prices, which will continue to rise sharply owing to persistent wage pressures, as agricultural producer prices will no longer offer relief. Although monetary policy tightening will continue to yield results, core inflation will fall only slowly, as it, too, will be maintained at a high level, above all, by the

*... and continue declining slowly in both 2025 and 2026, while remaining above average*

<sup>20</sup> The projection assumes that the price brakes will expire at the end of this year. While the average retail tariffs for electricity may then have already fallen below the brake value, the retail tariffs for gas may still be somewhat above the brake value when the brake expires.

<sup>21</sup> For more information on the impact of the rising CO<sub>2</sub> price on inflation, see p. 20.

<sup>22</sup> The increases in the carbon price roughly offset the assumed further decline in futures prices for energy commodities.

strong wage dynamics. For a while, the sharp rise in unit labour costs in 2023 and 2024 will continue to have an impact. And further wage growth will remain above average, though it will no longer be as strong as in previous years. All in all, by 2026, headline inflation will be down to 2.2% and core inflation down to 2.3%. Both rates will thus remain above average over the longer term.

## Public finances

According to this projection, the general government deficit ratio will fall from 2.5% in 2022 to 2.0% this year. Temporary crisis measures have been much less substantial in 2023, thus reducing the burden on budgets compared with the previous year (see p. 22). Other developments are weighing on public finances. Inflation, for example, is pushing up expenditure considerably. In particular, intermediate consumption and interest expenditure on inflation-indexed securities are significantly higher. Aside from this, expenditure on defence and climate action is increasing. Economic activity is also weighing on the budget somewhat. In addition, developments in profit-related taxes are significantly weaker than would be expected on the basis of the macroeconomic reference variables – unlike in 2022, when they saw a significantly stronger rise than the reference variables would have suggested.

According to the projection, the deficit ratio will fall significantly to 1.3% in 2024 and remain virtually unchanged in the years that follow (for information on how the Federal Constitutional Court's ruling on the debt brake will be taken into account, see pp. 21 f.). The temporary crisis assistance will have been phased out largely in 2024, and entirely in 2025. Taken in isolation, the deficit will fall sharply, above all next year. The weak economy will still have an impact at first. It is not until 2026 that its dampening effect will recede and then become deficit-neutral.

Without the temporary effects of the crisis measures and economic activity, i.e. in structural terms, the balance will gradually deteriorate. Expenditure on the military, in particular, will increase significantly from 2024 onwards. In addition, grants to finance the renewable energy (EEG) levy will rise sharply in 2024. This is because the sale of electricity from renewable energy plants will not cover the promised proceeds, and the reserves from the EEG levy will then be used up. Wage growth in the public sector will be strong, mainly as a result of high wage adjustments.<sup>23</sup> Moreover, pension expenditure will rise dynamically. This is mainly a lagged reflection of the high wage increases at the macroeconomic level. Demographic developments will also play a role, however: more and more people will be reaching retirement age. Growth in expenditure on health and long-term care will also outpace that of the reference variables for social security contributions. Nonetheless, this gap will largely be offset by the assumption of higher contribution rates. For interest expenditure, the burdens associated with inflation-indexed debt instruments will decrease from 2024 onwards but this will be outweighed by rising refinancing costs.

The debt ratio is still trending downwards and, according to this projection, will stand at 60.7% at the end of 2026 (2022: 66.1%). This decline is mainly due to the strong growth in nominal GDP (denominator effect). Moreover, the Federal Government is paring back debt related to coronavirus assistance loans and to bad bank portfolios stemming from the financial crisis. If the generational capital fund announced by the Federal Government were to be implemented, this in itself would increase the debt ratio, as the required capital is to be funded primarily from loans.<sup>24</sup> The repayments

*Worsening structural balance due to significant growth in expenditure, primarily on the military and pensions*

*Lower deficit ratio in 2023 due to reduced coronavirus measures*

*Temporary burdens from crisis measures will be phased out by end-2024*

*Debt ratio will fall towards 60%*

<sup>23</sup> The state government collective wage agreement reached after this projection was finalised exceeds the wage increases for state government assumed in the projection. The impact on the projected general government deficit is small.

<sup>24</sup> See Deutsche Bundesbank (2023f).



that Germany has committed to under the Next Generation EU programme are not included in the Maastricht debt ratio reported here. These are expected to rise to 2.3% of GDP by 2026. In economic analyses, they should be counted towards the German debt ratio.<sup>25</sup>

## ■ Risk assessment

*Downside risks to economic growth, upside risks to inflation*

The macroeconomic projections presented here are subject to several uncertainties. All in all, risks to economic growth are tilted to the downside, and risks to inflation to the upside, at present.

*Some fiscal policy decisions still pending*

The fiscal policy stance and its impact on the economy are still not completely certain following the Federal Constitutional Court's ruling on the debt brake. After this projection was finalised, German fiscal policymakers responded to the ruling, particularly with regard to central government finances in 2024. This means that there is no need for significant revisions to the projection (see the box on p. 34). However, the details of some parts of the agreements still need to be fleshed out, and responses by the state governments are also still pending in some cases. Furthermore, it remains uncertain how the future climate and transformation policy stance from 2025 onwards is to be structured and financed in concrete terms. This goes hand in hand with uncertainty about important underlying conditions for the German economy.

*Risks arising from geopolitical tensions and regarding energy supply*

In addition, there are geopolitical risks, especially with regard to the wars in Ukraine and the Middle East. An intensification of geopolitical conflicts would probably lead to tensions on the international energy and commodity markets and could trigger renewed supply chain disruptions. If the war in the Middle East were to escalate and spread to (crude oil-exporting) neighbouring countries, the price of crude oil could rise rather than fall as projected. This would weigh on the German economy

and, at the same time, fuel inflation. There could be similar consequences if the supply situation for natural gas in Germany were to worsen again. The gas storage facilities are currently much better filled than is usual for this time of year. The Federal Network Agency therefore considers the risk of a gas shortage to be low at present.<sup>26</sup> However, residual risks persist. They are associated, for example, with a colder-than-average winter or a halt in Russian gas supplies to southern Europe. In the former case, the demand for gas in Germany would be higher. In the latter, less gas would be available because Germany would export more to southern Europe.<sup>27</sup>

The risk that the inflation process will prove more stubborn than assumed in the projection has been reduced, but not yet eliminated, by the tighter monetary policy stance. For example, the combination of prior real wage losses and a tightening labour market could lead to even stronger wage growth. This would probably result in correspondingly higher second-round effects on consumer prices. Inflation could also remain elevated for longer if firms absorb the pressure from unit labour costs via reduced profit margins to a lesser extent than assumed in the projection. This could occur, say, given less intense competition or a more favourable demand situation. In an even longer-lasting high-inflation environment, the risk of economic agents adapting to elevated inflation and adjusting their long-term inflation expectations upwards would ultimately increase. Inflation could then become further entrenched.

*Risk of more persistent inflation due to higher rises in wages or profit margins declining less steeply*

<sup>25</sup> See Deutsche Bundesbank (2022b).

<sup>26</sup> See Federal Network Agency (2023).

<sup>27</sup> Since the projection was finalised, futures prices for energy commodities have decreased, especially for the short term. Further technical assumptions underlying the projection have also changed since then. For example, market expectations for the Euribor and the yield on long-term government bonds in the euro area have declined. In addition, the euro has depreciated. Viewed in isolation, these changes in the underlying conditions would have a slight positive impact on GDP growth over the projection horizon. They would dampen inflation somewhat next year, but increase it slightly in 2025 and 2026.

## What do the latest announcements on central government finances for 2024 mean for the projection?

The projection is based on assumptions as to how fiscal policy will react to the ruling by the Federal Constitutional Court (see pp. 21f.). After the projection was finalised, leading Federal Government policymakers adopted new resolutions on central government finances for 2024. Only a few details were known as this report went to press. Overall, however, there is no significant need to revise the projection at present – with neither the fiscal nor the macroeconomic outlook requiring any revision as things currently stand.

The announcements indicate that indirect levies are likely to increase slightly more sharply than projected. This applies to the price of national CO<sub>2</sub> certificates in 2024 and 2025 and other indirect levies (in particular, a new levy on plastic products). Planned expenditure is apparently also somewhat higher than assumed in our projection. The information available on this is patchier, however. Overall, the forecast deficit ratio of 1.3% for the years 2024 to 2026 still appears plausible. The Federal Minister of Finance has projected a deficit ratio of 1.5% for 2024, which is only slightly higher.

Most of the macroeconomic variables in the projection will therefore not require any major revision. However, the higher CO<sub>2</sub> price will have a direct impact on consumer prices. In the baseline of the projection, it was still assumed that the fixed price per tonne of CO<sub>2</sub> would be raised from currently €30 to €40 in January 2024 and to €50 in January 2025. The maximum price of €65 was assumed for 2026. In total, these increases would have raised the rate of the Harmonised Index of Consumer Prices (HICP) in 2024 and 2025 by approximately

0.15 percentage point for each year and in 2026 by just over 0.2 percentage point.<sup>1</sup> According to the latest announcements, the increase in the carbon price in the coming year to €45 will initially turn out to be more substantial, boosting the effect on the HICP rate by 0.1 percentage point. By 2025, the new carbon price should then amount to €55. The increase will therefore remain at €10, which means that the inflationary effect will not change. The maximum price of €65 is still assumed for the last projection year, yet the jump to this price now turns out to be smaller than before. Compared to the baseline, the contribution to the HICP rate is therefore reduced by close to 0.1 percentage point. Other measures planned, such as imposing a levy on plastic products or a kerosene tax on domestic flights, are still too unspecific to permit a precise assessment of their inflationary effect. While the measures are likely to have a trend inflationary effect, it will probably be limited. Domestic flights, for instance, account for less than 0.5% of the HICP basket of goods and services.

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<sup>1</sup> For the method to calculate the impacts based on the price path at the end of 2019, cf.: Deutsche Bundesbank (2019).

## ■ List of references

Deutsche Bundesbank (2023a), Arduous recovery amid high and only gradually easing inflation – outlook for the German economy up to 2025, Monthly Report, June 2023, pp. 13-37.

Deutsche Bundesbank (2023b), Global and European setting, Monthly Report, November 2023, pp. 13-24

Deutsche Bundesbank (2023c), Factors driving European gas prices, Monthly Report, November 2023, pp. 20 f.

Deutsche Bundesbank (2023d), Federal Constitutional Court issues ruling on debt brake, Monthly Report, November 2023, pp. 69-71.

Deutsche Bundesbank (2023e), The German economy, Monthly Report, November 2023, pp. 53-60.

Deutsche Bundesbank (2023f), The plan to introduce a generational capital fund to ease pressures on the pension scheme's finances, Monthly Report, November 2023, pp. 79-81.

Deutsche Bundesbank (2022a), Impact of permanently higher energy costs on German potential output, Monthly Report, December 2022, pp. 29 f.

Deutsche Bundesbank (2022b), Fiscal analysis distorted by the lack of data on EU-level deficits and debt, Monthly Report, June 2022, p. 77.

Deutsche Bundesbank (2019), The impact of the Climate Package on economic growth and inflation, Monthly Report, December 2019, pp. 29-33.

European Central Bank (2023), Eurosystem staff macroeconomic projections for the euro area, December 2023, accessible at: [https://www.ecb.europa.eu/pub/projections/html/ecb.projections202312\\_eurosystemstaff~9a39ab5088.en.html](https://www.ecb.europa.eu/pub/projections/html/ecb.projections202312_eurosystemstaff~9a39ab5088.en.html)

Federal Network Agency (2023), Current status of gas supply in Germany, available at <https://www.bundesnetzagentur.de/EN/Areas/Energy/SecurityOfSupply/GasSupply/start.html>

GfK (2023), Consumer Climate: Downward trend stopped for now, press release of 28 November 2023, available at <https://www.gfk.com/press/consumer-climate-downward-trend-stopped-for-now>



## Model-based recommendations for monetary policy decision-making

*As a result of the COVID-19 pandemic and Russia's unjustified war of aggression against Ukraine, inflation rates in the euro area reached record levels. The Governing Council of the European Central Bank (ECB) responded to this with its strongest interest rate hiking cycle thus far since the introduction of the euro: since July 2022, it has raised monetary policy interest rates by a total of 4.5 percentage points. Furthermore, in March 2023, the holdings of assets acquired under the asset purchase programme (APP) started to be reduced.*

*These monetary policy decisions reflect challenging trade-offs, as the Governing Council aims to fulfil its price stability mandate without creating unnecessary costs to the economy or risks to financial stability. For this reason, the Governing Council gathers a very comprehensive view in its consultations before it makes its decisions.*

*This article explores one of the components of this complex monetary policy decision-making process: model-based optimal policy projections (OPPs). In approximated form, they reflect the outlined policy trade-offs and, on the basis of suitable models, produce a recommended course of action for the path of monetary policy.*

*Eurosystem staff macroeconomic projection exercises represent the starting point for the calculation of OPPs and a point of reference for the monetary policy decision-making process. These provide a comprehensive picture of current and prospective developments in aggregate economic activity and prices in the euro area. However, these projections are based on market expectations of the monetary policy interest rate. From a monetary policy decision-making standpoint, the projections thus do not inherently make any statements regarding an optimal interest rate path.*

*Therefore, in terms of monetary policy, the key question is which monetary policy measures based on these projections optimally fulfil the price stability mandate. OPPs may provide an answer to this question: the resulting time path for monetary policy instruments is the result of an optimisation procedure intended to best achieve the objective of price stability, taking into account other relevant economic aspects. Here, "optimality" is always defined within the context of the respective model analyses used to determine the corresponding paths of interest rates. These analyses factor in assumptions on the preferences of monetary policy decision-makers; however, these assumptions do not necessarily reflect the actual preferences of the individual ECB Governing Council members.*

*This article outlines the use of OPPs in the monetary policy decision-making process on the basis of selected analyses. It discusses the need for sensitivity analyses as well as the limitations of the approach presented here. Despite their constraints, OPPs support and complement other, sometimes less formal, components of monetary policy decision-making. They have the advantages of analytical consistency and transparency. In this way, they help to rigorously test the validity of considerations and arguments within the monetary policy decision-making process.*

*Recent strong surges in inflation ...*

*... caused decisive interest rate responses from ECB Governing Council*

*OPPs support monetary policy considerations using macro-economic projections ...*

## ■ Introduction

Over the past two years, the euro area has seen exceptionally strong surges in inflation. These arose from a combination of supply bottlenecks related to the COVID-19 pandemic, a sharp increase in demand as the economy reopened from widespread pandemic-related lockdowns, and spikes in energy prices resulting from Russia's unjustified war of aggression against Ukraine.<sup>1</sup> Unlike inflation fuelled purely by demand, supply shocks pose particular challenges for monetary policy, as they drive economic activity and inflation in different directions. This results in complex monetary policy trade-offs.

The ECB Governing Council, which makes monetary policy decisions for the euro area, responded to the far too high inflation rates with an unprecedented series of interest rate rises. Since July 2022, it has increased the interest rate on the deposit facility – currently the most relevant key interest rate for the monetary policy stance – by 4.5 percentage points, from -0.5% to 4%. The aim of these decisive interest rate hikes is to slow down aggregate demand as a way of counteracting the exceptionally strong inflation dynamics. In doing so, the Governing Council is trying to avoid increasing interest rates by “too much”, as this could otherwise cause unnecessary costs to the economy and risks to financial stability.<sup>2</sup> Hence, monetary policy decision-making has been and is being carried out in a macroeconomic environment that requires the Governing Council to walk a fine line.

This article discusses how the ECB Governing Council is supported in these challenging monetary policy trade-offs and decision-making processes by model-based optimal policy projections (OPPs). In this context, OPPs are one component of a comprehensive analysis that draws on multiple economic, monetary and financial factors that are key to price developments in the euro area. Their role within this comprehensive analysis is mainly to provide a

rigorous, formal perspective. Here, the starting point and point of reference for calculating OPPs is the Eurosystem staff macroeconomic projections, which offer a concise picture of current and prospective developments in aggregate economic activity and prices in the euro area.<sup>3</sup>

Macroeconomic projections are based on the core assumption that the ECB Governing Council employs its instruments in the manner expected by markets at the time the projections are made.<sup>4</sup> The projections thus do not inherently contain any direct or immediate recommendations for monetary policy action, i.e. no assessment of an appropriate or even optimal interest rate path for monetary policy decision-makers. Instead, the Governing Council's assessment may differ from market expectations and, through its monetary policy decisions, the Governing Council may alter the projected path of key macroeconomic variables in order to fulfil its mandate.

This leads to the normative question of which monetary policy decisions contribute to optimally fulfilling the price stability mandate. Alongside a number of individual (sub-)analyses that feed into the monetary policy decision-making process, OPPs help to provide an answer to this question. Amongst other things, they include optimal time paths for the future development of monetary policy instruments (such as the relevant monetary policy interest rate or asset purchases and sales). These time paths, then, are the outcome of an optimisation procedure that aims to fulfil the mandate – which is primarily to maintain price stability over the me-

*... based on market expectations regarding monetary policy instruments*

*OPPs: optimal deviation of monetary policy instruments from market expectations*

<sup>1</sup> For more on this, see Nagel (2022), Lane (2022a, 2022b, 2023) and Arce et al. (2023).

<sup>2</sup> See Panetta (2023).

<sup>3</sup> Staff macroeconomic projections serve to estimate future price developments in the best possible way and thus identify potential risks to price stability at an early stage. For more information, see Deutsche Bundesbank (2023a).

<sup>4</sup> The modern view of monetary policy emphasises that monetary policy measures achieve their impact on economic developments largely by steering private sector expectations about future developments in inflation, output and interest rates (see Woodford (2003) and Svensson (2005)).

dium term – in the best possible way. If necessary, OPPs will therefore also include the optimal deviation of monetary policy instruments from market expectations.<sup>5</sup> However, it is important to stress that “optimality” must be understood here only within the context of the employed model analyses and the monetary policy preferences formulated within them, and not as a statement on the actual preferences of the ECB Governing Council or its members.

*OPPs are based on assumptions and must always be challenged*

It is also important to emphasise that OPPs represent just one component, albeit a noteworthy one, of the monetary policy decision-making process. OPP calculations are based on a range of assumptions, particularly projections for both economic developments and the rate of inflation, which are subject to considerable uncertainty. Moreover, the calculation of OPPs draws on macroeconomic models that only approximate reality. For this reason, a number of sensitivity and scenario analyses help to verify the robustness of OPP outputs and are indispensable when preparing monetary policy meetings. Despite the constraints within which OPPs and the underlying models are calculated, OPPs support and complement other, sometimes less formal, components of the monetary policy decision-making process. This is because OPPs have the advantage of being analytically rigorous, comparable over time, and transparent, which means they can play a part in testing the soundness of considerations and arguments in monetary policy decision-making.

## Conceptual framework for deriving optimal policy projections

### Overview: construction of optimal policy projections

*Three components for calculating OPPs*

Three components are needed to calculate OPPs:

- (i) the operationalisation of monetary policy target variables and their relative weighting;

- (ii) the prospective paths of the target variables – for given market expectations regarding monetary policy instruments (i.e. macroeconomic projections);

- (iii) the estimated transmission of monetary policy to these target variables.

The calculation of OPPs now centres around the question of how the ECB Governing Council should employ its monetary policy instruments to optimally influence the path of the target variables within the scope of its mandate (see the upper chart on p. 40).

Put simply, OPPs are calculated by adding the estimated impact of monetary policy instruments on the target variables to the projected paths of these variables. Here, the use of instruments is selected via an optimisation procedure in such a way that the target variables follow an optimal path within the scope of the mandate.<sup>6</sup> The lower chart on p. 40 provides a schematic illustration of this approach in the case of a monetary policy-induced rise in interest rates. It depicts the fundamental trade-off that Eurosystem monetary policy would face given an unfavourable supply shock. On the one hand, an increase in interest rates would lower the rate of inflation and thus bring it back closer to its target value. On the other hand, an increase in interest rates would amplify the economic downturn. When OPPs are calculated, these countervailing effects are traded off within the scope of the mandate. The outcome of these calculations – the optimal compromise – is an optimal interest rate

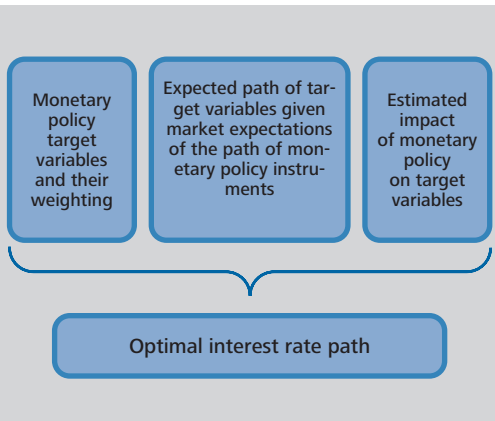
*Construction of OPPs*

<sup>5</sup> In some of the more recent literature on monetary policy, OPPs are therefore also referred to as “optimal policy perturbations” (Barnichon and Mesters (2023)).

<sup>6</sup> The method for calculating optimal policy projections was developed in recent macroeconomic literature. See Svensson (2005), Svensson and Tetlow (2005), Svensson (2010), de Groot et al. (2021), Harrison and Waldron (2021), Hebden and Winkler (2021), Barnichon and Mesters (2023) and McKay and Wolf (2023). The method is immune to the Lucas critique (Lucas (1976)), as it takes account of the fact that households and firms have individually optimal responses to current and future monetary policy impulses. In this context, “optimality” means profit or utility maximising.

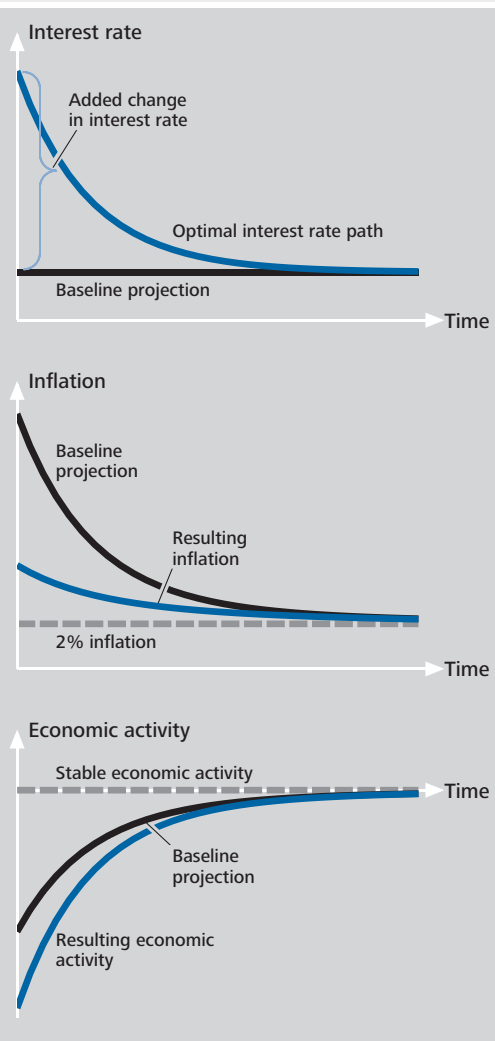


### Components for calculating optimal policy projections (OPPs)



Deutsche Bundesbank

### Stylised representation of the construction of an optimal interest rate path



Deutsche Bundesbank

path as well as the associated paths of inflation and economic activity (blue lines).

## Operationalisation of monetary policy target variables and their weighting

To determine the optimal time path for monetary policy instruments, the calculation of OPPs first requires the price stability mandate to be operationalised (component 1 in the list presented above). This is done by selecting individual target variables and then weighting them to set their relative priorities in monetary policy.

*Component 1: target variables and their weighting*

The Eurosystem’s monetary policy strategy considers that price stability is best maintained by aiming for an inflation rate of 2% over the medium term.<sup>7</sup> When calculating OPPs, the main target variable for monetary policy is therefore the deviation of inflation from its 2% target.

*Price stability in the Eurosystem operationalised with a medium-term inflation target of 2%*

The focus on the medium term takes account of the fact that monetary policy is transmitted with a time lag and is thus only able to influence current economic developments to a very limited extent. In addition, a medium-term horizon for monetary policy allows for flexible responses when inflation rates and economic activity move in opposite directions. This means that, in principle, when the ECB Governing Council stabilises the rate of inflation, it does so not entirely without regard to economic developments. If the stabilisation of inflation is too narrowly interpreted, accompanied by overly large fluctuations in economic activity, this may jeopardise the inflation target over the medium term. From the Eurosystem’s perspective, it is therefore appropriate to avoid excessive fluctuations in economic activity. Minimising eco-

*Monetary policy decision-making can take account of economic fluctuations ...*

<sup>7</sup> For an in-depth description of the Eurosystem’s monetary policy strategy, see European Central Bank (2021) and Deutsche Bundesbank (2021). The Governing Council’s inflation target of 2% is symmetric. In this context, “symmetric” means that both negative and positive deviations of inflation from the target are considered equally undesirable by the Governing Council.



conomic fluctuations is thus a second target variable underpinning the calculation of OPPs.

*... and financial stability risks in order to achieve the inflation target over the medium term*

Lastly, the orientation towards the medium term also permits the consideration of financial stability aspects that could arise from excessive fluctuations in monetary policy interest rates. In this context, financial stability is not a monetary policy objective in its own right, but is instead a prerequisite for achieving the inflation target over the medium term.<sup>8</sup> Small fluctuations in interest rates *ceteris paribus* increase the certainty of planning for households, firms and financial markets, and also reduce the likelihood of sharp corrections in asset values. For this reason, the third target variable that the Bundesbank takes into account when calculating OPPs is the volatility of the monetary policy interest rate.

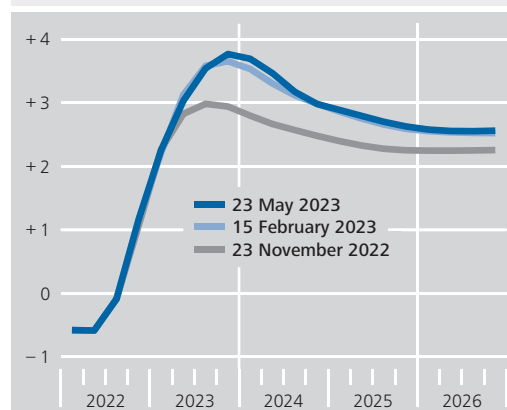
*Target variables are weighted ...*

Depending on the economic situation, these target variables may be at odds with one another. One prototypical example of this is the impact of a supply shock that causes both higher inflation and an economic downturn (e.g. an unexpected rise in energy prices). In this case, the goal of combating the excessively high inflation following such a shock is – all else being equal – at odds with the goal of preventing the economic downturn from becoming longer or more severe. The target variables therefore need to be traded off within the context of monetary policy decision-making, which means that the target variables each have to be assigned suitable relative weightings.

*... using a loss function*

This is done by means of a (formal) loss function, which represents the relative priority of each target variable within the context of the monetary policy mandate.<sup>9</sup> Here, “loss” refers to the margin by which the monetary policy targets are missed. The further the target variables deviate from their target values, the greater the loss. The weighting assigned to the target variables within the loss function determines the degree to which the (squared) deviations of the individual target variables from their respective target values affects the overall loss. Not only the target variables’ current val-

**Expected path of the euro short-term rate (€STR) at different points in time**



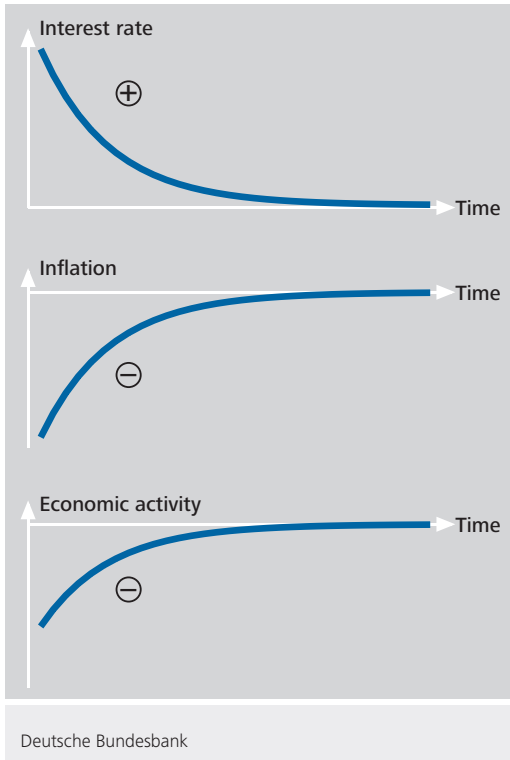
Source: ECB.  
 Deutsche Bundesbank

ues, but their future values as well, are factored into the loss function. This intertemporal approach takes account of the fact that monetary policy does not act statically but rather in a dynamic environment, weighing current and future developments against each other. Through its decisions, monetary policy only has a limited impact on the current (prevailing) economic situation. Instead, it exerts its main influence on future economic activity and the inflation rate over the medium term. This implies that a complex trade-off needs to be achieved: for example, a (sharp) rise in interest rates may be conducive to the aim of lowering inflation in the near future. At the same time, though, that (sharp) rise in interest rates should also not result in the rate of inflation falling significantly short of its target further down the line. The

<sup>8</sup> Financial stability ensures reliable and predictable transmission of monetary policy to all economic agents. For more information on the role of financial stability in monetary policy, see Deutsche Bundesbank (2021).

<sup>9</sup> In stylised (structural) macroeconomic models, it is possible to derive a loss function that, when minimised, maximises welfare for the economic agents in the model (see Woodford (2003) and Galí (2015)). However, since the model used should be consistent with the stylised facts on monetary policy and thus comprises many model blocks (see Gerke et al. (2022)), it is not possible to derive such a micro-founded loss function for this model. Instead, a loss function that can be supported directly by the monetary policy mandate of the Eurosystem – as shown – is used. The formal representation of a loss function is documented in Dengler et al. (2024).

**Stylised representation of the impact of a rise in interest rates in the form of impulse responses**



aim of this trade-off, then, is to stabilise the target variables optimally overall.

**Expected development of target variables and monetary policy interest rate**

*Component 2: projections for target variables*

The second component in the calculation of OPPs is an assessment of how the target variables are likely to develop for given market expectations about the path of the monetary policy interest rate. This assessment is based on time series from the Eurosystem’s macroeconomic projections – the (broad) macroeconomic projection exercises ((B)MPEs) produced by Eurosystem staff on a quarterly basis.<sup>10</sup> The current (B)MPE at each point in time contains the projected path of the inflation rate and of economic activity in the euro area, operationalised as the annual rates of change in the Harmonised Index of Consumer Prices (HICP) and real gross domestic product (GDP), respectively.

The (B)MPE is based on, inter alia, financial market expectations regarding the development of the monetary policy interest rate over the projection horizon at each point in time (see the chart on p. 41). Projections and market expectations derived from (B)MPEs are a key point of reference for the OPPs. As mentioned above, the OPPs answer the question of how the ECB Governing Council should deviate from these baseline time paths in order to optimally fulfil the monetary policy mandate (i.e. to minimise the loss function).

**Estimated impact of monetary policy on target variables**

The third component in the calculation of optimal interest rate paths is the quantitative estimation of the impact of monetary policy. In particular, the impact of a change in the monetary policy interest rate path on the target variables of the loss function must be calculated. Here, the focus is on the causal effect of an interest rate path change for monetary policy purposes: how are target variables affected when monetary policy alters the interest rate path compared with a scenario in which it is left unchanged?

*Component 3: quantifying the impact of monetary policy*

This question is answered in the form of impulse responses, i.e. specific time paths. These reflect the impact of an isolated, one-time impulse (in this case, a change in the interest rate) over a specific time horizon.<sup>11</sup> The adjacent chart schematically illustrates such an impulse response: a (temporary) interest rate hike that is implemented “today” and dissipates after a certain amount of time will typically cause a

<sup>10</sup> The Eurosystem’s macroeconomic projections are available to the public at <https://www.ecb.europa.eu/pub/projections/html/index.en.html>. A guide to the Eurosystem’s macroeconomic projection exercises can be found at <https://www.ecb.europa.eu/pub/pdf/other/staffprojectionsguide201607.en.pdf>. MPEs are published by ECB staff in March and September, while BMPEs are published by staff of the wider Eurosystem in June and December.

<sup>11</sup> A variety of impulse responses are necessary to calculate optimal paths; see Dengler et al. (2024).

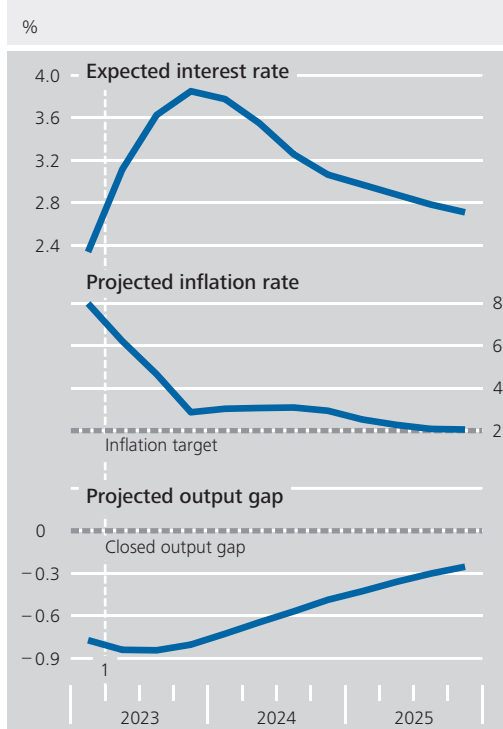
(temporary) decline in the inflation rate and macroeconomic activity.<sup>12</sup>

*Macroeconomic model captures impact of monetary policy*

A macroeconomic model is needed to quantify the causal effect of a change in the interest rate using impulse responses. This model must capture the relationship between the interest rate and other macroeconomic variables (and thus also the target variables) in an empirically plausible fashion. In principle, both purely empirical, comparatively atheoretical, time series models (such as vector autoregressive models<sup>13</sup>) and more theory-based structural models (such as dynamic stochastic general equilibrium (DSGE) models) are suitable for this purpose. When calculating optimal interest rate paths, which is the primary focus of this article, DSGE models offer certain conceptual advantages over purely empirical models. In particular, the calculation incorporates not only the effect of an immediate change in interest rates (as illustrated in the chart on p. 42), but also the effect of anticipated interest rate changes at future points in time (sometimes referred to as “news shocks”).<sup>14</sup> Whilst in monetary policy practice these effects can only be determined to a limited extent and approximately at best using empirical models, they can be quantified relatively easily and model-consistently using DSGE models.<sup>15</sup> DSGE models thus yield an analytically consistent input derived from “first principles” for the calculation of OPPs that provide analytically rigorous and transparent support for monetary policy decision-making that is consistent over time.<sup>16</sup>

All the components needed for the calculation of OPPs are at hand, then: optimal interest rate paths can be calculated using the weighted target variables within the loss function, projections of the future path of the target variables, and the estimated impact of monetary policy.<sup>17</sup>

**Market expectations of the interest rate path, projected inflation and output gap according to the June 2023 BMPE**



Source: ECB. **1** Beginning of projection horizon: Q2 2023. Deutsche Bundesbank

**12** Given empirically estimated impulse responses, the strongest effects of a change in the interest rate usually only occur with a time lag of around one to two years. See, inter alia, Christiano et al. (1999, 2005) and the literature that builds on this. See also Monetary Policy Committee, Taskforce on Rate Forward Guidance and Reinvestment (2022). The DSGE model described below reproduces such a time lag.

**13** VAR models are presented and applied in, inter alia, Deutsche Bundesbank (2023b, 2023c). For an introduction to this concept, see Kilian and Lütkepohl (2017).

**14** The reason for this is, to put it simply, that a (scaled) impulse response, as shown in the chart on p. 42, is not always sufficient to “hit” the best possible time path of the target variables. Rather, linear combinations of impulse responses to immediate and future monetary policy shocks are needed. See Dengler et al. (2024) for details.

**15** For approaches to calculating approximate OPPs using empirical models, see Barnichon and Mesters (2023) and McKay and Wolf (2023).

**16** In this context, “first principles” means the use of a general equilibrium model that is microfounded and is built on maximising utility for households and profits for firms.

**17** A clear distinction should be made between OPPs and time paths based on Taylor rules (the latter derive their name from the original Taylor rule (Taylor (1993))). Taylor rules are simple rules that describe how the interest rate is set as a function of different variables (current inflation and GDP are often used). They are usually estimated on the basis of historical data, and their aim is to capture monetary policy decisions as well as possible (mostly ex post). However, the Taylor rules differ fundamentally from OPPs in that they are not subject to any optimisation procedures. In other words, Taylor rules do not answer the question of how monetary policymakers should set the interest rate. This, in turn, is a distinguishing feature of OPPs.

## Illustration of optimal interest rate paths for preparing monetary policy decisions based on the June 2023 BMPE projections

*Illustration of methodology based on June 2023 macroeconomic projections*

The following section presents, as an example, a calculation of OPPs based on the June 2023 BMPE projections. For didactic purposes, we begin with the assumption that the monetary policy interest rate was the sole monetary policy instrument in active use by the Eurosystem at that time.

### Macroeconomic projections, model and weighting of target variables

*Monetary policy debate in June 2023 influenced by the then current BMPE; according to BMPE, inflation rate still too high and economic activity simultaneously sluggish*

The macroeconomic projections for the euro area (hereinafter referred to as the June 2023 BMPE) were a key component of the June 2023 monetary policy deliberations. These provided the time series required for the loss function target variables of the OPPs. The June 2023 BMPE projected HICP inflation rates well above the 2% target for multiple successive quarters. At the same time, the expected path of economic activity was assessed to be relatively weak. This was reflected in a negative projected output gap, which operationalises economic activity as a target variable in the context of the OPP calculations.<sup>18</sup> With regard to the monetary policy interest rate, operationalised by the interest rate on the deposit facility, market participants expected in June that this rate would rise from its level of 3.25% at that time to around 3.75% within the next few quarters.<sup>19,20</sup> The chart on p. 43 illustrates the path of the three target variables over time, first as realised values up to the first quarter of 2023 and thereafter as projected values according to the June 2023 BMPE.

To calculate OPPs from the June projections, a representative macroeconomic DSGE model was used to quantify the necessary impulse re-

sponses.<sup>21</sup> The model is based on the currently prevailing paradigm in monetary policy analysis, a New Keynesian model framework, which has become a standard in the academic literature and the international monetary policy debate.<sup>22</sup> The impulse responses describe how an interest rate increase leads – with a time lag – to a decline in the output gap and the inflation rate.<sup>23</sup> Although analysis in the context of the New Keynesian model produces an aggregated and thus simplifying representation of monetary policy transmission, it does allow for a consistent derivation of monetary policy recommendations based on a coherent theoretical framework, as stated above.

*New Keynesian DSGE model allows for quantification of monetary policy measures*

The last step is to select the weights assigned to the target variables in the loss function. The weighting assigned to deviations in the infla-

<sup>18</sup> The output gap is defined as the percentage deviation of real GDP from potential output. Potential output is calculated using a production function approach as part of the Eurosystem's projections. A negative output gap suggests a tendency towards underutilisation of resources, whilst a positive output gap signals a tendency towards an overheating economy.

<sup>19</sup> Here, market expectations relate to the money market rate (euro short-term rate (€STR)), which closely tracks the Eurosystem interest rate on the deposit facility (see Deutsche Bundesbank (2020)).

<sup>20</sup> As the Eurosystem usually changes monetary policy interest rates only by (multiples of) 0.25 percentage point, concrete figures for interest rate time series are, in accordance with this practice, rounded to the nearest possible monetary policy value (3.5%, 3.75%, 4%, etc.) in the following.

<sup>21</sup> The parameters of this model were estimated using macroeconomic data from the euro area. As mentioned above, broadly atheoretical time series models could also be used, in principle. Dengler et al. (2024) document that the Bundesbank also calculates OPPs for other models.

<sup>22</sup> The model contains the model blocks common in the literature. It is a DSGE model containing two types of households (those with and those without access to credit markets), firms experiencing pricing frictions and trade unions that are subject to wage-setting frictions, as well as a banking sector with financing frictions and a government. Households behave with bounded rationality. For details, see Gerke et al. (2022) and Dobrew et al. (2023), and for additional applications of DSGE models in monetary policy analysis, see Deutsche Bundesbank (2021).

<sup>23</sup> Put simply, households reduce their consumption expenditure in the model when the interest rate rises, as saving is more worthwhile when interest rates are higher. At the same time, firms invest less, as higher lending rates make borrowing more expensive. The reduced economic capacity utilisation (output gap) ultimately causes firms to lower their goods prices, resulting in lower inflation rates. Analogously, an interest rate reduction leads to higher inflation and increased economic activity.

tion rate from target is normalised to one, while the output gap is weighted at 0.25 and interest rate changes at 3.<sup>24</sup>

## Monetary policy discussion in June 2023 and OPPs

*Public debate on further interest rate hikes in June 2023 and beyond*

The June 2023 BMPE illustrates a prototypical monetary policy trade-off: taken in isolation, the inflation projection in June indicated the need for an even tighter monetary policy. Economic developments, by contrast – once again taken in isolation – indicated that a significant further tightening of monetary policy was not warranted.

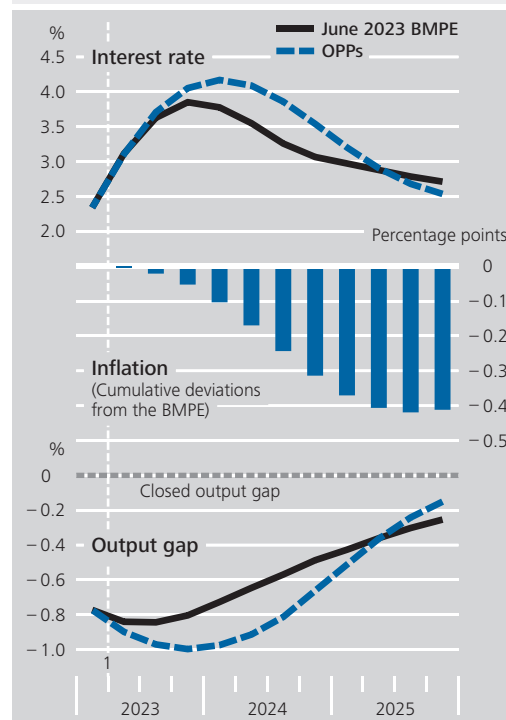
*Optimal interest rate path in June 2023 initially in line with market expectations: further interest rate step optimal*

The public debate ahead of the ECB Governing Council's June 2023 monetary policy meeting reflected this trade-off. Markets considered it very likely that the monetary policy interest rate would be raised by a further 0.25 percentage point to 3.5% at the meeting. But there was intense debate surrounding the interest rate's path beyond that, particularly its peak (also known as the terminal rate). Back then, the Bundesbank's OPP calculations indicated that further interest rate increases were warranted, including beyond the level expected by markets at that time. This is illustrated by the blue lines in the adjacent chart, which plot the optimal path of the monetary policy interest rate and the resulting OPP paths of the inflation rate and the output gap.<sup>25</sup> The OPP calculations suggest that the optimal interest rate path initially tracks the path expected by markets fairly closely. Taken in isolation, this indicated that the additional interest rate step of 0.25 percentage point expected by the majority of the market should be decided at the June meeting.

*Subsequent divergence: optimal interest rate path higher than path expected by markets*

Over time, however, the optimal and market-expected interest rates diverged. At a peak of around 4.25%, the optimal interest rate path at that time overshoot the path expected by markets. This more restrictive time path would have contributed to lowering the high inflation rates more quickly (middle panel of the chart

### Optimal policy projections (OPPs) based on the June 2023 BMPE



1 Beginning of optimal policy projections: Q2 2023.  
 Deutsche Bundesbank

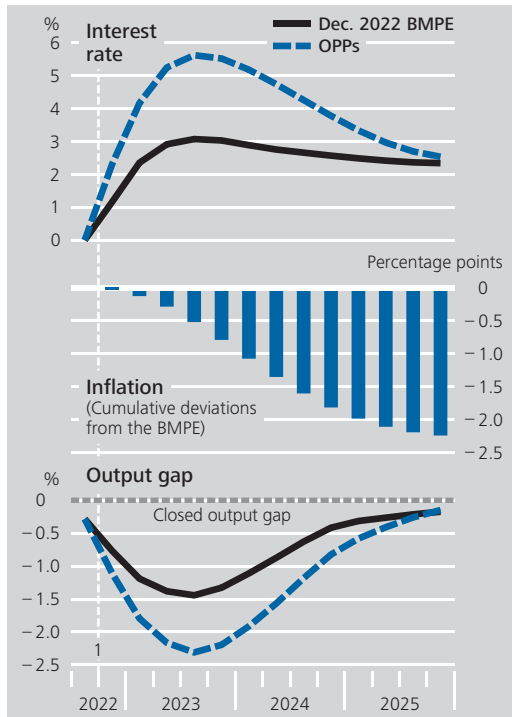
above), but at the expense of a more pronounced fall in the output gap (lower panel of said chart). Based on this rationale, the model-theoretical optimisation procedure of the OPPs assessed the monetary policy trade-off as being somewhat more strongly aligned towards combating inflation than implicitly suggested by market expectations. At the same time, an even larger direct interest rate step of 0.5 percentage point in June would not have been optimal from the perspective of the OPP calculations. While this would have lowered the inflation path further still, it would have done the same with the output gap. For the chosen

<sup>24</sup> These weights are derived from the macroeconomic literature (see, for example, Galí (2015), de Groot et al. (2021) and Harrison and Waldron (2021)). The (fairly high) weighting of 3 assigned to interest rate changes is necessary to avoid excessive volatility in market interest rates. A sensitivity analysis is carried out on pp. 48 ff. in which the relative weighting assigned to the output gap in the loss function varies.

<sup>25</sup> For greater clarity, the path of inflation rates is shown in the following as a cumulative deviation from the BMPE and over time.



### Optimal policy projections (OPPs) based on the December 2022 BMPE



1 Beginning of optimal policy projections: Q4 2022.  
 Deutsche Bundesbank

weighting of the target variables, this would have worsened the value of the loss function.<sup>26,27</sup> Lastly, not raising interest rates at all or announcing the end of interest rate hikes at the market-expected level of around 3.75% would have likewise worsened the value of the loss function.

*Optimal interest rate path in June 2023 points to necessary interest rate step and additional tightening in future*

The takeaway from the OPPs for the ECB Governing Council’s June 2023 meeting, then, was that there was a case for monetary policy to further increase the interest rate from 3.25% to 3.5% and that further increases of the interest rate in future should not be ruled out.

## Alignment of market expectations and optimal interest rate paths

The optimal interest rate path and the one expected by financial markets were closely aligned at the beginning of the projection

period, but that has not always been the case in the past two years. Rather, the very high inflation rates – particularly at their peak in autumn 2022 and based on the Bundesbank’s OPP calculations – generally made a tightening of monetary policy that was stronger and faster than expected by markets appear to be warranted. The adjacent chart illustrates this and compares market expectations and projections from the December 2022 BMPE with the optimal interest rate paths calculated internally by the Bundesbank at the time. On the one hand, it becomes clear that the interest rate path expected by financial markets was still quite low at the time, with a peak of 3%. Given the very high inflation rates, the optimal interest rate path calculated then was significantly higher (peak of 5.5%). On the other hand, unlike the picture in June 2023, the optimal interest rate path was already inclining considerably more steeply towards its peak at an early stage. Taken together, these factors would have led to a faster decline in the inflation rate, albeit accompanied by a stronger decline in macroeconomic activity than projected at the time by the BMPE based on market expectations.<sup>28</sup>

*Optimal interest rate path significantly steeper and higher in December 2022 than market expectations*

## Sensitivity analyses and scenarios in monetary policy decision-making

Calculating optimal interest rate paths hinges on numerous factors, particularly the underlying projections or the prioritisation of monetary policy objectives. We will therefore illustrate

<sup>26</sup> The incorporation of financial stability risks, operationalised by the smallest possible changes in interest rates, also suggested that the interest rate path should be as “smooth” as possible and therefore that an even greater increase in interest rates was not warranted.

<sup>27</sup> The choice of weights is discussed on pp. 45 f.

<sup>28</sup> The maximum of the optimal monetary policy interest rate in the June 2023 calculation is significantly lower than in December 2022. This is mainly on account of the intention to smooth the interest rate. As the interest rate was not raised as quickly and significantly as was suggested in the December 2022 OPPs, it “only” stood at 3.25% in June 2023. The December 2022 OPPs had already set the interest rate higher than 5% at this point in time, allowing it to slowly fall again shortly thereafter.



below how sensitivity and scenario analyses can be used to test the robustness of the derived optimal interest rate paths. Here, “robustness” means that the optimal interest rate path does not change significantly if at least one of the underlying assumptions is changed.<sup>29</sup>

## On the sensitivity of projections

*Sensitivity analyses regarding the BMPE baseline*

Euro area monetary policy operates in a constantly evolving and thus uncertain environment. In terms of the OPPs, uncertainty is primarily inherent in macroeconomic projections. By construction, these projections are based on a variety of assumptions – such as on the future path of oil and energy prices, expected exchange rates and assumptions regarding wage developments and corporate profits. There is a high probability that the assumptions will not materialise as expected, meaning that the paths of HICP inflation rates and the output gap will diverge from those projected by Eurosystem staff. Hence, future developments that deviate from the projections can lead to different monetary policy conclusions.

*Alternative scenario of stronger increases in energy prices or wages*

It is common for alternative scenarios to be analysed and discussed as a way of explicitly factoring projection uncertainty into monetary policy deliberations.<sup>30</sup> We assume below, for illustrative purposes, that energy prices or wages rise more strongly than assumed in the June 2023 BMPE, both of which would lead to even higher inflation rates than those projected in the BMPE. However, whether or not this directly results in a tighter monetary policy stance, expressed as a steeper interest rate path, depends in part on the assumptions made in these alternative scenarios regarding the other variables in the loss function, particularly economic developments. In the stylised alternative scenario described below, higher wage and energy costs lead to higher goods prices and even weaker economic growth, causing the output gap to decline further. The light blue lines in the upper two panels of the chart on p. 48

show how the alternative scenario contrasts with the baseline scenario.

The three lower panels of the chart on p. 48 show the optimal path of the monetary policy interest rate, as well as the resulting OPPs of the inflation rate and the output gap, and compare them with the baseline scenario.

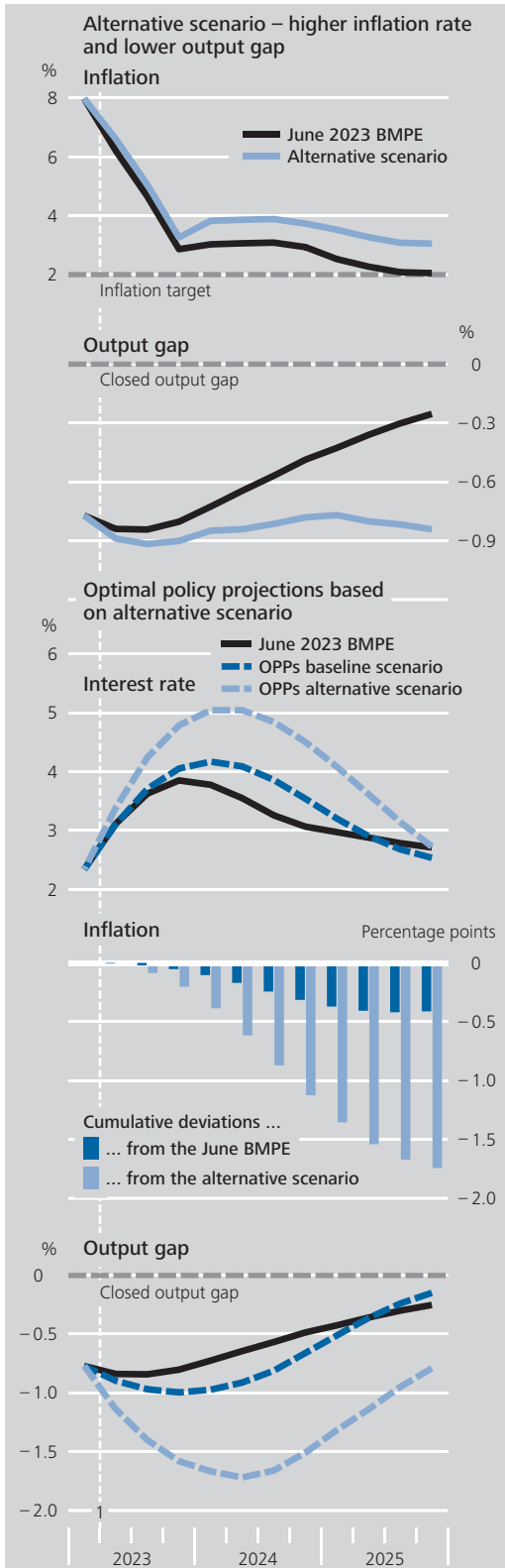
The monetary policy trade-off in this alternative scenario is even more acute than in the baseline scenario. The higher inflation rates require, taken in isolation, an even higher interest rate path, while the more strongly negative output gap – taken in isolation – calls for a flatter interest rate path. Just how the trade-off can be optimally resolved depends on the relative weights in the loss function (which are discussed in the next section) and the specific time paths for the output gap and inflation rate. In the alternative scenario presented here, optimal monetary policy implies a tighter trajectory: the optimal interest rate path in the alternative scenario (light blue dashed line in the third panel of the chart on p. 48) peaks at around 5%, leaving it roughly 0.75 percentage point above the peak of the optimal interest rate path in the baseline scenario described above (dark blue dashed line). The tighter monetary policy stance causes inflation to fall more sharply (light blue bar in the fourth panel) and a more strongly negative output gap (bottom panel) than in the baseline scenario.

*Scenario requires tighter monetary policy*

<sup>29</sup> In this context, the monetary policy literature sometimes also follows a “robust control” approach, i.e. an approach in which a given monetary policy decision is intended to minimise the maximum possible loss given uncertainty about assumptions or scenarios. This is done using a min-max criterion; see the seminal work of Hansen and Sargent (2005, 2008). Such calculations are performed regularly at the Bundesbank when preparing monetary policy meetings.

<sup>30</sup> For instance, an alternative energy price scenario was discussed in Box 3 of the June 2023 BMPE. See European Central Bank (2023).

### Optimal policy projections (OPPs) for the alternative scenario based on the June 2023 BMPE



1 Beginning of projection horizon and optimal policy projections: Q2 2023.  
 Deutsche Bundesbank

## Sensitivity with respect to the weights in the loss function

The weights in the loss function express, in a highly condensed form, the prioritisation of monetary policy target variables – especially if a trade-off needs to be made between objectives. However, in monetary policy practice, using a loss function entails challenges. One is that a specific weighting of target variables cannot be unambiguously derived from the Eurosystem’s mandate. Another is that a single concrete weighting of target variables in the loss function, when done in isolation, can only approximate and hence incompletely describe how the ECB Governing Council achieves an optimal trade-off within the meaning of its monetary policy mandate. One way of better capturing these complex trade-offs in model theory is therefore to vary the weights of the loss function. This way, alternative OPPs can be generated. Constructing alternative OPPs offers the advantage of allowing the monetary policy trade-offs to be made from complementary perspectives. Above and beyond that, Eurosystem decision-makers are also able to discuss alternative policy projections that were not constructed as OPPs.<sup>31</sup> In this sense, then, there is a certain degree of discretion when choosing the weights of the target variables. Therefore, to give greater regard to the ECB Governing Council’s considerations and trade-offs, it is standard practice to calculate alternative OPP paths when generating OPPs, based on different weightings being assigned to the target variables in the loss function.

*Sensitivity analysis with regard to the weight of the output gap*

As already explained, an initial benchmark calculation (baseline analysis) generally applies weights that are commonplace in the academic literature. From these are derived the already-shown OPPs, which are depicted once again in

31 See Svensson (2010), p. 1260. Moreover, prioritisation need not always nor necessarily be consistent across various decision-makers. Indeed, the Treaty on the Functioning of the European Union does not precisely define the exact numerical targets that can be derived from the mandate for the individual target variables of the loss function.

the adjacent chart by the solid dark blue lines and bars. If the weight of the output gap is now varied based on the June 2023 BMPE, we can see how this affects the OPPs for the monetary policy interest rate, output gap and inflation rate.<sup>32</sup>

*Output gap given a low weight: central bank is “hawkish” and optimal interest rate path is steeper*

If monetary policy gives the output gap a lower weight (“hawkish”), it would be willing to tolerate a stronger economic downturn in order to achieve price stability. Thus, the optimal interest rate path in the adjacent chart in the “hawkish” scenario (blue thick dashed line) peaks at around 5%. That is 0.75 percentage point more than in the baseline analysis and around 1.25 percentage points more than expected by markets in June 2023 (black line). A tighter monetary policy stance of that kind brings about, with a time lag, stronger disinflation and thus a faster return to the inflation target. It also leads, however, to a more strongly negative output gap than had been projected in the June BMPE.

*Output gap given a high weight: central bank is “dovish” and optimal interest rate path is flatter*

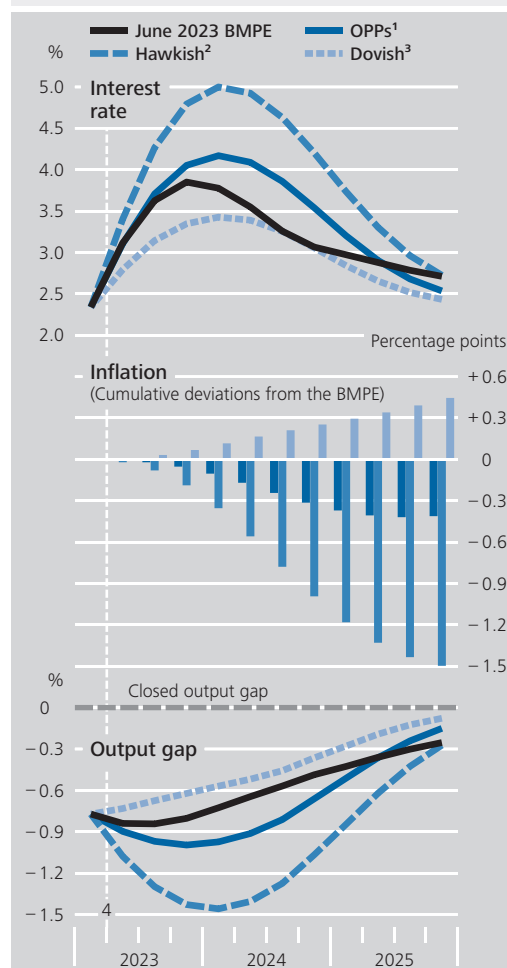
Similarly, OPPs can be calculated based on a high relative weight being assigned to the stabilisation of the output gap (light blue fine dashed line; “dovish”). That kind of weighting would specifically avoid a stronger decline in the output gap, but at the same time, the inflation rate would return to target more slowly than in the baseline analysis (light blue bars in the middle panel of the adjacent chart). In this case, the optimal interest path does not surpass the 3.5% mark.

## Incorporation of additional monetary policy instruments

*Monetary policy has multiple instruments*

Thus far, we have assumed, for the sake of simplicity, that the ECB Governing Council has only a single instrument, the interest rate. This assumption is not strictly necessary, as the methodology for calculating OPPs is flexible enough to accommodate multiple instruments – provided, however, that it is possible to measure the impact of each instrument on the econ-

### Sensitivity analysis looking at weighting of output gap



**1** Optimal policy projections. **2** In the “hawkish” scenario, the weight given to the output gap is halved. **3** In the “dovish” scenario, the weight given to the output gap is doubled. **4** Beginning of optimal policy projections: Q2 2023. Deutsche Bundesbank

omy, i.e. the corresponding impulse responses, using a macroeconomic model.<sup>33</sup>

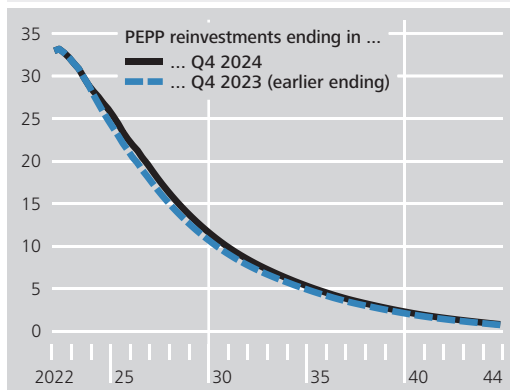
In the past era of low inflation rates, broadly based asset purchase programmes were implemented as additional monetary policy instruments in an attempt to shore up aggregate de-

<sup>32</sup> Comparable sensitivity analyses can be conducted in the same way for the weighting of interest rate changes in the loss function.

<sup>33</sup> The DSGE model explained above can model not only the impact of conventional interest rate policy measures but also the impact of central bank asset purchases or sales on economic activity and inflation. It is therefore suitable for deriving optimal paths for multiple monetary policy instruments.

### Impact of ending PEPP\* reinvestments earlier

Securities holdings as a percentage of the total envelope<sup>1</sup>



\* Pandemic emergency purchase programme. <sup>1</sup> In terms of ten-year equivalents.  
 Deutsche Bundesbank

*Effects of the accumulation and reduction of asset holdings on the central bank's balance sheet*

mand and bring the inflation rate closer to the 2% target. Two of the most important purchase programmes in the euro area are the asset purchase programme (APP), which was officially launched in March 2015, and the pandemic emergency purchase programme (PEPP), which was announced and implemented in March 2020 in response to the COVID-19 pandemic.<sup>34</sup> In a high-inflation environment, these programmes are gradually being phased out. Thus, as of June 2023, the principal payments from maturing securities purchased under the APP are no longer being reinvested, while reinvestments under the PEPP are scheduled to be discontinued at the end of 2024.

A reduction of the assets held on the central bank's balance sheet contributes to a tight monetary policy stance and has a correspondingly dampening impact on inflation and economic activity.<sup>35</sup> In principle, then, a (stronger) reduction in asset holdings could substitute potential interest rate hikes. When calculating OPPs, we can therefore also investigate the extent to which an accelerated reduction of asset holdings adds to the impact of potential interest rate hikes or even renders them unnecessary.

To illustrate this point, let us assume that PEPP reinvestments are discontinued in Q4 2023 –

that is, earlier than the Q4 2024 expiry date expected by most market participants in June. The adjacent chart shows the alternative path of the asset holdings compared with the path expected by markets at the time. In the present example, ending reinvestments earlier has a comparatively small impact on the expected reduction path for asset holdings.<sup>36</sup> As households and firms, bearing this in mind, expect only a marginally tighter monetary policy stance with regard to the reduction path, they would reduce their consumer expenditure and investment, respectively, only marginally in the context of the macroeconomic model. Accordingly, this would entail a comparatively minor impact on the inflation rate, economic activity and the optimal interest rate path.<sup>37</sup> This would be less than 0.1 percentage point below the optimal interest rate path shown in the previous section, for the calculation of which only the interest rate was permitted as a monetary policy instrument. It could therefore be concluded from this alternative calculation that ending PEPP reinvestments earlier, taken in isolation, could have contributed to a tighter monetary policy stance. However, the macroeconomic effects would have been comparatively minor, meaning that a further interest rate hike would still have been appropriate from a monetary policy perspective.

*Scenario: ending PEPP reinvestments earlier*

<sup>34</sup> The APP was launched at the effective lower bound on interest rates as an additional expansionary instrument in an era of a subdued inflation outlook and falling inflationary expectations. The PEPP was introduced in response to the COVID-19 pandemic and its economic fallout in order to prop up financing conditions and ensure economic stability during the crisis.

<sup>35</sup> This takes place through a variety of channels. For a discussion of the channels, see, for example, Deutsche Bundesbank (2016). One key channel, the announcement effect (also known as the stock effect) is discussed in Gerke et al. (2022).

<sup>36</sup> The primary reason for the small impact on the expected reduction path is that only a small volume of assets are affected by the premature end of reinvestments relative to the stock of assets still held by the Eurosystem.

<sup>37</sup> To isolate the effect of the presented alternative reduction path on the optimum interest rate in the model, the deviation of this alternative reduction path from market expectations is fed into the model. So, although in formal terms two monetary policy instruments – the interest rate and asset holdings – are available in this analysis, only the time path for the interest rate is optimally chosen.

## ■ Conclusion

*OPPs represent the optimal compromise within the monetary policy trade-off process*

Building on the Eurosystem’s quarterly projections, macroeconomic models can be used to derive OPPs that aim to optimally fulfil the Eurosystem’s monetary policy mandate. Here, OPPs serve as a basis for discussion and support decision-making in the context of the complex process of preparing monetary policy decisions. Their key advantage lies in allowing the monetary policy trade-off process to be modelled consistently by describing the optimal compromise between monetary policy trade-offs from the standpoint of model theory.

*OPPs widely used as an input in monetary policy discussion but should not be construed as sole recommended course of action, as they ...*

The calculation of OPPs as an input in monetary policy decision-making feeds not only into the monetary policy discussions within the Bundesbank or the Eurosystem. Other central banks, too, such as the US Federal Reserve, the Bank of England, Norges Bank and Sveriges Riksbank, calculate and publish OPPs for their respective currency areas.<sup>38</sup> Common to all of them is that they emphasise the utility of OPPs in monetary policy decision-making, yet are also cognisant of the risks associated with overreliance on the monetary policy implications they involve.<sup>39</sup> OPPs do not serve as a direct recommendation for a specific course of action in monetary policy decision-making, as they are naturally based on assumptions whose realisation is uncertain. Accordingly, there is an inherent uncertainty about OPPs that monetary policy decision-makers must bear in mind.

*... are conditional on certain macroeconomic projections and decision-makers’ priorities and ...*

For example, it is effectively assumed when calculating OPPs that the macroeconomic projection will actually materialise. Uncertainty surrounding the macroeconomic projections is therefore disregarded initially, though it can, as explained above, generally be taken into account using sensitivity analyses. There is also some discretionary scope as to how precisely the ECB Governing Council achieves the optimal trade-off between the monetary policy target variables. In other words: there is a degree of uncertainty surrounding monetary policy decision-makers’ priorities (i.e. ultimately the

weights assigned within the loss function). For that reason, it is generally a good idea to test the robustness of the results in this regard.

Moreover, there is, in principle, a degree of uncertainty about the functioning and strength of monetary policy at a given point in time, something the ECB Governing Council particularly highlighted in the context of its most recent decisions.<sup>40</sup> The impulse responses used to calculate OPPs initially reflect the cause-and-effect relationships observed in the past. Any change in the cause-and-effect relationships when calculating OPPs can therefore only be considered to an approximate degree.<sup>41</sup> The same applies for non-linear transmission channels of monetary policy decisions.<sup>42</sup>

Given that a raft of assumptions are used to underpin OPPs, they should therefore only be regarded as a contribution, albeit a notable one, to the monetary policy decision-making process. The comparative advantage of OPPs over other analyses carried out in the decision-making process lies in their analytical rigour and transparency with regard to the assump-

*... changes and non-linearities in monetary policy transmission process are only approximately captured*

*OPPs to be understood as a notable element of the basis for discussion*

<sup>38</sup> The Federal Reserve’s Tealbooks, which contain an analysis of the US economy and descriptions of monetary policy alternatives, likewise derive optimal interest rate paths. For examples, see Board of Governors of the Federal Reserve System (2017). Calculations of optimal interest rate paths likewise feed into the monetary policy decision-making discussions of the Bank of England’s MPC; see Broadbent (2022).

<sup>39</sup> As Broadbent (2022) puts it: “One should always take the OPPs with a healthy dose of salt.”

<sup>40</sup> See, for example, the press release following the ECB Governing Council meeting of 26 October 2023: “The Governing Council’s past interest rate increases continue to be transmitted forcefully into financing conditions.”

<sup>41</sup> For example, in a first step, a steeper Phillips curve, as documented by Benigno and Eggertsson (2023), can be diagnosed using a (separate) time-varying VAR estimate. In the second step, the parameters of the DSGE model can be adapted such that the resulting impulse responses reflect the potentially altered monetary policy impact.

<sup>42</sup> Thus, for one thing, unusually strong (or a particularly rapid succession of) interest rate increases can contribute to firmly anchoring economic agents’ inflation expectations and to preventing them from being a cause of high actual inflation rates themselves. For another, unusually strong interest rate increases could trigger strong adjustments in financial markets and themselves represent a risk to financial intermediaries. The latter risk of a non-linear transmission channel (not explicitly incorporated into the model) is, as already explained, approximated via the preference for small interest rate fluctuations.

tions made and the prioritisation of objectives. That said, OPPs are not direct recommendations for monetary policy actions but serve as a basis for discussion and a point of reference for monetary policy decision-makers. OPPs help monetary policy decision-makers estimate, in a coherent and consistent fashion, the impact of

monetary policy alternatives on the expected development of the economy and the achievement of the monetary policy objective. Through this, OPPs can also contribute to an improved assessment of the proportionality of monetary policy decisions.

## ■ List of references

Arce, O., G. Koester and C. Nickel (2023), One year since Russia's invasion of Ukraine – the effects on euro area inflation, The ECB Blog, 24 February 2023, <https://www.ecb.europa.eu/press/blog/date/2023/html/ecb.blog20230224~3b75362af3.en.html>

Barnichon, R. and G. Mesters (2023), A Sufficient Statistics Approach for Macro Policy, *American Economic Review*, Vol. 113(11), pp. 2809-2845.

Benigno, P. and G. Eggertsson (2023), It's Baaack: The Surge in Inflation in the 2020s and the Return of the Non-Linear Phillips Curve, NBER Working Papers No 31197.

Board of Governors of the Federal Reserve System (2017), Report to the FOMC on Economic Conditions and Monetary Policy, Book A, <https://www.federalreserve.gov/monetarypolicy/files/FOMC20170201tealbooka20170123.pdf>

Broadbent, B. (2022), The inflationary consequences of real shocks, speech given at Imperial College London, published on 20 October 2022, <https://www.bankofengland.co.uk/-/media/boe/files/speech/2022/october/the-inflationary-consequences-of-real-shocksspeech-by-ben-broadbent-annex.pdf>

Christiano, L. J., M. Eichenbaum and C. L. Evans (2005), Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy, *Journal of Political Economy*, Vol. 113(1), pp. 1-45.

Christiano, L. J., M. Eichenbaum and C. L. Evans (1999), Monetary policy shocks: What have we learned and to what end?, *Handbook of Macroeconomics*, Chapter 2, Vol. 1, Part A, pp. 65-148.

de Groot, O., F. Mazelis, R. Motto and A. Ristinemi (2021), A toolkit for computing Constrained Optimal Policy Projections (COPPs), ECB Working Paper No 2555.

Dengler, T., R. Gerke, S. Giesen, D. Kienzler, J. Röttger, A. Scheer and J. Wacks (2024), A primer on optimal policy projections, Deutsche Bundesbank Technical Paper, forthcoming.

Deutsche Bundesbank (2023a), Falling inflation, but not yet time to sound the all-clear – outlook for the German economy up to 2026, Monthly Report, December 2023.

Deutsche Bundesbank (2023b), Heterogeneous impact of monetary policy in the euro area?, Monthly Report, September 2023, pp. 37-60.



Deutsche Bundesbank (2023c), From the monetary pillar to the monetary and financial analysis, Monthly Report, January 2023, pp. 15-51.

Deutsche Bundesbank (2021), The Eurosystem's monetary policy strategy, Monthly Report, September 2021, pp. 17-60.

Deutsche Bundesbank (2020), New benchmark rates, new challenges: introducing the €STR in the euro area, Monthly Report, March 2020, pp. 47-75.

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

Dobrew, M., R. Gerke, D. Kienzler and A. Schwemmer (2023), Monetary policy rules under bounded rationality, Deutsche Bundesbank Discussion Paper No 18/2023.

European Central Bank (2023), Eurosystem staff macroeconomic projections for the euro area, June 2023, [https://www.ecb.europa.eu/pub/projections/html/ecb.projections202306\\_eurosystemstaff~6625228e9f.en.html](https://www.ecb.europa.eu/pub/projections/html/ecb.projections202306_eurosystemstaff~6625228e9f.en.html)

European Central Bank (2021), An overview of the ECB's monetary policy strategy, [https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview\\_monpol\\_strategy\\_overview.en.html](https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_overview.en.html)

Galí, J. (2015), Monetary Policy, Inflation, and the Business Cycle, Princeton University Press.

Gerke, R., D. Kienzler and A. Scheer (2022), On the macroeconomic effects of reinvestments in asset purchase programmes, Deutsche Bundesbank Discussion Paper No 47/2022.

Hansen, L. and T. Sargent (2008), Robustness, Princeton University Press.

Hansen, L. and T. Sargent (2005), Robust estimation and control under commitment, Journal of Economic Theory, Vol. 124(2), pp. 258-301.

Harrison, R. and M. Waldron (2021), Optimal policy with occasionally binding constraints: piecewise linear solution methods, Bank of England Working Paper No 911.

Hebden, J. and F. Winkler (2021), Impulse-Based Computation of Policy Counterfactuals, Finance and Economics Discussion Series No 2021-042.

Kilian, L. and H. Lütkepohl (2017), Structural Vector Autoregressive Analysis, Cambridge University Press.

Lane, P. R. (2023), Disinflation and monetary policy in the euro area, dinner speech at the Money Marketeers of New York University, 21 September 2023.

Lane, P. R. (2022a), Bottlenecks and monetary policy, The ECB Blog, <https://www.ecb.europa.eu/press/blog/date/2022/html/ecb.blog220210~1590dd90d6.en.html>

Lane, P. R. (2022b), Inflation diagnostics, The ECB Blog, <https://www.ecb.europa.eu/press/blog/date/2022/html/ecb.blog221125~d34babdf3e.en.html>

McKay, A. and C. K. Wolf (2023), What Can Time-Series Regressions Tell Us About Policy Counterfactuals?, *Econometrica*, Vol. 91(5), pp. 1695-1725.

Monetary Policy Committee, Taskforce on Rate Forward Guidance and Reinvestment (2022), Rate forward guidance in an environment of large central bank balance sheets: a Eurosystem stock-taking assessment, Occasional Paper Series No 290, Revised Version, December 2022.

Nagel, J. (2022), The impact of the Russian aggression on inflation prospects and monetary policy's response, Closing keynote address at the International Economic Symposium co-hosted by the Deutsche Bundesbank and NABE, Eltville, Germany, 10 May 2022, <https://www.bundesbank.de/en/press/speeches/the-impact-of-the-russian-aggression-on-inflation-prospects-and-monetary-policy-s-response-890196>

Panetta, F. (2023), Getting disinflation right, speech given at Bocconi University, 3 August 2023.

Svensson, L. E. O. (2010), Inflation Targeting, *Handbook of Monetary Economics*, Volume 3, Chapter 22, pp. 1237-1302.

Svensson, L. E. O. (2005), Monetary Policy with Judgment: Forecast Targeting, *International Journal of Central Banking*, Vol. 1(1), pp. 1-54.

Svensson, L. E. O. and R. J. Tetlow (2005), Optimal Policy Projections, *International Journal of Central Banking*, Vol. 1, pp. 177-207.

Taylor, J. B. (1993), Discretion versus policy rules in practice, *Carnegie-Rochester Conference Series on Public Policy*, December 1993, pp. 195-214.

Woodford, M. (2003), *Interest and Prices: Foundations of a Theory of Monetary Policy*, Princeton, Princeton University Press.

## German enterprises' profitability and financing during the 2022 energy crisis

*The energy crisis and high-inflation environment impacted on non-financial enterprises' profitability in 2022. Materials costs soared as prices of intermediate goods and energy skyrocketed, while sales saw exceptionally robust growth. These developments left the pre-tax profit margin only slightly lower at 4.5%, but still well up on its long-term average. This would suggest that the in part huge cost increases have been largely passed on to customers.*

*Dramatic upticks in gas, electricity and crude oil prices in 2022 barely impacted on profitability in energy-intensive sectors. Only the chemicals and pharmaceutical industry saw net earnings shrink noticeably – albeit from a record level in the previous year. That industry and, to a limited extent, the wood, paper and printing industry, had a higher need for liquidity as well, but this was not detrimental to balance sheet stability. Overall, energy-intensive sectors coped well with the immediate financial fallout from the energy price shock at first.*

*The primary outcome for enterprises of the monetary policy tightening in 2022 was an increase in the cost of external funds and of servicing new liabilities. The staggered maturity profile of existing liabilities and the gradual increase in the key interest rate mean that the monetary policy impulse is being transmitted with something of a lag, and will only impact fully on enterprises' profitability and financing in 2023 and 2024. Germany's corporate sector is in good shape overall, in terms of its profitability, liquidity and stability, to rise to the challenges presented by the reversal of interest rates.*

*With the economy experiencing a bout of weakness, the energy crisis is likely to have greater effects on enterprises' costs in their 2023 annual financial statements than it did in 2022. The increased energy costs are still weighing primarily on energy-intensive industry. Moreover, output in export-driven parts of the economy, and thus above all manufacturing sales, is also suffering from lacklustre foreign demand. In addition, cost-side pressures are likely to remain intense owing to high wage settlements and increased funding costs across all sectors. On balance, these factors will probably weigh more heavily on enterprises' profitability in 2023.*

## ■ Underlying trends

*Catch-up effects mean German economy grew significantly in 2022 despite higher energy prices*

The German economy shrugged off the critical developments in energy markets brought about by Russia's war of aggression against Ukraine and expanded significantly in 2022. Buoyed by catch-up effects, real gross domestic product grew by a calendar-adjusted 1.9% on the year. As the year progressed, however, activity deteriorated, particularly on the back of sharply higher energy prices. On balance, this left German economic output still lagging behind its medium-term aggregate production capacity in 2022. But the below-potential output level was due not to an absence of aggregate demand, but in part to a variety of supply-side disruptions. These were transitory in nature and did more to dampen supply than demand in many sectors, driving strong price increases. The Bundesbank's concept of potential output, by contrast, is geared to a medium-term horizon, which means that it has limited scope to capture short-term supply effects of that kind. What is more, subdued demand and considerable increases in energy costs left German exporters operating amid less favourable global conditions. With most pandemic restrictions being phased out, private consumption registered substantial gains, while business investment also rose significantly on the year. But even so, construction investment continued to decline owing to higher construction and funding costs. Fiscal policy remained supportive, though somewhat less so than in the previous two years on account of the gradual rollback of government coronavirus support measures, which were replaced in part by extensive new measures addressing the energy crisis and high inflation.

*Gross profit margin in 2022 down slightly from high prior-year level*

Judging by the annual financial statements we currently have on file, the 2022 pre-tax profit margin, at 4.5%, was slightly down on the previous year's very high 5.1%, but still well up on the long-term average.<sup>1</sup> Materials costs soared as prices of intermediate goods and energy skyrocketed. However, it would appear that the in part huge cost increases were largely passed

on to customers, with the result that corporate sales likewise saw exceptionally robust growth and profitability did not suffer unduly. Profits remained high in 2022, and this is likely to have played a not inconsiderable role in the inflation observed last year.<sup>2</sup> The cost of materials was not the only expense item that increased; personnel expenses were also driven higher by staff growth, strong wage rises and other factors.<sup>3</sup> On the income side, other operating income saw significant growth, just as it had done in the previous two years.

With profitability still high and capital adequacy remaining sound, corporate insolvencies saw only a slight uptick in 2022 on a broad sectoral basis, leaving them at a very low level by historical standards. Corporate insolvencies had bottomed out in the previous year, partly on account of the temporary suspension, subject to certain conditions, of the requirement to file for insolvency.

*Corporate insolvencies up slightly in 2022 from low level*

## ■ Effects of the energy price shock

The energy price shock presented considerable challenges for energy-intensive manufacturing sectors in 2022, with the chemicals industry, manufacturers of glass and ceramic products, manufacturers of metals and the paper industry in particular coming under intense pres-

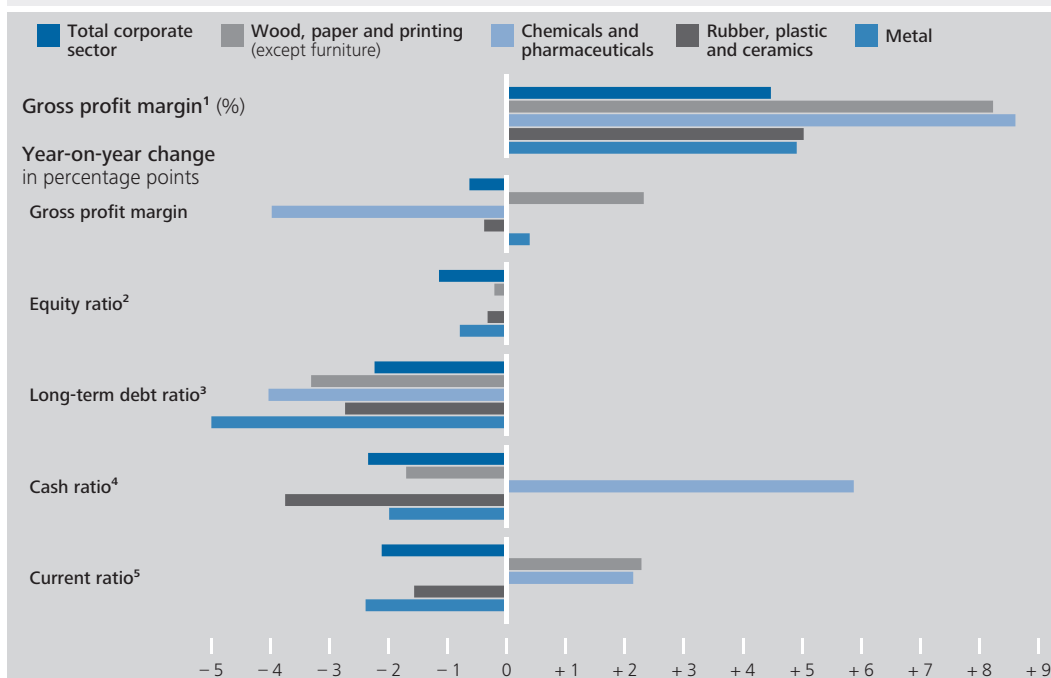
*Energy-intensive industrial sectors see output decline as energy prices rise dramatically*

<sup>1</sup> The analysis for 2022 is based on some 21,000 corporate annual financial statements, which were roughly extrapolated based on the evaluation of aggregate sales data from the business register.

<sup>2</sup> The gross profit margin was well above the long-term average in the hotel and restaurant sector, in the wood, paper and printing industry, construction, transportation and storage, and the electrical engineering industry in particular. Further information on the evolution of profit margins can be found in Deutsche Bundesbank (2023a).

<sup>3</sup> The strong year-on-year increase in wages can be traced back in part to the decline in short-time work.

### Profitability, liquidity and stability of the total German corporate sector and of energy-intensive economic sectors in 2022\*



\* Extrapolated results from corporate financial statement statistics. **1** Annual result before taxes/sales. **2** Equity/total assets. **3** Long-term liabilities/equity. **4** (Cash+short-term securities)/short-term liabilities. **5** (Cash+short-term securities+short-term receivables+inventories)/short-term liabilities.  
 Deutsche Bundesbank

sure.<sup>4</sup> Data from the Federal Statistical Office show that output in energy-intensive industries was down by around 7% on an annual average, with output at year-end even lagging almost one-fifth behind the previous year's level. This decline was particularly evident in the chemicals industry, while manufacturers of metals suffered somewhat smaller losses in output. The annual financial statements on file deliver key insights into how the energy crisis impacted on liquidity, stability and profitability in the corporate sector as a whole and in specific sectors.

pharmaceutical industry. Unlike in previous years of crisis, liquidity requirements did not generally increase, as firms chose to dip into the liquidity reserves they had set aside during the pandemic. The stability metrics exhibited broadly similar patterns as well, with the long-term debt ratio, amongst others, continuing to recede. The equity ratio was the only metric to deteriorate, mainly due to the soaring cost of intermediate inputs, which drove up the figure for trade payables, advance payments received on account of orders and, in some cases, liabilities to affiliated companies.

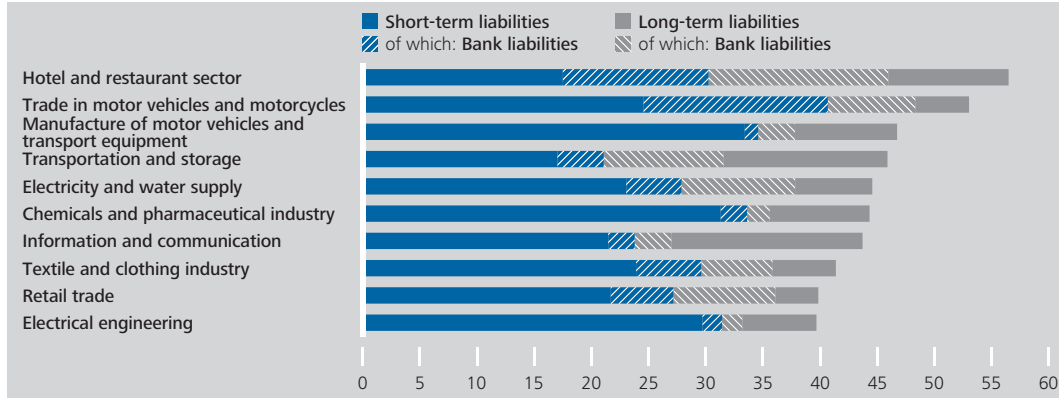
*Aggregate-level liquidity and balance sheet stability barely impacted by energy crisis, ...*

The energy crisis barely impacted on profitability and liquidity or solvency levels in the corporate sector in 2022. The cost of materials rose dramatically, in part due to higher energy costs, but profitability was hardly affected – probably, in first order, because the costs were largely passed on to customers.<sup>5</sup> There was also an uptick in other operating income, chiefly on the back of one-off factors in the chemicals and

**4** The manufacture of coke and refined petroleum products, which forms part of the manufacturing sector, is not reported separately in the annual financial statement statistics owing to the small number of firms. Besides some manufacturing sectors, the transportation sector also has a high level of energy intensity that is sourced almost exclusively from refined petroleum products, though German enterprises are likely to face fewer drawbacks in this area than international competitors.  
**5** See also Deutsche Bundesbank (2023b).

### Interest-bearing liabilities in selected sectors in 2022\*

As a percentage of total assets



\* Extrapolated results from corporate financial statement statistics. Interest-bearing liabilities=liabilities–trade payables–advance payments received on account of orders. Chart shows the ten sectors with the highest value of interest-bearing liabilities as a percentage of total assets.

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... with energy-intensive industries likewise barely impacted in this regard

Extrapolated data from the corporate annual financial statement statistics can also be used to draw conclusions about developments in energy-intensive industrial sectors.<sup>6</sup> As expected, materials costs rose more strongly in energy-intensive sectors than elsewhere in the corporate sector. The chemicals and pharmaceutical industry, which operates in a fiercely competitive international environment, appears to have had less scope to hike prices than other sectors. So although this sector saw its other operating income increase significantly, the gross profit margin was 4 percentage points down on the previous year's record level. However, this is likely to have been due, at least in part, to the pharmaceutical industry's profits returning to normal levels after the boost they had been given by the coronavirus pandemic. Despite the decline, sector profitability was close to its long-term average. The general patterns shown by liquidity and stability metrics were also reflected to a large degree in energy-intensive sectors. Only the chemicals and pharmaceutical industry and, to a limited extent, the wood, paper and printing industry saw their liquidity requirements increase.

Adjustment still needed in medium term

Energy-intensive sectors thus coped well, for the most part, with the direct financial impact of the energy price shock.<sup>7</sup> Declines in energy prices plus action to cap businesses' gas and

electricity prices will probably make a further contribution this year. But even so, the increased energy costs are dragging on Germany's corporate sector. With energy prices likely to remain permanently higher than both pre-energy-crisis levels and prices in other large economic areas like the United States, Bundesbank estimates suggest that they will continue to noticeably dampen the German economy's potential output in the coming years.<sup>8</sup>

### Corporate sector stable before interest rate reversal began

Against a backdrop of high inflation rates and increased inflation expectations, the European Central Bank (ECB) began to tighten its monetary policy stance in 2022. Net asset purchases under the pandemic emergency purchase programme (PEPP) and the asset purchase programme (APP) were discontinued as of the end

Monetary policy tightening drove up cost of external funds and of servicing new liabilities

<sup>6</sup> Under the proviso that the definition of energy-intensive sectors relates to sectoral aggregates that also include other (non-energy-intensive) sectors. The extrapolated data for 2022, however, show that energy-intensive industrial sectors accounted for between around four-tenths and three-quarters of the respective sectoral aggregates.

<sup>7</sup> See also simulations of the impact of energy price increases on the corporate sector in Deutsche Bundesbank (2023c).

<sup>8</sup> See Deutsche Bundesbank (2022).



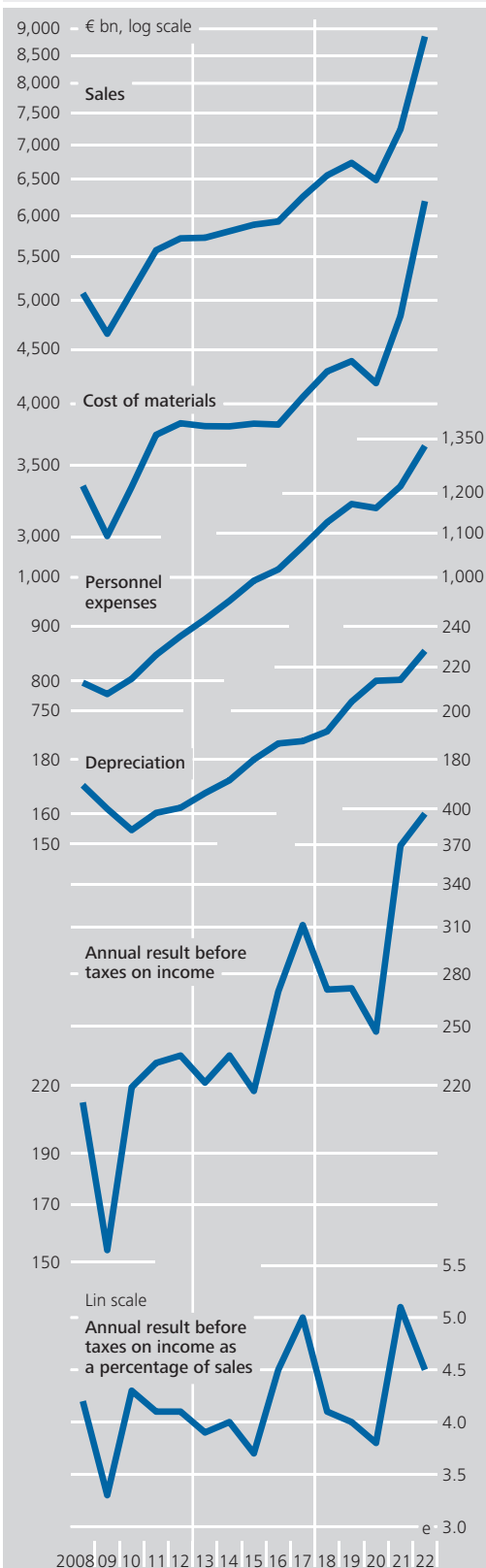
f March 2022 and the end of June 2022, respectively. The interest rate decision of 21 July 2022 set the reversal of interest rates in motion, with the monetary policy deposit facility rate gradually increasing from -0.5% to 2% at year-end 2022 and to 4% by 20 September 2023. These interest rates had been very low since the 2008-09 economic and financial crisis. The primary outcome of the monetary policy tightening for enterprises is an increase in the cost of external funds and of servicing new liabilities. Taken in isolation, this narrows the scope for investment. How the interest rate reversal impacts on enterprises' financing structure depends primarily on the ratio of liabilities to equity, the maturity profile of existing debt, and the extent to which enterprises can service interest costs out of their current receipts or liquidity reserves.

*Two-thirds of interest rate hike likely to be passed on to enterprises within a year as existing liabilities are rolled over*

The interest rate channel ranks as the key transmission channel of monetary policy. The pass-through of interest rates by banks to enterprises is of crucial importance, especially in Germany's bank-based financial system. The pace and degree of this transmission depends on the maturity structure of liabilities and the importance of bank liabilities. Interest-bearing short-term liabilities maturing in less than one year accounted for 27% of total assets in the reporting year, and long-term liabilities (maturing in over one year) for 13%.<sup>9</sup> Viewed through the lens of enterprises' capital structure, it therefore stands to reason that around two-thirds of the interest rate hike will be passed through to enterprises within the space of a year when existing liabilities are renewed at the new interest rate conditions. Sectors such as trade in motor vehicles and motorcycles, motor vehicle manufacturers and the chemicals and pharmaceutical industry, which have a higher share of interest-bearing short-term liabilities, may thus feel the impact of the interest rate reversal sooner.

<sup>9</sup> Interest-bearing short-term liabilities are short-term liabilities excluding trade payables as well as advance payments received on account of orders, which typically do not entail interest expenditure.

### Indicators from German enterprises' income statement\*



\* Extrapolated results from corporate financial statement statistics.  
 Deutsche Bundesbank

### Enterprises' income statement\*

Item	2020	2021	2022 <sup>e</sup>	Year-on-year change	
				2021	2022 <sup>e</sup>
<b>Income</b>	€ billion			%	
Sales	6,489.2	7,243.2	8,853.7	11.6	22.2
Change in finished goods <sup>1</sup>	3.9	86.6	117.6	2,097.4	35.8
Gross revenue	6,493.1	7,329.8	8,971.3	12.9	22.4
Interest and similar income	17.0	17.5	21.6	2.9	23.2
Other income <sup>2</sup>	294.3	333.2	358.9	13.2	7.7
of which: from other long-term equity investments	54.4	58.8	59.3	8.1	0.8
Total income	6,804.4	7,680.5	9,351.8	12.9	21.8
<b>Expenses</b>					
Cost of materials	4,182.9	4,837.6	6,200.8	15.7	28.2
Personnel expenses	1,161.7	1,217.8	1,328.7	4.8	9.1
Depreciation	213.4	213.8	227.7	0.2	6.5
of tangible fixed assets <sup>3</sup>	189.6	191.2	197.3	0.8	3.2
Other <sup>4</sup>	23.8	22.6	30.3	- 4.9	34.3
Interest and similar expenses	69.7	64.2	77.9	- 7.9	21.2
Operating taxes	4.6	4.9	4.5	7.8	- 7.7
Other expenses <sup>5</sup>	925.2	972.7	1,116.4	5.1	14.8
Total expenses before taxes on income	6,557.4	7,311.0	8,956.0	11.5	22.5
Annual result before taxes on income	247.0	369.4	395.8	49.5	7.1
Taxes on income <sup>6</sup>	56.8	76.8	90.7	35.3	18.1
Annual result	190.3	292.6	305.1	53.8	4.3
Memo items:					
Cash flow <sup>7</sup>	461.4	600.7	639.2	30.2	6.4
Net interest paid	52.7	46.7	56.3	- 11.3	20.4
	As a percentage of sales			Percentage points	
Gross income <sup>8</sup>	35.6	34.4	31.3	- 1.2	- 3.1
Annual result	2.9	4.0	3.4	1.1	- 0.6
Annual result before taxes on income	3.8	5.1	4.5	1.3	- 0.6
Net interest paid	0.8	0.6	0.6	- 0.2	0.0

\* Extrapolated results; differences in the figures due to rounding. **1** Including other own work capitalised. **2** Excluding income from profit transfers (parent company) and loss transfers (subsidiary). **3** Including write-downs of intangible fixed assets. **4** Predominantly write-downs of receivables, securities and other long-term equity investments. **5** Excluding cost of loss transfers (parent company) and profit transfers (subsidiary). **6** In the case of partnerships and sole proprietorships, trade earnings tax only. **7** Annual result, depreciation, and changes in provisions, in the special tax-allowable reserve and in prepaid expenses and deferred income. **8** Gross revenue less cost of materials.

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#### Enterprises' bank debt declining in importance

In the case of liabilities to banks in particular, the monetary policy impulse could be passed on relatively directly in the form of interest rate spreads. Bank debt as a percentage of total assets, which has declined significantly over the past two decades, only came to around 10% in the reporting year. Hence, the percentage of liabilities to affiliated companies was higher, at just over 23% of total assets. Viewed from this angle, the hotel and restaurant sector, trade in motor vehicles and motorcycles, the energy sector, transportation and storage, and the retail trade – all sectors with an above average ratio of bank liabilities to total assets – could be

affected particularly strongly by the interest rate reversal.

All in all, Germany's total corporate sector is in good shape overall, in terms of its profitability, liquidity and stability, to rise to the challenges presented by the reversal of interest rates. In addition, some enterprises are likely to benefit in the coming years from relief on the pension obligations front as the interest rate used for discounting purposes notches up again. Even so, mounting interest costs in the years ahead can be expected to erode profits at most enterprises and significantly increase the cost of capital expenditure and debt servicing.

*Corporate sector well placed to meet challenges posed by interest rate reversal*

Enterprises' sources and uses of funds*					
€ billion					
Item	2020	2021	2022 <sup>e</sup>	Year-on-year change	
				2021	2022 <sup>e</sup>
<b>Sources of funds</b>					
Capital increase from profits and contributions to the capital of non-corporations <sup>1</sup>	21.2	91.4	92.9	70.2	1.5
Depreciation (total)	213.4	213.8	227.7	0.4	13.9
Increase in provisions <sup>2</sup>	57.8	94.2	106.3	36.4	12.0
Internal funds	292.4	399.5	426.9	107.0	27.4
Increase in capital of corporations <sup>3</sup>	24.4	61.3	29.2	36.9	- 32.1
Change in liabilities	89.0	271.7	414.9	182.7	143.2
Short-term	- 14.3	288.9	401.1	303.2	112.2
Long-term	103.2	- 17.2	13.9	- 120.4	31.1
External funds	113.4	333.0	444.1	219.7	111.1
Total	405.8	732.5	871.0	326.7	138.5
<b>Uses of funds</b>					
Increase in tangible fixed assets (gross)	220.8	240.8	267.4	20.1	26.5
Increase in tangible fixed assets (net) <sup>4</sup>	31.2	49.6	70.1	18.5	20.4
Depreciation of tangible fixed assets	189.6	191.2	197.3	1.6	6.1
Change in inventories	- 18.8	140.7	206.1	159.5	65.4
Non-financial asset formation (gross investments)	202.0	381.5	473.5	179.6	92.0
Change in cash	89.3	40.1	22.8	- 49.3	- 17.3
Change in receivables <sup>5</sup>	36.8	221.5	283.1	184.7	61.6
Short-term	50.0	232.6	268.4	182.6	35.8
Long-term	- 13.2	- 11.2	14.7	2.0	25.8
Acquisition of securities	15.2	8.3	14.1	- 6.9	5.8
Acquisition of other long-term equity investments <sup>6</sup>	62.5	81.1	77.6	18.6	- 3.6
Financial asset formation	203.8	351.0	397.5	147.1	46.5
Total	405.8	732.5	871.0	326.7	138.5
Memo item:					
Internal funds as a percentage of gross investments	144.8	104.7	90.2	.	.

\* Extrapolated results; differences in the figures due to rounding. **1** Including "GmbH und Co. KG" and similar legal forms. **2** Including change in the balance of prepaid expenses and deferred income. **3** Increase in nominal capital through the issue of shares and transfers to capital reserves. **4** Change in tangible fixed assets (including intangible assets but excluding goodwill). **5** Including unusual write-downs of current assets. **6** Including change in goodwill.

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## Sales and income

*Sales growth exceptionally strong, mainly on the back of price effects and more post-pandemic catch-up effects*

Non-financial enterprises' sales saw exceptionally strong growth in 2022, significantly surpassing even the rate of growth registered in 2021, which had previously been the strongest increase observed since records began back in 1997. Two factors will probably have been at play here: the continued impact of post-pandemic catch-up effects, and the fact that higher prices played a more significant role in the increase in sales than volume growth, as was the case in the previous year.<sup>10</sup> Sales prices of goods and services rose considerably and even more strongly than in the previous year.

The onset of the interest rate reversal also pushed interest income significantly higher. Other operating income rose sharply, just as it had done in the crisis year of 2020, and remained at a high level relative to sales. Developments at enterprises from the chemicals and pharmaceutical industry and transport equipment manufacturers accounted for much of this.

Sales rose robustly in all sectors. Once again, the strongest sales growth was recorded by en-

<sup>10</sup> Profitability and financing conditions in 2021 are presented in Deutsche Bundesbank (2023d).

## Enterprises' balance sheet\*

Item	2020	2021	2022 <sup>e</sup>	Year-on-year change	
				2021	2022 <sup>e</sup>
<b>Assets</b>	€ billion			%	
Intangible fixed assets <sup>1</sup>	82.4	83.7	84.4	1.6	0.7
Tangible fixed assets	1,237.9	1,286.2	1,355.6	3.9	5.4
Inventories	800.7	941.3	1,147.5	17.6	21.9
Non-financial assets	2,120.9	2,311.3	2,587.4	9.0	11.9
Cash	444.9	485.0	507.8	9.0	4.7
Receivables	1,664.9	1,881.4	2,160.3	13.0	14.8
of which:					
Trade receivables	441.8	521.7	592.7	18.1	13.6
Receivables from affiliated companies	1,009.8	1,091.7	1,252.2	8.1	14.7
Securities	106.8	115.1	129.2	7.8	12.2
Other long-term equity investments <sup>2</sup>	1,028.5	1,092.0	1,143.4	6.2	4.7
Prepaid expenses	26.5	39.3	38.8	47.9	- 1.1
Financial assets	3,271.7	3,612.8	3,979.5	10.4	10.2
Total assets <sup>3</sup>	5,392.6	5,924.0	6,567.0	9.9	10.9
<b>Capital</b>					
Equity <sup>3</sup>	1,664.9	1,817.7	1,939.8	9.2	6.7
Liabilities	2,874.0	3,145.7	3,560.6	9.5	13.2
of which:					
to banks	597.3	595.7	663.5	- 0.3	11.4
Trade payables	345.8	415.4	495.6	20.1	19.3
to affiliated companies	1,275.4	1,360.8	1,541.8	6.7	13.3
Advance payments received on account of orders	292.9	349.8	412.0	19.4	17.8
Provisions	805.8	898.8	1,001.6	11.5	11.4
of which:					
Provisions for pensions	294.4	318.6	362.6	8.2	13.8
Deferred income	48.0	61.9	64.9	29.1	4.9
Liabilities and provisions	3,727.7	4,106.4	4,627.2	10.2	12.7
Total capital <sup>3</sup>	5,392.6	5,924.0	6,567.0	9.9	10.9
Memo items:					
Sales	6,489.2	7,243.2	8,853.7	11.6	22.2
Sales as a percentage of total assets	120.3	122.3	134.8	.	.

\* Extrapolated results; differences in the figures due to rounding. <sup>1</sup> Excluding goodwill. <sup>2</sup> Including shares in affiliated companies and goodwill. <sup>3</sup> Less adjustments to equity.

Deutsche Bundesbank

*Sales growth strong in all sectors*

ergy companies owing to the significantly increased energy prices brought on by the energy crisis. The hotel and restaurant sector recorded the second-highest increase in sales. With pandemic-related restrictions still in force in 2021, the post-pandemic catch-up process in the hotel and restaurant sector only began in 2022. The strong increases in food prices are also likely to have played a part in the higher sales numbers. Other services sectors, such as transportation and storage, wholesale trade and business service providers, also saw their sales grow considerably. Within the manufacturing sector, sales grew most strongly in the metal industry, the wood, paper and printing

industry, and the food industry. These are also industrial and services sectors in which price increases are likely to have played a significant role.

Non-financial enterprises' profits remained at a high, stable level in 2022 in spite of the immediate impact of the energy crisis. As overall expenditure rose roughly as strongly as income, the annual result before taxes was more or less the same as it had been in the previous year, which would suggest that enterprises largely passed on the increased costs to customers. The strong uptick in spending on materials was driven primarily by a sizeable increase in the

*Profits still high, partly thanks to cost pass-through*

prices of intermediate goods and energy, while personnel expenses also rose sharply as a result of staff growth, strong wage increases and increased pension provisions.<sup>11</sup> Interest expenditure rose considerably as well, probably on the back of the increased funding costs brought about by the monetary policy interest rate reversal in combination with the additional provisions set aside for pension obligations.<sup>12</sup> Other expenses also increased considerably, in line with the strong sales growth.

## ■ Sources and uses of funds

*Sources and uses of funds still at very high level*

On the revenue side, the large volume of additional funds was sourced internally and externally in roughly equal parts. Internal financing increased as a result of depreciation and transfers to provisions. External financing grew mainly owing to the considerable expansion of short-term liabilities. In contrast to the previous year, however, long-term liabilities were likewise built up again. Looking at the uses of funds, expenditure on non-financial assets increased sharply again as a result of strong stockpiling. Growth in tangible fixed assets accelerated further and was actually significantly greater than in the pre-crisis year of 2019. As in the previous year, the bulk of the sharp increase in financial asset formation came from the acquisition of additional short-term receivables. The build-up of liquidity in the form of cash moderated somewhat again.

## ■ Balance sheet developments

*Share of financial assets in total assets down slightly; build-up also of long-term receivables*

In line with the high sales growth, the total assets of non-financial enterprises expanded considerably in 2022. As with sales, the increase in total assets, at 10.9%, was larger than in the previous record year, 2021. In addition to the effects of the energy crisis, rebound effects after the crisis year of 2020 are likely still to have been a factor in some cases. On the assets side, the share of financial assets in total assets fell slightly. Following the decline in the two

### Enterprises' balance sheet ratios\*

Item	2020	2021	2022 <sup>e</sup>
	As a percentage of total assets <sup>1</sup>		
Intangible fixed assets <sup>2</sup>	1.5	1.4	1.3
Tangible fixed assets	23.0	21.7	20.6
Inventories	14.8	15.9	17.5
Short-term receivables	27.5	28.9	30.1
Long-term equity and liabilities <sup>3</sup>	52.5	50.4	48.3
of which:			
Equity <sup>1</sup>	30.9	30.7	29.5
Long-term liabilities	16.1	14.4	13.2
Short-term liabilities	37.2	38.7	41.0
	As a percentage of tangible fixed assets <sup>4</sup>		
Equity <sup>1</sup>	126.1	132.7	134.7
Long-term equity and liabilities <sup>3</sup>	214.3	218.2	220.1
	As a percentage of fixed assets <sup>5</sup>		
Long-term equity and liabilities <sup>3</sup>	109.1	110.8	111.6
	As a percentage of short-term liabilities		
Cash resources <sup>6</sup> and short-term receivables	98.4	97.9	94.3
	As a percentage of liabilities and provisions <sup>7</sup>		
Cash flow <sup>8</sup>	14.1	16.6	15.5

\* Extrapolated results; differences in the figures due to rounding. **1** Less adjustments to equity. **2** Excluding goodwill. **3** Equity, provisions for pensions, long-term liabilities and the special tax-allowable reserve. **4** Including intangible fixed assets (excluding goodwill). **5** Tangible fixed assets, intangible fixed assets, other long-term equity investments, long-term receivables and long-term securities. **6** Cash and short-term securities. **7** Liabilities, provisions, deferred income and proportionate special tax-allowable reserve less cash. **8** Annual result, depreciation, and changes in provisions, in the special tax-allowable reserve and in prepaid expenses and deferred income.

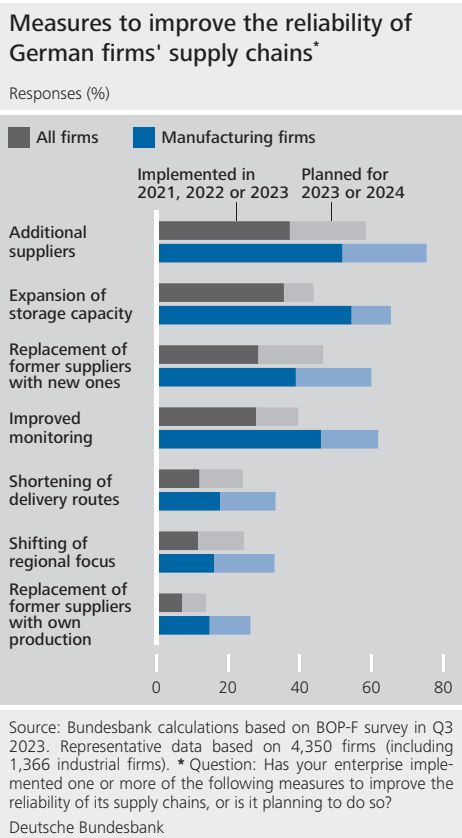
Deutsche Bundesbank

**11** The strong uptick in recognised pension provisions in 2022 is largely due to the sharp decline in the fair values of assets offset against pension obligations (pursuant to Section 246(2) sentence 2 of the German Commercial Code (*Handelsgesetzbuch*)). Overall, the weak bond and equity markets in 2022 could be partly responsible for the decline in fair values. The post-employment benefit obligations themselves, by contrast, saw only moderate growth in 2022 by historical standards. Some of the strong year-on-year increase in wages can be traced back to the decline in short-time work. **12** Section 253(2) of the Commercial Code requires provisions for post-employment benefit obligations with a residual maturity of more than one year to be discounted at the average market interest rate of the past ten financial years according to their residual maturity. Because of this averaging, the strong rise in central bank interest rates only has a lagged effect on the discount rate and thus on enterprises' pension provisions. In fact, the discount rate applied under the Commercial Code fell slightly, dropping from 1.87% as at 31 December 2021 to 1.78% as at year-end 2022. As a result, the monetary policy reversal is only likely to be a source of relief in future periods.

## Adjustments to the international supply chains of German firms and impact on their production costs

In the wake of the coronavirus pandemic and the Russian war of aggression against Ukraine, disruptions to international supply chains became a widespread phenomenon, affecting numerous economic sectors and countries. There has also been an increase in protectionist measures and geopolitical tensions in the recent past, particularly between China and western countries.<sup>1</sup> According to existing surveys, firms have responded to these developments by introducing measures to strengthen the resilience of their supply chains.<sup>2</sup> However, there is still little insight into the impact of these initiatives on production costs. Cost increases and their pass-through to customers also determine how firms' profitability and sales prices develop.

In the Bundesbank Online Panel – Firms (BOP-F) conducted in the third quarter of 2023, the Bundesbank asked around 8,400 firms about their international supply chains, measures to restructure them and the associated costs. According to this survey, around 50% of firms obtained products via international supply routes.<sup>3</sup> When asked about the most significant regions for global supply relationships, around 90% of the firms named the EU (excluding Germany), 40% China, and just under 25% the rest of Europe (i.e. excluding the EU).<sup>4</sup> On the one hand, these responses indicate the key role played by the European single market for the cross-border supply chains of German firms. On the other, they show the significance of China, which is, moreover, somewhat more pronounced still in the manufacturing sector.<sup>5</sup>



Almost 60% of firms have introduced at least one measure since 2021 to improve the reliability of their international supply chains.<sup>6</sup> The most important measures here were the expansion of supply networks through additional suppliers, the expansion of storage capacity, the replacement of former suppliers with new ones and improved monitoring of supply chains. In addition,

1 See Deutsche Bundesbank (2023e).  
 2 According to a survey carried out by the ifo Institute in July 2022, almost 90% of German manufacturing firms initiated measures to adjust their supply chains following the outbreak of the coronavirus pandemic; see Aksoy et al. (2022).  
 3 The following analysis relates to firms with international supply chains.  
 4 Other regions named included Asia excluding China (17%), North America (11%) and other regions (5%).  
 5 For more on the importance of China as a supplier of key intermediate goods, see Deutsche Bundesbank (2023f).  
 6 Just under 30% of firms introduced three or more measures.



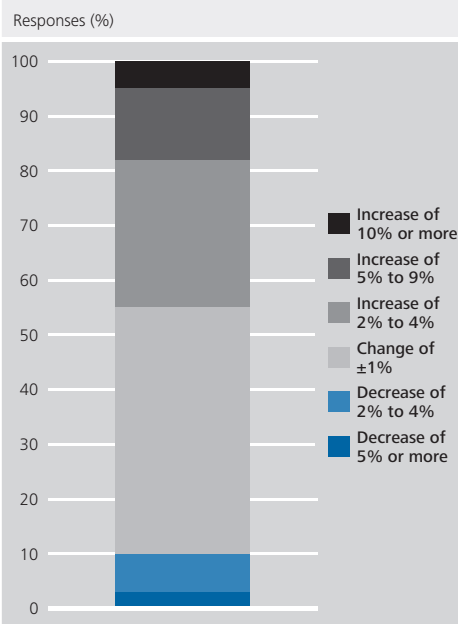
around 40% of firms planned to introduce further measures by the end of the coming year. Shorter delivery routes and a shift in the regional focus among current suppliers are also expected to play an important role here. The proportion of firms that have already implemented measures and intend to do so in the future is highest in the manufacturing sector. Furthermore, manufacturing firms typically took more measures than firms active in other sectors.

It is also worth noting that firms for which China played a key role in international supply chains implemented more measures or planned to do so in the near future than firms with a supply chain focus on the EU (excluding Germany). This is consistent with the results of another survey conducted in the second quarter of this year, according to which some firms sourcing critical inputs from China are switching to alternative supply sources.<sup>7</sup>

It is therefore clear that German firms are attempting to make their supply relationships more reliable. In all likelihood, these measures are also having an impact on the production costs of firms.<sup>8</sup> According to the survey, 45% of German firms anticipate cost increases as a result of supply chain adjustments. Almost one-fifth of these firms expect these measures to increase their production costs – not insignificantly – by 5% or more. Firms tend to expect the highest cost increases for measures that significantly change the structure of their supplier network (shift of regional focus, replacement of former suppliers with new ones). In contrast, just over two-fifths of firms do not expect the measures to have any impact on their production costs. In addition, almost one in ten firms expect certain cost savings.

A rough estimate based on the firms' responses about the measures already imple-

### Impact of supply chain changes on German firms' production costs\*



Source: Bundesbank calculations based on BOP-F survey in Q3 2023. Representative data based on 3,472 firms. \* Question: What impact do you expect the supply chain improvement measures you selected to have on your enterprise's production costs?

Deutsche Bundesbank

mented since 2021 suggests average cost increases of around 2% in the period from 2021 onwards.<sup>9</sup> According to this estimate, the additional measures planned for implementation by the end of 2024 will lead to cost increases of another 2%. Any further adjustments to supply chains after 2024 could thus result in even more cost increases.

<sup>7</sup> See Deutsche Bundesbank (2023f).

<sup>8</sup> For example, costs can arise through the construction or rental of warehousing premises and warehouse staff. In addition, the establishment of new supply relationships can involve higher expenses for searching and coordination. Although shorter delivery routes can reduce transport costs, this may also mean moving away from the most cost-efficient suppliers. On the other hand, diversified supply relationships can also reduce procurement costs by alleviating the effects of supply chain disruptions, which can lead to short-term cost increases or production losses. Diversification can also increase competition among suppliers, which can likewise have a cost-cutting impact in the long term; see Schiersch et al. (2023).

<sup>9</sup> If firm size is taken into account in the calculation by weighting by turnover, the cost increases work out somewhat smaller at 1.5%.

In the manufacturing sector, around 40% of firms anticipate a rise in production costs. Moreover, smaller firms tend to expect cost increases more often than larger firms. The regional focus of supply chains also has an impact on expected changes in production costs. Firms with a regional focus on China are more likely to assume that the restructuring of supply chains will lead to cost increases and that these will be comparatively high. Overall, the survey results suggest that, in a changing international environment, firms are placing greater emphasis on resilience – albeit at some additional cost – when weighing up between the efficiency and resilience of supply chains.<sup>10</sup>

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**10** One factor in this changing environment could be that supply chain disruptions are more systemic than in the past, as they have recently affected several countries and products simultaneously and had a longer-lasting effect; see Baldwin et al. (2023).

previous years, long-term receivables were also built up again in 2022, though they did not yet reach pre-pandemic levels. There was growth in both long-term receivables from affiliated companies and other loans and long-term financial assets. In line with the high sales growth, there was another significant rise in trade receivables. Short-term receivables from affiliated companies also recorded a considerable increase. The sizeable growth in other receivables and other assets was mostly driven by developments at enterprises in the energy and manufacture of transport equipment sectors. Securities also rose sharply. Unlike in the two previous years, efforts to conserve liquidity seemed to play a fairly minor role. For example, the increase in the cash item slowed, and more long-term securities were also purchased.

*Stockpiling drives non-financial assets sharply higher*

As in the previous year, the strong build-up of inventories was the main factor driving the increase in non-financial assets in 2022. In 2020, they had been scaled back in a bid to conserve

liquidity, partly in response to the crisis. Stockpiling was again broadly spread across sectors. Besides the ongoing economic recovery and price effects, efforts to make value chains more resilient may have been a factor here in some cases (see the box on pp. 64 ff.). Tangible fixed assets rose sharply, having already grown perceptibly again in the previous year. By contrast, intangible fixed assets, which include digital goods such as software, databases or patents, barely increased.<sup>13</sup> The sharp rise in intangible fixed assets in the manufacture of transport equipment sector was offset by a decline in the chemicals and pharmaceutical industry.

The equity ratio of non-financial enterprises declined slightly on average across all sectors in 2022, but remained at a high level. That ratio

*Equity ratio down slightly but still at a high level*

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**13** According to the Commercial Code, intangible fixed assets include, amongst other things, internally generated industrial rights and similar rights and assets, purchased concessions, industrial and similar rights and assets, and licences in such rights.

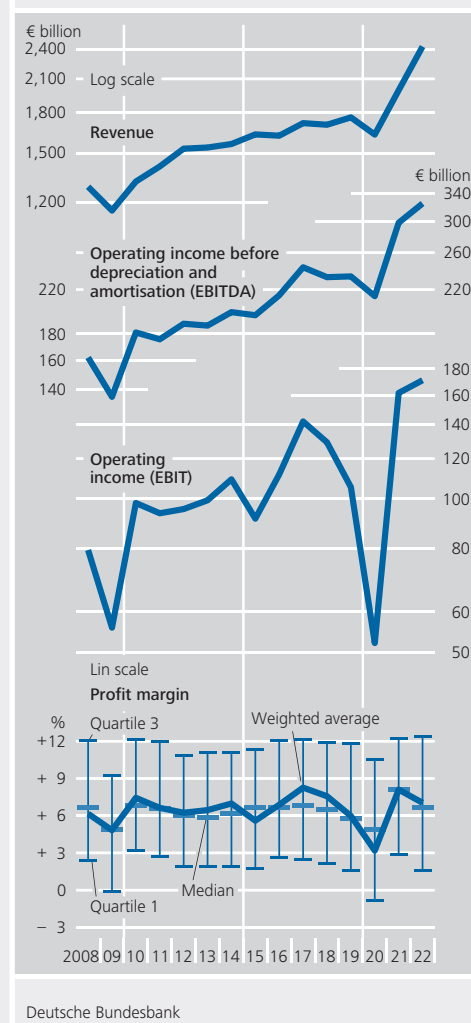
## Profitability and financial position of German listed groups in 2022 and an outlook for 2023

German non-financial listed groups recorded a decline in their profit margin in 2022.<sup>1</sup> Price developments meant that revenue growth significantly outpaced the rise in profits. Equity increased markedly, including as a proportion of total assets. Estimates for 2023 point to a slight fall in revenues and a further decline in the profit margin.

Revenues recorded another strong rise of 21% in 2022.<sup>2</sup> Driving factors here were price effects and the weaker euro, which increased group revenues generated in foreign currencies and converted into euro. Overall, these two effects considerably overcompensated for the declining sales volumes reported by a number of groups. As prices also increased on the operating cost side, revenue growth only partially fed through into groups' earnings. Operating income before depreciation and amortisation (EBITDA) and operating income (EBIT) increased by 8% and 4%, respectively. As a consequence, the profit margin declined from its near-record level of 8.1% in 2021 to 7.0%. However, this figure remains above the long-term average since 2007.<sup>3</sup> At the sector level, a decline was evident in the profit margin of the production sector,

namely from 7.5% to 6.0%.<sup>4</sup> A significant portion of this decline was attributable to the losses of energy companies. These deficits were the result of the additional cost of procuring energy to make up for the cessation of Russian energy supplies, along with valuation effects in connection with transactions to hedge against price risks. In the services sector, the profit margin increased from 10.5% to 11.3%, buoyed by the recovery of the aviation industry and high freight rates in the logistics sector.

Revenue, earnings and profit margin of German non-financial groups



<sup>1</sup> The reporting population comprises around 230 non-financial groups admitted for trading on the Prime Standard segment of the Frankfurt Stock Exchange (excluding real estate activities) that publish quarterly or half-yearly IFRS consolidated financial statements and make a meaningful contribution to value creation in Germany. Information on the profitability and financial position of non-financial groups from other European countries can be found in the publications of the Working Group on European Records of IFRS Consolidated Accounts (ERICA WG) at <https://www.eccbso.org/wba/publications#listEI2>

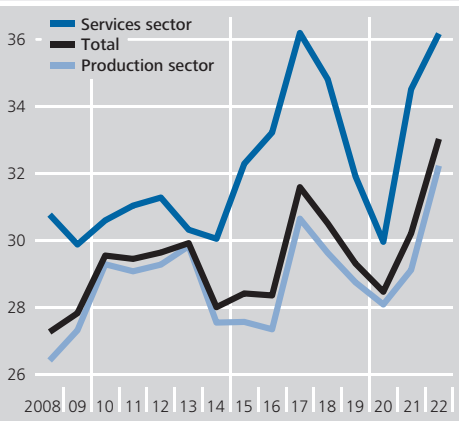
<sup>2</sup> The rates of change for the profit margin, revenue, EBITDA and EBIT are published with reporting and consolidation basis adjustments.

<sup>3</sup> The profit margin is defined as EBIT as a percentage of revenue.

<sup>4</sup> Groups from the production sector account for around 80% of total revenue reflected in the statistics.

### Equity of German non-financial groups

As a percentage of total assets



Deutsche Bundesbank

Groups' assets grew by 4% in 2022, with the build-up of inventories in the production sector contributing almost 40% of this increase. On the one hand, the general rise in prices caused the value of inventories to go up. On the other, there was also a volume effect at work. This was the result of higher raw material and intermediate product inventories as well as inventory increases in finished products and goods earmarked for delivery. Groups' cash and cash equivalents declined by 7%. However, the 2022 figure for this item was still significantly higher than the levels recorded in the years prior to the onset of the coronavirus pandemic in 2020. Intangible and tangible fixed assets, which each accounted for more than one-fifth of groups' assets, grew by 5% and 4%, respectively.

On the financing side, short-term and long-term liabilities in 2022 were almost unchanged on the year. At the same time, trade payables rose by 15%, with three-quarters of all groups recording an increase in this balance sheet item. This expansion was more or less offset by a decline in short-term financial debt. In the long-term sphere, energy companies reported marked rises in derivative liabilities. These were the result of developments in transactions to

hedge against commodity price risks. A significant fall in groups' pension obligations overall due to the rising reference interest rate had a mitigating effect. The resulting liability shift together with the high level of retained earnings largely explains the 14% rise in equity capital. The equity ratio increased strongly, climbing by 2.8 percentage points to 33%. Both equity capital and the equity ratio rose significantly more in the production sector than among service providers. Notable factors here included special effects from transactions involving subsidiaries in the automotive industry and relating to the fair value of derivatives of energy companies.

According to estimates based on the financial statements of the largest groups in the reporting population for the first three quarters of 2023, revenues recorded a slight year-on-year decline and pre-tax profits a marked decline. This would suggest that a further fall in the profit margin is likely for 2023.<sup>5</sup> Viewed at the sector level, the picture that emerges is mixed. In the production sector, the automotive industry recorded higher delivery volumes and revenues thanks to the growing global market, but, due to higher costs (amongst other things), this has not fed through into rising pre-tax profits.<sup>6</sup> Revenue increases here were offset by revenue declines in both the chemicals sector and amongst energy companies. The chemicals sector reported declines in both demand and prices in a challenging economic environment. The fall in energy prices – from the very high values recorded in 2022 – and attempts to save energy by end users had the effect of reducing the revenues of energy companies. In summary, the revenues of the production

<sup>5</sup> Profit margin is defined here as the revenue-weighted ratio of the annual result before taxes on income to revenue.

<sup>6</sup> In addition, the pre-tax profit of the automotive industry in 2022 was boosted by a one-off effect relating to the consolidation of subsidiaries.

sector can be expected to stagnate and its pre-tax profits to fall. In the services sector, both revenues and pre-tax profits could decline noticeably. The logistics sector, which was a driver of the strong rises of previous years, experienced weaker demand and a considerable decline in freight rates.

The profitability of groups as an indicator of the picture for individual enterprises should be viewed with a degree of caution, as the former is essentially subject to greater fluctuations. Unlike the single-entity financial statements, which primarily paint a picture of business in Germany, consolidated financial statements reflect above all the development of the global economy and the domestic economic parameters of the countries in which the respective subsidiaries are located.<sup>7</sup>

### Annual result before taxes on income

As a percentage of revenue



Deutsche Bundesbank

<sup>7</sup> Furthermore, the metrics derived from the financial statements are materially shaped by differences between the accounting standards applied (German GAAP for corporate financial statement statistics (single-entity), IFRS for consolidated financial statement statistics).

fell most sharply in the manufacture of transport equipment, energy supply and mechanical engineering sectors. In most sectors, there was an increase in the volume of equity, but this was, overall, outpaced by the growth in liabilities and provisions. Equity declined noticeably only in the manufacture of transport equipment sector, while it largely stagnated in the information and communication sector.

ities to banks also increased considerably. By contrast, long-term liabilities to banks stagnated. As in the previous year, provisions increased sharply in 2022. This was largely due to higher provisions for pensions and to other provisions set aside in line with positive business developments. Provisions for tax also increased sharply, as in the previous two years.

*Strong growth in liabilities and provisions; ongoing shift from long-term to short-term liabilities*

As in the previous year, growth in liabilities and provisions was very strong in 2022. On balance, there was a further shift from long-term to short-term liabilities, as in 2022. In 2020, liquidity considerations related to the pandemic had caused a short-term shift in the ratio of long-term to short-term liabilities in favour of long-term liabilities. The uptick in business activity and price effects caused trade payables and advance payments received on account of orders to rise sharply. Short-term liabilities to affiliated companies also grew significantly. Unlike in the previous two years, short-term liabil-

## ■ Trends for 2023

In view of the bout of weakness the German economy is experiencing, it is likely that non-financial enterprises did not expand their business activities or, in some cases, reduced them in 2023. Although energy markets calmed down somewhat, energy prices remained at elevated levels. In addition to the increased energy cost burden, industry is also likely to have suffered as a result of weak foreign demand. Real exports of goods fell, for example. Meanwhile, supply bottlenecks in industry as a whole

*Delayed economic recovery detrimental to business activities in 2023; high energy prices and increased wage and financing costs weighing on profitability*

continued to ease according to ifo Institute and S&P Global surveys. The impact of the reversal of monetary policy interest rates is likely to be felt more strongly in 2023. The increased financing costs brought about by this could dampen private investment and thereby also weigh on domestic demand for industrial goods and, in particular, construction work. Furthermore, order backlogs decreased further, absorbing less and less of the decline in demand in industry and the construction sector. Overall, this puts a strain on output in these two sectors of the economy. In addition, real government consumption declined as pandemic-related spending came to an end, which was only par-

tially replaced by new measures to address the energy crisis and high inflation. What is more, consumers held back on additional spending despite strong wage growth, declining inflation rates and stable employment. This is likely to hurt consumer-related service providers, in particular, although the period of economic weakness could well also dampen business activities at business-related service providers. Overall, enterprises' profit margins could come under stronger pressure in the current year than in 2022 given high energy prices, increased wages and financing costs and gloomier sales prospects.

Long series with extrapolated results from the corporate financial statement statistics are available at <https://www.bundesbank.de/en/statistics/enterprises-and-households/-/corporate-financial-statements-796226>

## ■ List of references

Aksoy, C. G., A. Baur, L. Flach and B. K. S. Javorcik (2022), Reactions to supply chain disruptions: Evidence from German firms, EconPol Policy Brief, No 45, CESifo GmbH.

Baldwin, R., R. Freeman and A. Theodorakopoulos (2023), Hidden Exposure: Measuring U. S. Supply Chain Reliance, Brooking Papers on Economic Activity, September 2023.

Deutsche Bundesbank (2023a), Falling inflation, but not yet time to sound the all-clear – outlook for the German economy up to 2026, Monthly Report, December 2023, pp. 15-35.

Deutsche Bundesbank (2023b), Measures introduced or planned by German enterprises in response to rising energy costs, Monthly Report, September 2023, pp. 26-28.

Deutsche Bundesbank (2023c), Impact of higher energy costs on the profitability of German industrial enterprises, Monthly Report, March 2023, pp. 69-70.

Deutsche Bundesbank (2023d), German enterprises' profitability and financing in 2021, Monthly Report, March 2023, pp. 67-81.

Deutsche Bundesbank (2023e), Germany as a business location: selected aspects of current dependencies and medium-term challenges, Monthly Report, September 2023, pp. 15-35.

Deutsche Bundesbank (2023f), The significance of China as a supplier of critical intermediate inputs to German firms, Monthly Report, September 2023, pp. 21 f.



Deutsche Bundesbank (2022), Impact of permanently higher energy costs on German potential output, Monthly Report, December 2022, pp. 29 f.

Schiersch, A., I. Bertschek and T. Niebel (2023), Stärkere Diversifizierung der Importe von Gütern der Informationstechnologie: Vorteile überwiegen, DIW Weekly Report No 46/2023, p. 639.



## Tackling the challenges of crypto-assets – the state of play with regulation

*Since the first Bitcoin block was mined in 2009, thousands of different crypto-assets have been created. This cryptosystem has increasingly attracted public attention in recent years. A series of scandals, spectacular bankruptcies and crises have exposed the system as a source of potential risk. Despite the general interest in the cryptosystem, it is a small, largely self-contained niche when compared with the traditional financial system, which means that – at least for the time being – it is fairly unlikely that crises in the cryptosystem could pose a threat to financial stability.*

*In terms of preventive regulation, however, competent authorities worldwide are faced with the question of how to deal with crypto-assets with a view to limiting potential future risks to financial stability. Regulatory approaches are generally guided by the principle of “same activity, same risk, same rules” – in other words, focusing on the economic function of an activity, irrespective of the technological means used. At the same time, regulation should be formulated in such a way that it does not hinder innovation – and the technology underlying the cryptosystem certainly presents an opportunity to make the financial system more efficient. In addition, regulation should take account of the fact that crypto-assets can vary in their design and function.*

*With regard to the cryptosystem, the principle of “regulate and contain” has now become established: first, the cryptosystem itself should be regulated, and second, potential contagion risks between the cryptosystem and the traditional financial system should be contained.*

*In terms of regulating the cryptosystem, the European Union (EU) has taken a major step forward and adopted a comprehensive rulebook, the Markets in Crypto-Assets Regulation (MiCAR). MiCAR directly addresses cryptosystem participants, including issuers of crypto-assets and providers of crypto-asset services. In future, these participants will be required to comply with a number of rules designed to help protect investors and keep potential risks in check.*

*In a move to contain contagion risks, the Basel Committee on Banking Supervision (BCBS) has developed an internationally harmonised standard for banks’ exposures to the cryptosystem. Banks are expected to comply with this standard when they take on exposures to crypto-assets. For example, the standard defines capital requirements geared towards the risk posed by different types of crypto-assets. Overall, the standard is designed to ensure that banks are protected as well as possible against risks from the cryptosystem even if they have taken on direct exposures.*

*The aforementioned regulatory initiatives have established initial guard rails. But the cryptosystem is rapidly evolving, meaning that what is a robust regulatory framework today might already be showing cracks tomorrow. With that in mind, both MiCAR and the Basel standard are already being examined to determine the extent to which provisions need to be adjusted to keep up with new developments. Overall, crypto-assets are thus likely to remain firm fixtures on the agendas of international, European and national regulatory bodies for years to come.*

## ■ Introduction

*Idea behind crypto-assets is nothing new*

When the concept of Bitcoin was made public in a November 2008 paper authored by the pseudonymous Satoshi Nakamoto, this marked a critical juncture on the path to a new, digital form of money.<sup>1</sup> Ever since the 1980s, if not before, computer specialists and idealists had been attempting to bring together the internet, cryptography and money. Their aim was to develop digital money that everyone could use anytime and anywhere, free from government control.

*Cryptosystem is constantly evolving*

Today, there are thousands of crypto-assets besides Bitcoin, and it is no longer just specialists who engage with crypto-assets. A very large number of participants with different backgrounds now operate in the various sectors of the cryptosystem: people living in regions lacking a sufficient traditional financial infrastructure, small investors who want to see how the cryptosystem works, speculators hoping to make a quick profit and criminals relying on the supposed anonymity of the cryptosystem to launder money or engage in other illegal activities. Traditional financial institutions are also operating in the cryptosystem, investigating, for example, what kind of efficiency gains the underlying distributed ledger technology (DLT)<sup>2</sup> might deliver.<sup>3</sup>

*Cryptosystem poses risks*

Given how rapidly the cryptosystem is evolving, possible risks and regulatory implications must be considered. The cryptosystem itself is a potential source of various risks that can also affect the traditional financial system. For example, it is in many respects highly concentrated: the two largest crypto-assets, Bitcoin and Ether, account for just under 70% of market capitalisation.<sup>4</sup> Trading in crypto-assets is also concentrated on a small number of platforms. At the same time, liquidity in the system depends on a small number of stablecoins – crypto-assets that are backed by traditional assets.<sup>5</sup> In the event of a run on a stablecoin, the reserves of traditional assets backing it could open up a channel of contagion between

the cryptosystem and the traditional financial system. There is also a danger of stablecoins increasing the risk of currency substitution in regions of the world where there is a lack of established financial infrastructure or confidence in monetary stability.<sup>6</sup> In addition, the cryptosystem often involves high leverage, with loans mostly secured by uncovered and thus volatile crypto-assets. On top of this, market structures are complex and opaque.

The risks inherent in the cryptosystem may well take on a systemic dimension, which raises the question of the extent to which the traditional financial system could also be affected. The size of the cryptosystem is one factor that plays a role in the risk it poses to the traditional financial system. When compared with the traditional financial system, the cryptosystem is actually little more than a niche. However, the past has shown that even small market segments can lead to major crises. What is more important than relative size is the fact that the cryptosystem and the traditional financial system have so far barely interacted with each other. Most of the channels through which crises in the cryptosystem could affect the traditional financial system are therefore of little relevance today. This is a snapshot, however – the risks emanating from the cryptosystem will depend on how it evolves over time.

*Risks to traditional financial system so far limited*

When considering a preventive approach, regulators are therefore faced with the question of how they should treat the cryptosystem. A fairly simple method would be to prohibit all activities related to crypto-assets, at least in one's own jurisdiction. Alternatively, the cryp-

*Various approaches to addressing risks posed by crypto-assets*

<sup>1</sup> See, for example, Deutsche Bundesbank (2021a).

<sup>2</sup> Characterised by its decentralised data storage, DLT is the technology on which the blockchain is based.

<sup>3</sup> See, for example, Deutsche Bundesbank (2021b or 2023).

<sup>4</sup> See <https://coinmarketcap.com/charts/>

<sup>5</sup> As the largest stablecoin (measured by market capitalisation), Tether accounts for just over 70% of trading on the largest platforms; see <https://www.theblock.co/data/crypto-markets/spot/share-of-trade-volume-by-pair-denomination>

<sup>6</sup> See Financial Stability Board (2023a).

tosystem could be left to itself, with the only measures taken being those to ensure that the traditional financial system remains unaffected by potential crises. The third and final option would be to regulate the cryptosystem to ensure its stability, too, and to protect investors and consumers.

A ban on all activities related to crypto-assets would constitute a significant intervention by the government. Moreover, a ban could mean that it takes longer for beneficial innovations to catch on, if they catch on at all.

To protect the traditional financial system from adverse developments in the cryptosystem, a containment strategy could also be pursued. Regulators would focus on limiting the links between the cryptosystem and the traditional financial system. Crises in the cryptosystem would therefore not pose a direct threat to general financial stability.

However, there are also grounds for considering regulation of the cryptosystem itself. First, an unregulated cryptosystem would take zero account of important concerns, including consumer protection and money laundering prevention. Second, the possibility of the cryptosystem expanding beyond its niche over time and becoming a relevant part of the financial system cannot be ruled out. And third, risks traditionally associated with financial services do not usually disappear simply because the services are carried out by other technological means. For this reason, “same activity, same risk, same rules” is a guiding principle for establishing a regulatory framework – where an activity has an economic function that has an equivalent in the traditional financial system and is thus exposed to the same risk, it should be subject to the same regulation.<sup>7</sup> Moving activities to the cryptosystem must not be a way of circumventing regulation.

Regulating the cryptosystem itself is therefore a key component in dealing with crypto-assets. Against this background, national, European

and international bodies have decided to establish minimum standards for the regulation of cryptosystems. In the EU and Germany, regulatory measures aim to provide scope for innovation through a clear framework whilst at the same time minimising risks to the financial system and ensuring consumer protection.

Looking at established banks, the BCBS<sup>8</sup> has decided to treat crypto-assets within the traditional regulatory framework for the banking system in order to contain contagion risks. Overall, regulators are thus following the “regulate and contain” approach mentioned previously.

The following sections provide an overview of the main initiatives to regulate the cryptosystem itself and to regulate banks’ exposure to crypto-assets.

## Regulating the cryptosystem: the EU Markets in Crypto-Assets Regulation (MiCAR)

The EU Markets in Crypto-Assets Regulation (MiCAR)<sup>9</sup> directly addresses cryptosystem participants.

The European Commission presented the corresponding legislative proposal on 24 September 2020 as part of the Digital Finance Package.<sup>10</sup> In addition to the proposal on MiCAR, the package included, amongst other things, the Digital Operational Resilience Act (DORA),<sup>11</sup> a proposal for a pilot regime for market infra-

*MiCAR – a harmonised European legal framework for crypto-assets*

<sup>7</sup> See Financial Stability Board (2023), p. 3.

<sup>8</sup> The task of the BCBS is to establish global standards for the prudential regulation of banks.

<sup>9</sup> Regulation (EU) 2023/1114 of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 (text with EEA relevance).

<sup>10</sup> See European Commission (2020).

<sup>11</sup> Regulation (EU) 2022/2554 of 14 December 2022 on digital operational resilience for the financial sector and amending Regulations (EC) No 1060/2009, (EU) No 648/2012, (EU) No 600/2014, (EU) No 909/2014 and (EU) 2016/1011.

### Dates of application – an overview

Provisions	Applicable from
Asset-referenced tokens (ARTs)	30 June 2024
E-money tokens (EMTs)	30 June 2024
Authorisation and ongoing supervision of crypto-asset service providers (CASPs)	30 December 2024
All other MiCAR provisions that are not directly applicable under Article 149(4) of MiCAR	30 December 2024
Individual articles	29 June 2023

Deutsche Bundesbank

structures based on DLT<sup>12</sup> and a digital finance strategy. MiCAR was published on 9 June 2023 and entered into force on 29 June 2023.

The provisions set out in MiCAR, which are explained in more detail below, have varying dates of application (see the chart above).

The main objective of MiCAR is to create a harmonised European legal framework for all crypto-assets that are not already covered by other existing EU regulations.<sup>13</sup> MiCAR is intended to support innovation and make it possible to harness the potential of crypto-assets whilst ensuring that financial stability, the smooth operation of payment systems and monetary policy transmission and investor protection are maintained.

In this context, MiCAR makes an explicit distinction between (i) various activities relating to the issuance and offers of crypto-assets and (ii) crypto-asset services.

The main points covered by Article 1 of MiCAR are:

- requirements for issuers of asset-referenced tokens and e-money tokens<sup>14</sup> and crypto-asset service providers as well as supervisory requirements for, amongst other things, the

management and organisation of these participants;

- transparency and disclosure requirements for offers to the public and admissions of crypto-assets to trading;
- requirements for protecting the holders of crypto-assets and the clients of undertakings offering crypto-asset services;
- requirements for the disclosure of inside information; measures to prevent insider dealing, unlawful disclosure of inside information and market manipulation related to crypto-assets.

The European Banking Authority (EBA) and the European Securities and Markets Authority (ESMA) are currently developing regulatory technical standards (RTSs), implementing technical standards (ITSs) and guidelines based on

<sup>12</sup> Regulation (EU) 2022/858 of 30 May 2022 on a pilot scheme for market infrastructures based on distributed ledger technology, and amending Regulations (EU) No 600/2014 and (EU) No 909/2014 and Directive 2014/65/EU.

<sup>13</sup> Some crypto-assets, particularly those that are financial instruments within the meaning of the provisions of the Markets in Financial Instruments Directive II (MiFID II), fall within its scope of application and not within the scope of application of MiCAR. See Recital 3 of MiCAR.

<sup>14</sup> These types of tokens are commonly referred to as stablecoins.



MiCAR. These are intended to further specify and make applicable the provisions in MiCAR that apply to issuers of e-money tokens and asset-referenced tokens as well as to crypto-asset service providers.

## Definitions and addressees of MiCAR

*Introduction of a harmonised European definition of crypto-assets*

Article 3(1) number 5 of MiCAR introduces a definition of the term crypto-assets in Europe. This definition is an umbrella term that is further broken down into (i) asset-referenced tokens (ARTs), (ii) e-money tokens (EMTs), (iii) utility tokens and (iv) other crypto-assets that do not fall into any of the other categories (see the chart on p. 78).

*Exceptions for MiFID financial instruments, e-money and deposits*

MiCAR does not apply to crypto-assets that are covered by other EU regulations. MiCAR therefore does not apply, inter alia, to crypto-assets belonging to one or more of the following categories: (i) financial instruments within the meaning of the Markets in Financial Instruments Directive II (MiFID II)<sup>15</sup> (e.g. tokenised securities), (ii) e-money<sup>16</sup> within the meaning of the Electronic Money Directive II (EMD II),<sup>17</sup> with the exception of EMTs within the meaning of MiCAR, (iii) deposits within the meaning of the Deposit Guarantee Schemes Directive, and (iv) structured deposits within the meaning of MiFID II.<sup>18</sup>

*Addressees of MiCAR*

The addressees of MiCAR are natural and legal persons and certain other undertakings<sup>19</sup> that are engaged in the issuance, offer to the public<sup>20</sup> and admission to trading of crypto-assets or that provide services related to crypto-assets in the EU (Article 2(1) of MiCAR). MiCAR distinguishes between issuers and offerors (see the chart on p. 79).

*Crypto-asset services*

MiCAR sets forth a catalogue<sup>21</sup> of ten different crypto-asset services that closely mirrors the catalogue of MiFID activities. In particular, MiCAR lists: (i) providing custody and administration of crypto-assets on behalf of clients; (ii)

the operation of a trading platform for crypto-assets; (iii) the exchange of crypto-assets for funds; (iv) the exchange of crypto-assets for other crypto-assets; (v) the execution of orders for crypto-assets on behalf of clients; (vi) the placing of crypto-assets; (vii) the reception and transmission of orders for crypto-assets on behalf of clients; (viii) providing advice on crypto-assets; (ix) providing portfolio management on crypto-assets; and (x) providing transfer services for crypto-assets on behalf of clients.

Crypto-asset services that are provided in a fully decentralised manner without any intermediary do not fall within the scope of the Regulation. This applies to crypto-assets without a determinable issuer, including Bitcoin, for example. However, it should be noted that crypto-asset service providers offering services relating to crypto-assets without a determinable issuer do fall within the scope of MiCAR. This means, for example, that a crypto-asset service provider that renders services related to or using Bitcoin is covered by the scope of MiCAR.

*Exception of activities performed in a decentralised manner*

<sup>15</sup> Directive 2014/65/EU of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

<sup>16</sup> E-money is defined as any electronically – including magnetically – stored unit of monetary value as represented by a claim on the issuer which is issued on receipt of funds for the purpose of making payment transactions and which is accepted by a natural or legal person other than the e-money issuer. Examples of e-money are reloadable chip cards or prepaid cards.

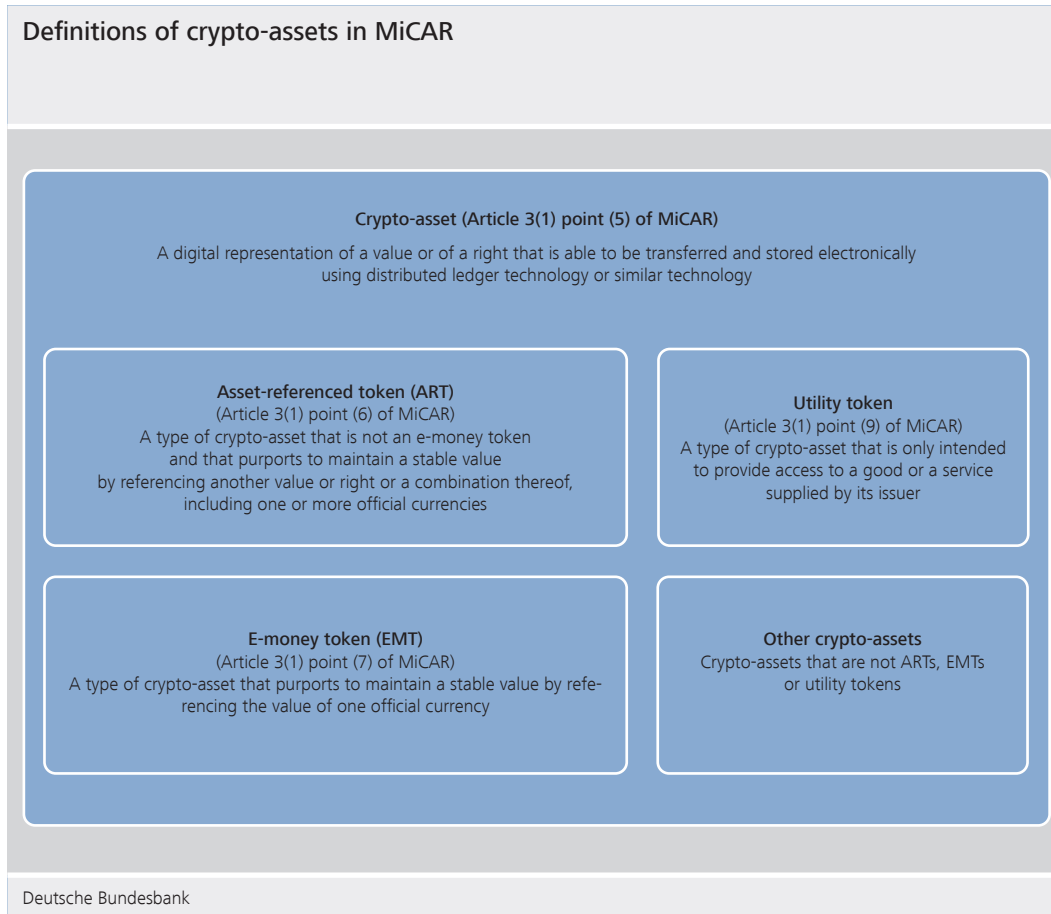
<sup>17</sup> Directive 2009/110/EC of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC.

<sup>18</sup> See Article 2(4) of MiCAR.

<sup>19</sup> With regard to other undertakings (e.g. commercial partnerships), it should be borne in mind that the legal form ensures a level of protection for third parties' interests equivalent to that afforded by legal persons and they are subject to equivalent prudential supervision (see Article 16(1) subparagraph 3 and Article 59(3) of MiCAR).

<sup>20</sup> An offer to the public is defined as a communication to persons in any form, and by any means, presenting sufficient information on the terms of the offer and the crypto-assets to be offered so as to enable prospective holders to decide whether to purchase those crypto-assets.

<sup>21</sup> See Article 3(1) number 16 of MiCAR; the individual definitions are then outlined in Article 3(1) numbers 17 to 26 of MiCAR.



## Rules for offerors of crypto-assets

### Requirements for issuers of ARTs<sup>22</sup>

*Comprehensive requirements for issuers of ARTs*

Authorisation requirements as well as ongoing obligations are envisaged for issuers of ARTs. An offer of ARTs to the public or the application for their admission to trading on a trading platform of crypto-assets generally requires authorisation granted by the competent authority.<sup>23</sup> Authorisation is conditional on the issuer of the ARTs being a legal person or another undertaking established in the EU, for instance. The issuer must draw up and publish a crypto-asset white paper.<sup>24,25</sup> This white paper must also be submitted and approved as part of the application for authorisation.

Authorisation is not required if the outstanding value of the ART does not exceed €5 million or the equivalent value in another currency over a period of 12 months, or if the offer to the pub-

lic of the ART is addressed solely to qualified investors where the ART can only be held by such investors.<sup>26</sup> However, issuers are still required to draw up a crypto-asset white paper and submit it to the competent authority for approval.

Issuers of ARTs must comply with a number of requirements. Alongside various obligations pertaining to communication, publication, notifications, complaints-handling procedures, disclosure, governance and business organisation, the issuer must hold sufficient own funds,<sup>27</sup> draw up a recovery plan and a redemption plan<sup>28</sup> and maintain a reserve<sup>29</sup> that

<sup>22</sup> These types of tokens are commonly referred to as stablecoins.

<sup>23</sup> See Article 16 in conjunction with Article 20 of MiCAR.

<sup>24</sup> Binding information document on the crypto-asset.

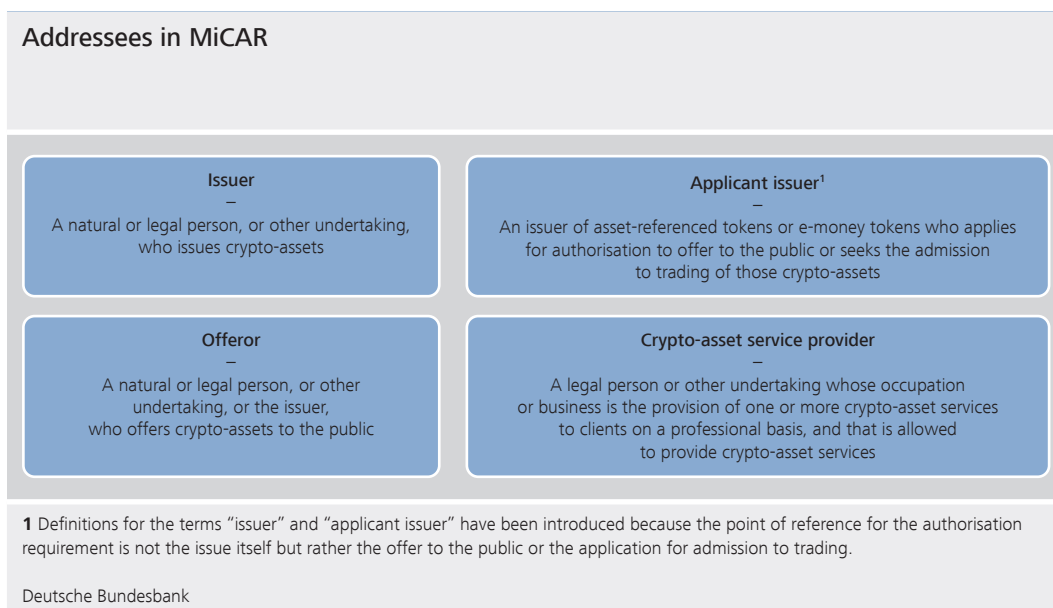
<sup>25</sup> See Article 17 in conjunction with Articles 18 et seq. and 28 of MiCAR.

<sup>26</sup> See Article 16(2) of MiCAR.

<sup>27</sup> See Article 35 of MiCAR.

<sup>28</sup> See Articles 46 et seq. of MiCAR.

<sup>29</sup> See Article 36(1) of MiCAR.



covers the risks associated with the assets referenced by the ARTs. How the reserve assets must be held in custody and invested is specified for the reserve.

Credit institutions authorised in the EU<sup>30</sup> do not need to be explicitly authorised to offer ARTs to the public or to apply for admission to trading. However, they must likewise draw up a crypto-asset white paper and submit it to the competent authority for approval. In addition, they must comply with the other requirements.<sup>31</sup>

### Requirements for issuers of EMTs

In the EU, only credit or e-money institutions that have already been authorised may offer EMTs to the public or apply for admission to trading for these tokens.<sup>32</sup> To do so, they must submit a crypto-asset white paper to the competent authority and publish it.<sup>33</sup>

Since e-money tokens are very closely related to e-money – as the name suggests – EMTs are explicitly considered to be e-money. Therefore, MiCAR stipulates that EMT issuers must largely comply with the provisions set out in the EMD II – with only a few specific adjustments due to MiCAR. Central requirements include EMT holders’ right to redeem their tokens at par

value<sup>34</sup> at any time as well as compliance with security requirements.

If the EBA classifies ARTs or EMTs as significant on the basis of several criteria (size, scope, interconnectedness, etc.), issuers must comply with additional requirements. These include, for example, higher own funds requirements and additional reserve management requirements.<sup>35</sup>

### Provisions for other crypto-assets

Although an offer to the public or an admission to trading of crypto-assets other than ARTs or EMTs do not require authorisation, MiCAR sets out some necessary requirements that must be adhered to.<sup>36</sup> An offer to the public or an application for admission to trading in the EU may only be made by legal persons. They must draw up and publish a crypto-asset white paper and submit it to the competent authority. Require-

*Classification as significant ARTs and EMTs*

*No authorisation requirement for offering crypto-assets that are not ARTs or EMTs*

*Only already authorised credit institutions or e-money institutions are eligible to offer EMTs*

<sup>30</sup> Pursuant to Article 3(1) number 28 of MiCAR, a credit institution is as defined in Article 4(1) number (1) of Regulation (EU) No 575/2013 and authorised under Directive 2013/36/EU.

<sup>31</sup> See Article 17 of MiCAR.

<sup>32</sup> See Article 48(1) of MiCAR.

<sup>33</sup> See Article 51(13) and (14) of MiCAR.

<sup>34</sup> See Article 49(4) of MiCAR.

<sup>35</sup> See Article 35(3) in conjunction with paragraph 6(a) of MiCAR.

<sup>36</sup> See Articles 4 to 9, 13 and 14 of MiCAR.

ments for marketing communications and rules of conduct must be met, and token holders must be granted rights of withdrawal.

Exceptions to the obligations outlined above are provided, for example, if other crypto-assets are offered free of charge as ARTs or EMTs or if these crypto-assets involve mining rewards.<sup>37</sup>

## Rules for crypto-asset service providers

*Rules for crypto-asset service providers*

As a general rule, crypto-asset services pursuant to MiCAR may only be provided by providers that are established in the EU and authorised as crypto-asset service providers by the competent authority.<sup>38</sup> However, certain undertakings, such as credit institutions, investment firms and e-money institutions, are allowed to provide all or specific crypto-asset services without separate authorisation.<sup>39</sup> They simply have to inform the competent authority before providing the planned activity using the information specified in MiCAR. Pursuant to MiCAR, crypto-asset service providers also have to comply with certain provisions, including holding own funds, compliance with governance requirements and safeguarding crypto-assets and clients' funds.<sup>40</sup> Specific obligations also apply depending on the service. For instance, a crypto-asset service provider that provides custody must enter into an agreement with clients with predetermined minimum content.<sup>41</sup> Where a trading platform for crypto-assets is operated, own-account trading is prohibited.

With the exception of the own funds requirements, all of the above-mentioned requirements also apply to undertakings that do not require a separate authorisation for this service. By contrast, the own funds requirements for these undertakings are governed by the applicable sectoral supervisory legislation.

Crypto-asset service providers may provide these services throughout the EU by means of

cross-border services or by establishing a branch. They must notify the competent authority of this intention (see the chart on p. 81).

*Passporting opportunities for crypto-asset service providers*

## Competent authorities in Germany

In Germany, the Federal Financial Supervisory Authority (BaFin) in cooperation with the Bundesbank supervise the issuers of ARTs and EMTs and also crypto-asset service providers. However, MiCAR stipulates that supervision is to be fully transferred to the EBA in the case of significant ARTs<sup>42</sup> and partially transferred in the case of significant EMTs<sup>43</sup>. In the case of credit institutions and e-money institutions, the EBA will exercise these supervisory powers in close cooperation with the other competent authorities.

## MiCAR and German law

Crypto-assets were already subject to German law even before MiCAR. Owing to the law transposing the amending directive to the Fourth EU Anti-Money Laundering Directive (Federal Law Gazette I, 2019, p. 2602), German legislators established a very broad definition of crypto-assets in the Banking Act (*Kreditwesen-*

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<sup>37</sup> See Article 4(3)(b) of MiCAR. In the case of crypto-assets such as Bitcoin, mining describes the procedure used to process, secure and synchronise transactions. Miners provide the system with computing power for this purpose. High power consumption means that the computing power is very costly. Miners are remunerated with mining rewards (units of the crypto-asset and proportionate transaction fees).

<sup>38</sup> See Article 59(1)(b) in conjunction with Article 63 of MiCAR.

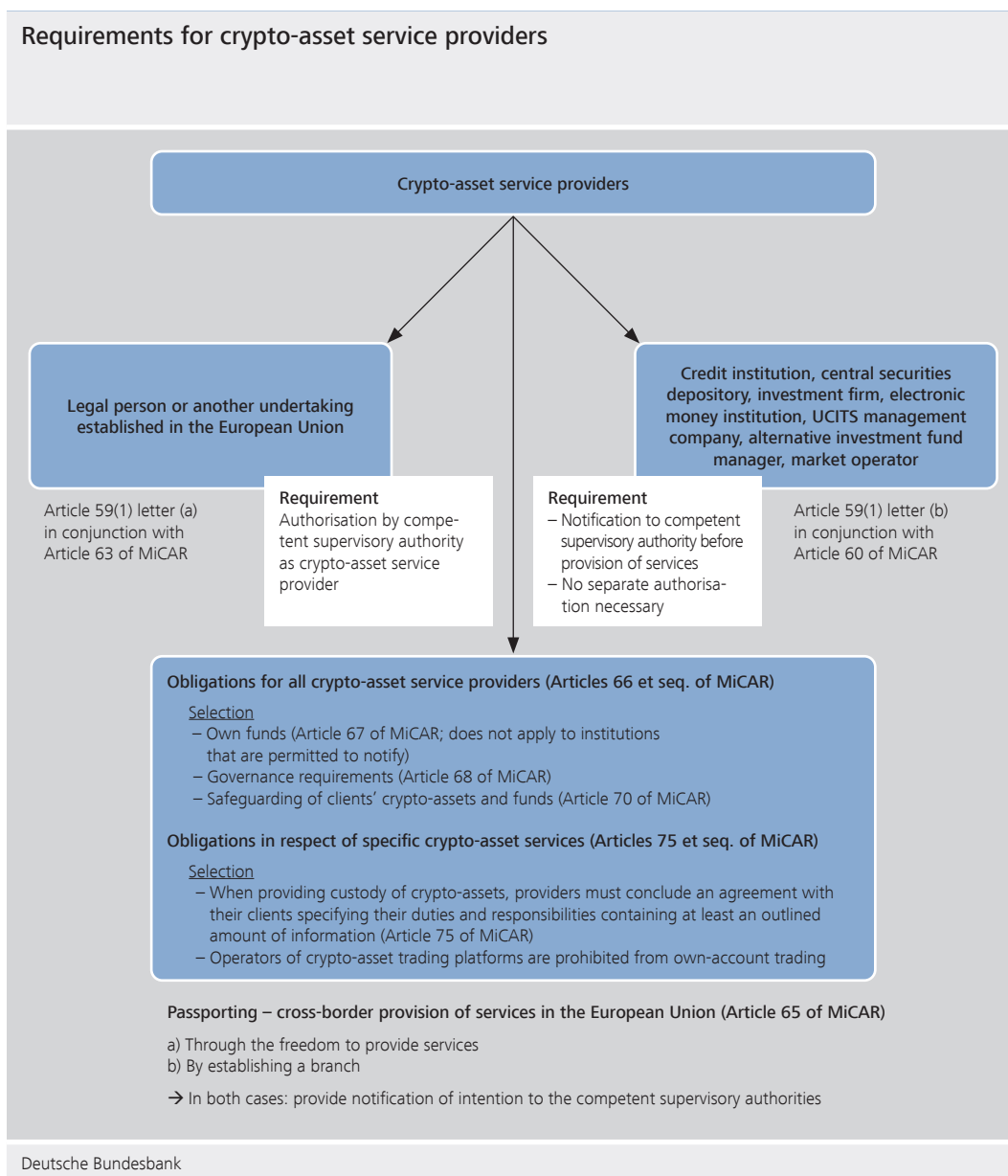
<sup>39</sup> See Article 59(1)(a) in conjunction with Article 60 of MiCAR.

<sup>40</sup> See Articles 66 to 70 of MiCAR.

<sup>41</sup> See Article 75(1) of MiCAR.

<sup>42</sup> See Article 43(7) of MiCAR.

<sup>43</sup> See Article 56(6) of MiCAR.



gesetz)<sup>44</sup> back in 2020. At the same time, crypto-custody business was also added to the Banking Act as a new financial service and crypto-assets as a new financial instrument. These existing national rules need to be adjusted on account of the provisions under MiCAR.

This adjustment will be made through a new crypto-asset markets oversight act (*Kryptomärkteaufsichtsgesetz – KMAG*)<sup>45</sup>. It will contain, amongst other things, more detailed provisions governing BaFin's tasks and powers and its cooperation with the Bundesbank. It will also include rules for transferring existing au-

thorisations for conducting crypto-custody business. The existing national definition of a crypto-asset will be brought into line with the

<sup>44</sup> Crypto-assets within the meaning of this Act are a digital representation of value that is not issued or guaranteed by a central bank or public authority and does not possess a legal status of currency or money, but is accepted by natural or legal persons as a means of exchange or payment by virtue of an agreement or actual practice or used for investment purposes and which can be transferred, stored and traded electronically; see Section 1(11), sentence 4 of the Banking Act.

<sup>45</sup> The KMAG is integrated into the Financial Market Digitalisation Act (*Finanzmarktdigitalisierungsgesetz – FinmadiG*, omnibus law), which also implements and specifies, amongst other things, the Digital Operational Resilience Act (DORA) Directive and the DORA Regulation. See Federal Ministry of Finance (2023).

European definition. The category “crypto-custody business” will be maintained in the Banking Act under the new name of “qualified crypto-custody business” (*qualifiziertes Krypto-verwahrsgeschäft*). This serves to maintain the authorisation requirement for the custody of crypto-assets that do not fall within the scope of MiCAR. Qualified crypto-custody business comprises the custody of cryptographic financial instruments and the safeguarding of cryptographic keys, which are, for example, used to enable access to crypto-securities.

## The Basel standard for the prudential treatment of banks’ crypto-asset exposures

While MiCAR is aimed directly at cryptosystem participants, the BCBS focuses on banks’ exposures to the cryptosystem.

*New BCBS standard defines minimum requirements for banks’ crypto-asset exposures*

In December 2022, the BCBS added an additional standard (SCO60)<sup>46</sup> to the Basel framework. This new standard sets out the prudential treatment of banks’ crypto-asset exposures and is designed to shield the traditional financial system from risks arising from the cryptosystem. Overall, the standard only defines minimum requirements. This means that individual jurisdictions still have the option of generally prohibiting crypto-assets, restricting banks’ exposure to this segment or regulating such exposure more strictly than the standard requires.

## Definitions in the Basel standard

With regard to the definition of crypto-assets, the Basel standard takes a broad approach, similarly to MiCAR, and generally includes private digital assets that are based on cryptography and DLT or similar technologies.<sup>47</sup>

The standard distinguishes between two groups of crypto-assets based on a set of clas-

sification conditions (see the upper table on p. 86) and sets out different requirements for these groups, especially with regard to capital requirements. The chart on p. 85 provides a schematic representation of the structure of the standard; its elements are explained in detail on the following pages.<sup>48</sup>

Both tokenised traditional assets (Group 1a), such as bonds issued with DLT, and crypto-assets with an effective stabilisation mechanism (stablecoins) (Group 1b) may qualify for Group 1. If crypto-assets do not meet the classification conditions specified in the standard (see the upper table on p. 86), they must be classified in Group 2. Unbacked crypto-assets must always be assigned to Group 2; the most prominent example here being Bitcoin.

The classification conditions are designed to ensure that the risk profile of crypto-assets in Group 1 is comparable to that of traditional assets<sup>49,50</sup>. Based on the principle of “same activity, same risk, same rules”, the standard essentially applies the existing Basel framework to these crypto-assets as far as capital requirements are concerned. A tokenised corporate bond in the banking book, for example, could generally receive the same risk weight as a conventional corporate bond in the banking book. By contrast, the standard assumes higher or novel risks for Group 2 crypto-assets and provides for a conservative regime to contain these risks for banks.

*For the purposes of capital requirements, crypto-assets are divided into two groups based on a set of classification conditions*

*Minimum requirements take into account the different risk profiles of crypto-assets*

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<sup>46</sup> See Basel Committee on Banking Supervision (2022a).  
<sup>47</sup> The definitions are worded as follows: “Cryptoassets are defined as private digital assets that depend on cryptography and distributed ledger technologies (DLT) or similar technologies. Digital assets are a digital representation of value, which can be used for payment or investment purposes or to access a good or service.”  
<sup>48</sup> See Basel Committee on Banking Supervision (2022a).  
<sup>49</sup> The standard defines traditional assets as those assets that are covered by the Basel framework and which do not fall under the crypto-asset definition introduced in the standard.  
<sup>50</sup> For information on the background to the emergence of the standard, see also the preceding consultations: Basel Committee on Banking Supervision (2021, 2022b).



## The work of the Financial Stability Board on crypto-assets

As an international body coordinating the supervision and regulation of international financial markets, the Financial Stability Board (FSB) has also been increasingly focussing on the risks posed by crypto-assets in recent years. Its aim in this regard has been to promote a comprehensive and internationally standardised regulatory approach.

To this end, the FSB published recommendations on the regulation, supervision and oversight of “global stablecoin” (GSC) arrangements in October 2020.<sup>1</sup> GSCs are stablecoins<sup>2</sup> that could be potentially used on a large scale across multiple jurisdictions as a means of making payments and/or as a store of value. These properties mean that GSCs could pose particular risks to financial stability.

The FSB subsequently published a comprehensive global regulatory framework for crypto-asset activities in July 2023. The framework consists of two sets of recommendations that define minimum international standards for the regulation, supervision and oversight of crypto-assets. In view of the greater risks posed by GSCs, the FSB has decided to maintain separate recommendations for these crypto-assets. At the same time, however, the FSB supplemented them by a second set of recommendations that is applicable to any crypto-asset and crypto market, including stablecoins and decentralised finance (DeFi).

The FSB’s recommendations focus primarily on financial stability risks and have been intentionally formulated in general and principles-oriented terms. They are based on the principles of “same activity, same risk, same rules” and technological neutral-

ity. The principles are flexible enough not to require a specific regulatory framework for their implementation. Therefore, it is up to each jurisdiction to decide whether to implement the recommendations by adopting a new regulation (as in the case of the Markets in Crypto-Assets Regulation, MiCAR) or by applying or extending an existing one. The FSB’s recommendations are also designed to allow international standard-setting bodies such as the Basel Committee on Banking Supervision enough scope to develop granular standards.

The status of implementation of the two sets of recommendations in the respective jurisdictions is to be reviewed at the end of 2025.<sup>3</sup> In the interim, the FSB and the International Monetary Fund will work together towards ensuring that the recommendations are implemented globally in an as harmonised manner as possible.<sup>4</sup>

Based on the principles set out in the FSB’s recommendations, other international standard-setting bodies are currently examining the extent to which their respective standards can already be applied to crypto-assets and stablecoins, or if further guidance is required.

Of particular note in this context is a report published by the Bank for International Settlements’ Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO) in July 2022. The report

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<sup>1</sup> See Financial Stability Board (2020).

<sup>2</sup> The report defines stablecoins as crypto-assets that aim to maintain a stable value relative to a specified asset, or a pool or basket of assets.

<sup>3</sup> See Financial Stability Board (2022b).

<sup>4</sup> See also International Monetary Fund and Financial Stability Board (2023).

examines the extent to which the Principles for Financial Market Infrastructures (PFMI) can be applied to stablecoin arrangements.<sup>5</sup> Following the principle of “same activities, same risks, same rules”, the report essentially finds that the PFMI can be applied to systemically important stablecoin arrangements. At the same time, the report also sets out additional specific recommended actions for a number of the Principles in respect of stablecoin arrangements.<sup>6</sup>

IOSCO also published a consultation report in May 2023 proposing recommendations addressed to the respective jurisdictions on the regulation and supervision of crypto-asset service providers.<sup>7</sup> It focuses on considerations on the protection of investors and their assets and the organisation of crypto-asset trading. The final report is expected in 2024.

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<sup>5</sup> See Committee on Payments and Market Infrastructure and International Organization of Securities Commissions (2022).

<sup>6</sup> This relates to Principles 2 (governance), 3 (framework for the comprehensive management of risk), 8 (settlement finality) and 9 (money settlements). See Committee on Payments and Market Infrastructure and International Organization of Securities Commissions (2022, p. 12-21).

<sup>7</sup> See International Organization of Securities Commissions (2023).

Individual institutions are required to continuously check whether the crypto-assets they hold meet the classification conditions. At the same time, institutions are required to inform the supervisory authorities of their assessment results. Supervisors, in turn, may disagree with institutions' assessments and override classification decisions.

## Rules for crypto-assets in Group 1 of the Basel standard

*Capital requirements for Group 1 crypto-assets essentially in line with the existing framework*

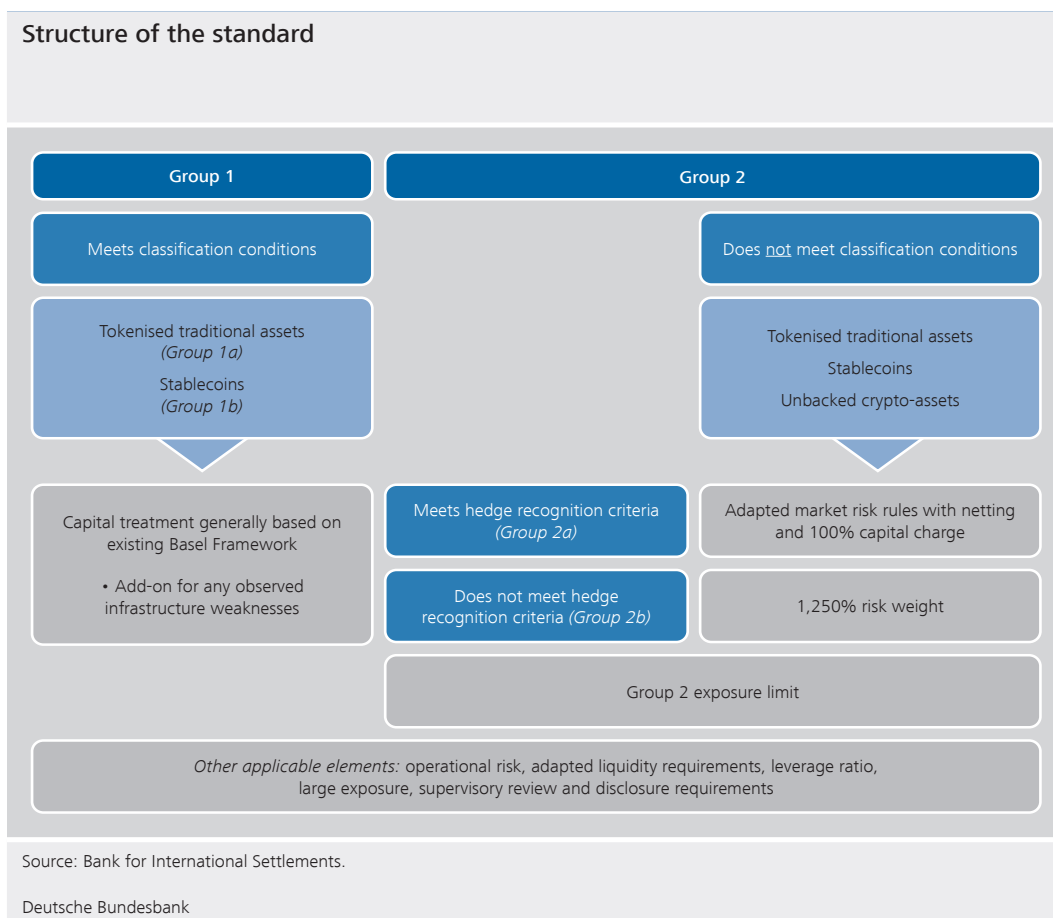
For Group 1 crypto-assets, the standard specifies how institutions should apply the existing provisions of the Basel framework for calculating credit, market and counterparty credit risk of these crypto-assets. The same applies to credit valuation adjustment (CVA) risks. Following the same logic, institutions can, for example, also apply internal models to Group 1 crypto-assets; the overview below illustrates these regulations.

The possibility of recognising crypto-assets as collateral for the purpose of credit risk mitigation is limited to Group 1a crypto-assets, as the crypto-assets in Group 1b require redemption, which entails additional counterparty credit risk.

The new standard also includes an infrastructure risk add-on, which is a flexible instrument that allows supervisors to respond to potential additional risks arising from the underlying technology. This add-on is initially set to zero, but can be increased by supervisors if corresponding risks arise that are not already adequately taken into account elsewhere.

## Rules for crypto-assets in Group 2 of the Basel Standard

As these crypto-assets are riskier, the standard sets out separate capital requirement rules for Group 2. The starting point is a simple, conser-



*Conservative approach to capital requirements for Group 2 crypto-assets*

vative approach, which generally provides for a risk weight of 1,250% for these crypto-assets, i.e. if the total capital ratio is 8%, these assets must, in principle, be backed entirely with capital. This approach does not distinguish between crypto-assets in the banking and trading books and does not differentiate between credit and market risks, including CVA risks.<sup>51</sup> The counterparty credit risk must additionally be backed by capital. The standard excludes the use of internal models and the recognition as collateral for crypto-assets in Group 2 (see the lower table on p. 86).

Nevertheless, the standard recognises that, even for Group 2 crypto-assets, risks can in some cases be reduced through hedging. Group 2 is subdivided accordingly: For Group 2a, the standard defines an adapted version of the requirements for market, CVA and counterparty credit risk, allowing institutions to net risk positions to a limited extent. One prerequisite for classification as Group 2a is that there is a

functioning market for the respective crypto-assets that allows the advantages of hedging to be realised effectively (see the table on p. 87).

In view of the higher risks that Group 2 crypto-assets pose, the BCBS has decided to explicitly limit an institution's maximum permissible risk exposure to this group of crypto-assets. An institution's total exposure to Group 2 crypto-assets may not exceed 2% of the institution's tier 1 capital and should generally be below 1% of tier 1 capital. If the institution exceeds the 1% limit, it must treat the excess amount as belonging to Group 2b. If the institution exceeds the 2% limit, the capital requirements of Group 2b apply to all Group 2 crypto-assets.

<sup>51</sup> In certain cases, supervisors may impose additional capital charges for higher default risks associated with short crypto positions and crypto derivatives.

### Classification conditions for Group 1 (condensed presentation)

1. Tokenised traditional assets or crypto-assets with effective stabilisation mechanisms
a. Digital representations of traditional assets using cryptography, DLT or similar technologies with the same level of credit and market risk and the same rights for the holder as the traditional form of the asset
b. Effective stabilisation mechanism: <ul style="list-style-type: none"> <li>– Redeemable for a predefined amount</li> <li>– Design minimises fluctuations in market value</li> <li>– Enables adequate risk management</li> <li>– Monitoring options for reserve assets</li> <li>– Passed redemption risk test</li> <li>– Supervised and regulated issuer</li> </ul>
2. Documentation and legal enforceability of all rights, obligations and interests in all jurisdictions where the asset is issued/redeemed and settlement finality
3. Robust risk governance and risk control policies and practices as well as traceability of all participants and transactions
4. Supervision of important stakeholders, e.g. regarding management of reserve assets or redemption of crypto-assets
Deutsche Bundesbank

### Further requirements of the Basel standard

*Application of other elements of the Basel framework*

Irrespective of the individual groups, the new standard also sets out how other elements of the Basel framework are to be applied to crypto-assets. For example, institutions must take crypto-assets into account in the leverage ratio, the large exposure regime and the calculation of operational risks. Institutions should also take due account of the specific risks of crypto-assets in their internal risk management, for example technological or legal risks. Supervisors, in turn, should expand their supervisory

review process accordingly. Institutions must disclose business activities and risks as well as risk management measures.

Liquidity risks associated with crypto-assets (or crypto-liabilities) are identified on the basis of the existing prudential definitions and classifications in accordance with the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR). Accordingly, Group 1a crypto-assets and liabilities are treated in the same way as their traditional counterparts. This allows tokenised versions of highly liquid assets to be included in the LCR liquidity buffer. Other

### Comparison of selected elements of the Basel framework for various groups

Element	Group 1a	Group 1b	Group 2
Separate banking book and trading book treatment	✓	✓	✗
Use of internal models	✓	✓	✗
Recognition as collateral for the purpose of credit risk mitigation	✓	✗	✗
Deutsche Bundesbank			

Requirements for inclusion in Group 2a (condensed presentation)
1. The crypto-asset exposure is one of the following:
a. A direct holding of a spot Group 2 crypto-asset where there exists a derivative or exchange-traded fund (ETF)/exchange-traded note (ETN) that is traded on a regulated exchange that solely references the crypto-asset
b. A derivative/ETF/ETN that references a Group 2 crypto-asset where the derivative/ETF/ETN has been explicitly approved by a jurisdiction's markets regulators for trading or the derivative is cleared by a qualifying central counterparty
c. A derivative/ETF/ETN that references a derivative/ETF/ETN that meets criterion (b) above
d. A derivative/ETF/ETN that references a crypto-asset-related reference rate published by a regulated exchange
2. The bank's crypto-asset exposure, or the crypto-asset referenced by the derivative/ETF/ETN, is highly liquid, i.e. it meets the minimum requirements for market capitalisation and trading volumes
3. Sufficient data regarding price, trading volumes and market capitalisation are available over the previous year
Deutsche Bundesbank

crypto-assets and related activities are classified according to their liquidity characteristics as follows, irrespective of the group classification described above.

- Stablecoins of Group 1b and certain stablecoins of Group 2 are treated as non-liquid securities; such holdings are thus subject to a required stable funding (RSF) factor of 85% in the NSFR.
- The payment flow assumptions for own-issued stablecoins in groups 1b and 2 are treated like own-issued collateralised securities.
- Other crypto-assets are subject to the most stringent treatment possible in the LCR and NSFR, i.e. holdings in or claims on these assets are not to be considered as liquid assets or inflows in the LCR and are subject to an RSF factor of 100% in the NSFR, while liabilities in these assets are subject to an outflow rate of 100% in the LCR when due within 30 days and do not contribute to stable funding in the NSFR.

## Implementation of the Basel standard

The members of the BCBS have agreed to implement the new standard in their respective jurisdictions by 1 January 2025.<sup>52</sup> Corresponding discussions have also commenced in the European Union. The review of the Capital Requirements Regulation (CRR) and the Capital Requirements Directive (CRD) that is currently underway is intended to initially introduce a transitional regime for the treatment of crypto-assets.

*Implementation: transitional regime envisaged in the EU*

## ■ Outlook

The regulatory initiatives presented make an important contribution to the regulation of the cryptosystem. They help to protect consumers and to maintain financial stability and the smooth operation of payment systems without hindering innovation.

*Previous regulatory initiatives are important steps*

It is now important that the regulation adopted to date is implemented consistently and swiftly. In Europe, this means transposing the Basel standard into European law; in Germany, it means adopting the national legislative amend-

<sup>52</sup> See Basel Committee on Banking Supervision (2022c).

ments necessary for MiCAR and adapting supervisory activities to the requirements of the regulation.

However, despite the regulatory progress made so far, one point is clear: the cryptosystem and the technologies on which it is based are rapidly evolving. It is therefore to be expected that change in this area will remain a constant for the time being. And with this change, regulation must also evolve where necessary.

*However, the regulatory journey will continue*

Regulators are aware of this necessity. The BCBS is already looking into some follow-up questions:<sup>53</sup> For example, it is currently reviewing some aspects of the classification conditions for Group 1b (stablecoins), including the appropriate composition of reserve assets for these crypto-assets.

And although the EU, with MiCAR, is at the forefront of global crypto regulation, it became clear already during the negotiations that there may still be gaps in MiCAR that should be closed. Examples include staking<sup>54</sup> and lending, which thus far do not fall under MiCAR's scope of application. The same applies to decentralised finance (DeFi). The main challenge in the case of DeFi is to define potential addressees for regulation and supervision.<sup>55</sup> At the same time, the collapse of the FTX crypto trading platform in November 2022, in particular, pointed to a further need for action under MiCAR.<sup>56</sup> Even if MiCAR had already been in force, the regulation would not have fully covered FTX's business practices. This is mainly because MiCAR does not provide the possibility of consolidated supervision or of additional prudential requirements for the bundling of several activities.

For all these reasons, MiCAR requires the European Commission to present a report on the

latest developments with respect to crypto-assets by 30 December 2024.<sup>57</sup> This report should include, amongst other things, assessments of the necessity and feasibility of regulating lending and borrowing of crypto-assets and of the appropriate regulatory treatment of crypto-assets without an issuer. The European Commission may, if appropriate, present a concrete legislative proposal alongside the report.

From today's perspective, it is impossible to say with any certainty how the cryptosystem will evolve going forward. Given the potential risks, a preventive regulatory approach is prudent. However, it needs to be accompanied by additional measures.<sup>58</sup> First, the cryptosystem is still fairly opaque; while MiCAR improves the situation, it would make sense to go further here and cover areas of the cryptosystem that do not yet fall under MiCAR's scope of application. Second, the cryptosystem is largely detached from geographical structures and thus provides scope for regulatory arbitrage; a globally harmonised regulatory approach would be desirable.

While the regulatory progress made so far is considerable, we have not yet come to the end of the road, and there is no telling where the end of the road will be. Going forward, the topic of crypto-assets will continue to be a key focus of regulators around the world.

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<sup>53</sup> See Basel Committee on Banking Supervision (2023).

<sup>54</sup> Staking is a process in which network participants can receive rewards by locking their crypto-assets and making them available to validate network transactions or as a source of liquidity for others.

<sup>55</sup> On the topic of DeFi, see also Deutsche Bundesbank (2021c).

<sup>56</sup> See: <https://de.cointelegraph.com/news/ecb-president-reiterates-calls-for-mica-ii-in-response-to-ftx-collapse>

<sup>57</sup> See Article 142 of MiCAR.

<sup>58</sup> See also Buch (2023).



## Other regulatory initiatives

In addition to the standards and laws described above, a number of other regulatory initiatives expressly extend the possibility of using distributed ledger technology (DLT) in the financial sector.<sup>1</sup>

### Pilot regime for DLT-based market infrastructures

One of the three pillars of the European Commission's digital finance package adopted in 2020 is the introduction of a regulatory sandbox for the use of DLT in market infrastructures. The pilot regime (Regulation on a pilot regime for market infrastructures based on distributed ledger technology) has been applicable in the European Union since 23 March 2023. It creates a simplified supervisory framework for the trading and settlement of tokenised securities within the meaning of the Markets in Financial Instruments Directive II (MiFID II).

The Regulation provides for three new types of financial market infrastructures: DLT multilateral trading facilities, DLT settlement systems, and DLT trading facilities and settlement systems used in tandem. As a baseline, these infrastructures must comply with the provisions of MiFID II, the Markets in Financial Instruments Regulation (MiFIR) and the Central Securities Depository Regulation (CSDR). However, investment firms, market operators and central securities depositories can apply to their national supervisory authorities for exemptions from these requirements for a period of six years provided that the use of DLT justifies such exemptions. The supervisory authority may, however, impose compensatory measures aimed at meeting the objectives of the original requirements.

A number of thresholds have been put in place to prevent market infrastructures becoming too large and thus posing a risk to financial stability. For example, a new financial instrument may not be included in trading or settlement if this would result in the total market value of all the securities included exceeding €6 billion.<sup>2</sup> Should the market value of all financial instruments included reach €9 billion (e.g. via increases in market value), a transition strategy must be implemented, i.e. conversion to a traditional infrastructure for which no further exemptions apply.<sup>3</sup> This transition strategy must also be implemented if the exemptions granted no longer apply after the six-year period.

It remains to be seen if the pilot regime will actually make it easier to get technical innovations off the ground in the EU. The appeal of the pilot regime is diminished by the fact that the high costs involved in setting up a financial market infrastructure are paired with an operating period of just six years.<sup>4</sup> Potential users of the infrastructure also need to consider if they wish to incur the one-off connection and utilisation costs given this limited operating period.

One of the strengths of the regime is its highly customisable supervisory framework for infrastructure operators, thanks to the

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<sup>1</sup> Money laundering and the financing of terrorism are covered by the German Ordinance on Enhanced Due Diligence Obligations for the Transfer of Crypto-Assets (Crypto-Asset Transfer Ordinance) (*Verordnung über verstärkte Sorgfaltspflichten bei dem Transfer von Kryptowerten (Kryptowertetransferverordnung)*) (Federal Law Gazette 2023 I No 135).

<sup>2</sup> See Article 3(2) sentence 1 of Regulation (EU) 2022/858.

<sup>3</sup> See Article 3(3) sentence 1 of Regulation (EU) 2022/858.

<sup>4</sup> See Recital 48 of Regulation (EU) 2022/858.

exemptions that can be applied for in each case. However, this customised approach also increases complexity for supervisors, operators and users of financial market infrastructures. The European Securities and Markets Authority is endeavouring to counteract this by publishing the authorisations and exemptions that have been granted on its website.<sup>5</sup>

### German Electronic Securities Act<sup>6</sup>

The German Electronic Securities Act (*Gesetz über elektronische Wertpapiere, eWpG*) makes it possible to issue bearer debt securities, Pfandbriefe and shares in special funds in a purely electronic format whereby the issuer records them in an electronic securities register. The eWpG does not cover registered securities and order bonds, however.

Before the eWpG came into force, with the exception of government bonds, financial instruments classified as securities under civil law had to be securitised in a physical certificate. The transfer of these securities is carried out under the principles of property law alongside the application of civil law provisions on the protection of good faith. To facilitate comparable marketability and legally compliant acquisition for electronic securities, too, these securities are deemed to be “things” (res) in a legal sense via a legal fiction. This means the transfer of electronic securities is also governed by the principles of property law.

The eWpG distinguishes between two types of electronic securities registers, namely central securities registers and crypto-securities registers.<sup>7</sup> A crypto-securities register must be maintained on a tamper-proof system that records data in chronological order and safeguards them against unauthorised deletion and retroactive modi-

fication.<sup>8</sup> The requirements governing how the system should be designed have been formulated in a technology-neutral manner; the aim is not to specify DLT or any particular form of this technology. Furthermore, the eWpG does not state that a DLT-based system for recording data complies with legal requirements at all times.<sup>9</sup> Since 10 June 2021, maintaining crypto-securities registers has been deemed a financial service requiring a licence within the meaning of Section 1(1a) number 8 of the German Banking Act (*Kreditwesengesetz*).

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<sup>5</sup> See Recital 47 of Regulation (EU) 2022/858.

<sup>6</sup> See eWpG, 3 June 2021 (Federal Law Gazette I p. 1423).

<sup>7</sup> See Section 4(1) in conjunction with sections 12 and 16 of the eWpG.

<sup>8</sup> See Section 16(1) of the eWpG.

<sup>9</sup> See German Bundestag (2021), pp. 59 f.

## ■ List of references

Basel Committee on Banking Supervision (2023), Basel Committee agrees to consult on targeted revisions to standards on cryptoasset and interest rate risk in the banking book and to take steps to address window-dressing in relation to the G-SIB framework, Press release of 7 December 2023, <https://www.bis.org/press/p231207.htm>

Basel Committee on Banking Supervision (2022a), Prudential treatment of cryptoasset exposures, December 2022, <https://www.bis.org/bcbs/publ/d545.pdf>

Basel Committee on Banking Supervision (2022b), Second consultation on the prudential treatment of cryptoasset exposures, Consultative Document, June 2022, <https://www.bis.org/bcbs/publ/d533.pdf>

Basel Committee on Banking Supervision (2022c), Governors and Heads of Supervision endorse global bank prudential standard for cryptoassets and work programme of Basel Committee, Press release of 16 December 2022, <https://www.bis.org/press/p221216.htm>

Basel Committee on Banking Supervision (2021), Prudential treatment of cryptoasset exposures, Consultative Document, September 2021, <https://www.bis.org/bcbs/publ/d519.pdf>

Buch, C. (2023), Are crypto-assets a threat to financial stability?, Speech as part of the seminar series "Women in Finance", University of Hohenheim, 20 April 2023.

Committee on Payments and Market Infrastructure and International Organization of Securities Commissions (2022), Application of the Principles for Financial Market Infrastructures to stablecoin arrangements, July 2022.

Cryptocurrency Transfer Regulation (*Kryptowertetransferverordnung*) of 22 May 2023 (FLG. 2023 I No 135), [https://www.gesetze-im-internet.de/kryptowtransferv\\_2023/BJNR0870A0023.html](https://www.gesetze-im-internet.de/kryptowtransferv_2023/BJNR0870A0023.html)

Deutsche Bundesbank (2023), Digital money: options for the financial industry, Monthly Report, July 2023, pp. 17-32.

Deutsche Bundesbank (2021a), The impact of the Eurosystem's monetary policy on Bitcoin and other crypto tokens, Monthly Report, September 2021, pp. 61-89.

Deutsche Bundesbank (2021b), Digital money: options for payments, Monthly Report, April 2021, pp. 57-75.

Deutsche Bundesbank (2021c), Crypto tokens and decentralised financial applications, Monthly Report, July 2021, pp. 31-48.

Electronic Securities Act (*Gesetz über elektronische Wertpapiere*) of 3 June 2021 (FLG I p. 1423), <https://www.gesetze-im-internet.de/ewpg/eWpG.pdf>

European Commission (2020), Digital finance package, Press release of 24 September 2020, [https://finance.ec.europa.eu/publications/digital-finance-package\\_en](https://finance.ec.europa.eu/publications/digital-finance-package_en)

Federal Ministry of Finance (2023), Referentenentwurf eines Gesetzes über die Digitalisierung des Finanzmarktes (Finanzmarktdigitalisierungsgesetz – FinmadiG), [https://www.bundesfinanzministerium.de/Content/DE/Gesetzestexte/Gesetze\\_Gesetzesvorhaben/Abteilungen/Abteilung\\_VII/20\\_Legislaturperiode/2023-10-23-FinmadiG/0-Gesetz.html](https://www.bundesfinanzministerium.de/Content/DE/Gesetzestexte/Gesetze_Gesetzesvorhaben/Abteilungen/Abteilung_VII/20_Legislaturperiode/2023-10-23-FinmadiG/0-Gesetz.html)

Financial Stability Board (2023), FSB Global Regulatory Framework for Crypto-Asset Activities, July 2023.

Financial Stability Board (2022a), Assessment of risks to Financial Stability from Crypto-assets, February 2022.

Financial Stability Board (2022b), International Regulation of Crypto-asset Activities, October 2022.

Financial Stability Board (2020), Regulation, Supervision and Oversight of “Global Stablecoin” Arrangements, October 2020.

German Bundestag (2021), Entwurf eines Gesetzes zur Einführung von elektronischen Wertpapieren, 19th legislative term, Drucksache 19/26925, <https://dserver.bundestag.de/btd/19/269/1926925.pdf>

International Monetary Fund und Financial Stability Board (2023), IMF-FSB Synthesis Paper: Policies for Crypto-Assets, September 2023.

International Organization of Securities Commissions (2023), Policy Recommendations for Crypto and Digital Asset Markets, Consultation Report, May 2023, <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD734.pdf>

# Statistical Section

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## I. Key economic data for the euro area

### 1. Monetary developments and interest rates

Period	Money stock in various definitions 1,2				Determinants of the money stock 1			Interest rates			
	M1	M2	M3 3		MFI lending, total	MFI lending to enterprises and households	Monetary capital formation 4	€STR 5,6	Yield on European government bonds outstanding 7		
				3-month moving average (centred)							
	Annual percentage change							% p.a. as a monthly average			
2022 Mar.	9.2	6.8	6.5	6.5	6.1	4.4	-0.8	-0.58	0.9		
Apr.	8.6	6.6	6.4	6.3	6.4	5.0	-0.2	-0.58	1.4		
May	8.3	6.3	6.1	6.2	6.2	5.1	-0.1	-0.59	1.7		
June	7.5	6.2	6.0	6.0	6.3	5.4	-0.2	-0.58	2.2		
July	7.0	6.1	5.8	6.0	5.9	5.4	-0.2	-0.51	1.9		
Aug.	6.8	6.3	6.2	6.0	5.7	5.7	-0.3	-0.09	1.8		
Sep.	5.2	5.9	6.0	5.7	5.5	5.7	-0.3	0.36	2.6		
Oct.	3.5	5.0	4.9	5.2	5.1	5.3	-0.7	0.66	3.0		
Nov.	2.2	4.5	4.6	4.4	4.8	5.2	-0.1	1.37	2.7		
Dec.	0.2	3.4	3.8	3.8	3.9	4.4	0.6	1.57	2.8		
2023 Jan.	-1.3	2.5	3.0	3.1	3.0	3.7	1.3	1.90	2.9		
Feb.	-3.1	1.7	2.5	2.5	2.5	3.3	1.9	2.28	3.0		
Mar.	-4.7	1.0	2.0	2.0	2.0	2.9	2.4	2.57	3.1		
Apr.	-5.7	0.5	1.4	1.5	1.4	2.4	2.4	2.90	3.0		
May	-7.0	-0.1	1.0	0.9	0.9	2.2	3.2	3.08	3.0		
June	-8.0	-0.6	0.5	0.4	0.4	1.6	3.6	3.24	3.0		
July	-9.1	-1.4	-0.4	-0.4	0.1	1.3	4.0	3.40	3.1		
Aug.	-10.4	-2.4	-1.3	-0.9	-0.2	0.7	4.5	3.64	3.2		
Sep.	-9.9	-2.2	-1.2	-1.2	-0.4	0.3	4.9	3.75	3.3		
Oct.	-10.0	-2.2	-1.0	...	-0.5	0.4	5.4	3.90	3.5		
Nov.	...	...	...	...	...	...	...	3.90	3.3		

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

Short-Term Rate. 6 See also footnotes to Table VI.3, p. 43\*. 7 GDP-weighted yield on ten-year government bonds. Countries included: DE, FR, NL, BE, AT, FI, IE, PT, ES, IT, GR, SK, CY, SI.

### 2. External transactions and positions \*

Period	Selected items of the euro area balance of payments								Euro exchange rates 1		
	Current account		Financial account						Reference rate vis-à-vis the US dollar	Effective exchange rate 3	
	Balance	of which: Goods	Balance	Direct investment	Portfolio investment	Financial derivatives 2	Other investment	Reserve assets		Nominal	Real 4
	€ million								EUR 1 = USD ...	Q1 1999 = 100	
2022 Mar.	+ 4,911	+ 669	- 20,793	+ 24,447	- 140,125	+ 1,891	+ 93,088	- 94	1.1019	95.8	91.5
Apr.	- 15,938	- 13,674	- 50,201	+ 21,629	+ 40,017	+ 26,153	- 137,243	- 756	1.0819	95.0	90.1
May	- 29,322	- 7,870	+ 74,017	+ 120,742	+ 36,979	+ 2,565	- 87,435	+ 1,165	1.0579	95.4	90.5
June	- 4,576	- 8,748	+ 7,336	+ 7,896	- 100,873	+ 6,266	+ 92,140	+ 1,906	1.0566	95.7	90.7
July	- 12,890	- 13,561	+ 19,972	- 10,178	+ 46,302	+ 9,922	- 27,708	+ 1,634	1.0179	93.9	89.2
Aug.	- 26,568	- 30,991	- 19,868	- 36,092	- 60,734	+ 14,532	+ 60,269	+ 2,158	1.0128	93.4	88.9
Sep.	- 5,398	- 13,237	- 24,973	+ 82,999	- 166,454	+ 13,771	+ 41,241	+ 3,470	0.9904	93.9	89.9
Oct.	- 14,552	- 8,014	+ 13,845	+ 10,657	- 21,966	+ 3,675	+ 17,555	+ 3,923	0.9826	94.5	91.3
Nov.	+ 5,781	+ 6,848	- 21,426	- 5,967	- 30,236	+ 4,364	+ 9,899	+ 515	1.0201	95.7	92.3
Dec.	+ 15,170	+ 9,187	+ 62,820	+ 27,823	+ 64,359	- 7,810	- 26,407	+ 4,855	1.0589	96.8	92.6
2023 Jan.	- 11,450	- 13,621	+ 9,250	- 795	+ 30,484	- 2,482	- 9,210	- 8,747	1.0769	97.1	92.8
Feb.	+ 12,774	+ 22,117	- 18,894	+ 32,093	- 25,632	+ 12,383	- 26,391	- 11,347	1.0715	97.0	93.0
Mar.	+ 31,242	+ 40,550	+ 44,846	+ 3,466	- 102,298	+ 5,702	+ 136,330	+ 1,646	1.0706	97.3	93.2
Apr.	+ 8,747	+ 7,698	+ 7,906	- 4,249	+ 66,948	- 1,474	- 51,452	- 1,868	1.0968	98.4	p 94.1
May	- 6,248	+ 16,180	- 9,461	- 57,786	+ 50,043	+ 7,352	- 10,423	+ 1,353	1.0868	98.0	p 93.5
June	+ 37,376	+ 32,660	+ 73,921	+ 81,656	- 46,330	- 11,016	+ 47,222	+ 2,389	1.0840	98.2	p 93.8
July	+ 27,610	+ 27,310	+ 7,191	- 28,982	+ 13,045	- 831	+ 23,565	+ 394	1.1058	99.2	p 95.0
Aug.	+ 33,737	+ 26,773	+ 41,253	+ 7,611	- 1,766	+ 8,876	+ 25,231	+ 1,302	1.0909	99.0	p 95.1
Sep.	+ 40,779	+ 31,138	+ 39,401	+ 6,961	- 37,703	+ 3,807	+ 70,209	- 3,873	1.0684	98.5	p 94.7
Oct.	...	...	...	...	...	...	...	...	1.0563	98.0	p 94.2
Nov.	...	...	...	...	...	...	...	...	1.0808	98.7	p 94.4

\* Source: ECB, according to the international standards of the International Monetary Fund's Balance of Payments Manual (sixth edition). 1 Monthly averages, see also Tables XII. 9 and 11, pp. 82\*/ 83\*. 2 Including employee stock options. 3 Bundesbank cal-

culated. Vis-à-vis the currencies of the extended EER group of trading partners (fixed composition). 4 Based on consumer price indices.

## I. Key economic data for the euro area

### 3. General economic indicators

Period	Euro area	Belgium	Germany	Estonia	Finland	France	Greece	Ireland	Italy	Croatia	Latvia
<b>Real gross domestic product <sup>1</sup></b>											
Annual percentage change											
2020	- 6.1	- 5.3	- 3.8	- 1.0	- 2.4	- 7.5	- 9.3	6.6	- 9.0	- 8.6	- 3.5
2021	5.9	6.9	3.2	7.2	3.2	6.4	8.4	15.1	8.3	13.8	6.7
2022	3.4	3.0	1.8	- 0.5	1.6	2.5	5.6	9.4	3.7	6.4	3.4
2022 Q2	4.1	3.8	1.6	0.2	2.6	4.0	7.1	9.3	5.0	9.3	4.4
Q3	2.4	2.0	1.2	- 0.5	1.2	1.3	3.7	9.4	2.5	5.5	0.8
Q4	1.8	1.4	0.2	- 4.2	- 0.6	0.3	3.7	10.2	1.3	3.2	1.6
2023 Q1	1.3	1.7	0.2	- 3.7	0.6	1.1	2.0	2.6	2.3	1.6	- 0.0
Q2	0.6	1.3	- 0.4	- 2.9	- 0.6	0.7	2.8	- 0.3	0.0	2.6	- 1.1
Q3	0.0	1.4	- 0.8	- 3.9	- 1.5	0.3	1.8	- 5.8	- 0.0	2.8	- 0.7
<b>Industrial production <sup>2</sup></b>											
Annual percentage change											
2020	- 7.7	- 3.8	- 9.6	- 2.8	- 3.2	- 10.9	- 2.1	14.5	- 11.5	- 3.4	- 1.8
2021	8.9	16.8	4.6	12.8	4.2	5.9	10.4	28.3	12.2	6.4	6.5
2022	2.3	- 0.7	- 0.3	- 2.3	4.0	- 0.2	2.5	18.9	0.4	1.6	0.8
2022 Q2	2.0	- 5.1	- 1.3	2.6	8.0	- 0.2	3.1	14.9	2.1	2.5	3.6
Q3	3.4	- 3.6	1.9	- 5.0	3.5	0.2	3.9	21.0	0.0	2.5	- 2.6
Q4	2.2	- 0.2	- 0.6	- 10.4	- 0.6	- 0.4	- 1.7	29.8	- 2.2	- 1.4	- 1.2
2023 Q1	0.3	- 2.9	0.4	- 9.6	1.0	- 0.5	2.3	7.8	- 1.5	- 1.7	- 6.0
Q2	- 1.2	- 4.3	- 0.3	- 14.3	- 2.9	1.5	1.2	4.2	- 3.9	0.0	- 6.6
Q3	- 4.8	- 7.2	p - 3.1	- 11.6	- 1.7	0.8	- 0.1	- 21.6	- 2.6	- 0.4	- 5.3
<b>Capacity utilisation in industry <sup>3</sup></b>											
As a percentage of full capacity											
2021	81.4	80.1	84.9	78.1	81.2	81.1	75.7	78.0	76.5	75.0	75.3
2022	82.2	79.1	85.2	71.7	81.0	81.8	75.9	79.8	78.4	77.0	75.0
2023	80.5	75.7	83.4	67.3	76.6	81.1	75.2	...	76.9	77.2	72.9
2022 Q3	81.9	78.9	85.1	74.7	80.7	81.7	74.5	79.2	78.4	75.8	75.7
Q4	81.4	77.2	84.9	71.5	80.8	80.6	75.5	79.8	77.9	74.5	73.3
2023 Q1	81.4	76.7	84.6	71.0	79.0	81.0	74.8	79.2	77.4	77.6	72.6
Q2	81.2	77.3	84.2	70.0	76.3	82.0	73.8	...	77.4	78.1	73.8
Q3	80.0	75.0	82.9	63.5	77.4	80.6	76.3	...	76.9	78.4	72.7
Q4	79.4	73.9	81.9	64.7	73.7	80.7	75.9	...	75.9	74.7	72.3
<b>Standardised unemployment rate <sup>4</sup></b>											
As a percentage of civilian labour force											
2020	7.9	5.6	3.6	7.0	7.8	7.8	16.3	5.6	9.2	7.6	8.1
2021	7.7	e 6.3	3.6	e 6.2	e 7.7	e 7.9	e 14.8	e 6.3	e 9.5	e 7.6	e 7.6
2022	6.7	e 5.5	p 3.1	e 5.6	e 6.8	e 7.3	e 12.5	e 4.5	e 8.1	e 6.8	e 6.9
2023 June	6.5	5.6	3.0	7.1	7.2	7.3	11.2	4.4	7.5	6.4	6.6
July	6.6	5.3	3.0	7.5	7.4	7.4	11.3	4.4	7.8	6.5	6.6
Aug.	6.5	5.3	3.0	7.3	7.3	7.4	10.8	4.5	7.5	6.5	6.6
Sep.	6.5	5.4	3.1	6.5	7.4	7.3	10.3	4.7	7.6	6.5	6.5
Oct.	6.5	5.6	3.1	6.3	7.5	7.3	9.6	4.7	7.8	6.5	6.5
Nov.	...	...	...	...	...	...	...	4.8	...	...	...
<b>Harmonised Index of Consumer Prices</b>											
Annual percentage change											
2020	0.3	0.4	<sup>5</sup> 0.4	- 0.6	0.4	0.5	- 1.3	- 0.5	- 0.1	0.0	0.1
2021	2.6	3.2	<sup>5</sup> 3.2	4.5	2.1	2.1	0.6	2.4	1.9	2.7	3.2
2022	8.4	10.3	8.7	19.4	7.2	5.9	9.3	8.1	8.7	10.7	17.2
2023 June	<sup>6</sup> 5.5	1.6	6.8	9.0	4.1	5.3	2.8	4.8	6.7	8.3	8.1
July	5.3	1.7	6.5	6.2	4.2	5.1	3.5	4.6	6.3	8.0	6.6
Aug.	5.2	2.4	6.4	4.3	3.1	5.7	3.5	4.9	5.5	8.4	5.6
Sep.	4.3	0.7	4.3	3.9	3.0	5.7	2.4	5.0	5.6	7.4	3.6
Oct.	2.9	- 1.7	3.0	5.0	2.4	4.5	3.8	3.6	1.8	6.7	2.3
Nov.	e 2.4	e - 0.7	2.3	e 4.1	e 0.8	e 3.8	2.9	e 2.3	e 0.7	5.5	1.1
<b>General government financial balance <sup>7</sup></b>											
As a percentage of GDP											
2020	- 7.1	- 8.9	- 4.3	- 5.4	- 5.6	- 9.0	- 9.7	- 5.0	- 9.6	- 7.3	- 4.5
2021	- 5.2	- 5.4	- 3.6	- 2.5	- 2.8	- 6.5	- 7.0	- 1.5	- 8.8	- 2.5	- 7.2
2022	- 3.6	- 3.5	- 2.5	- 1.0	- 0.8	- 4.8	- 2.4	1.7	- 8.0	0.1	- 4.6
<b>General government debt <sup>7</sup></b>											
As a percentage of GDP											
2020	97.2	111.8	68.8	18.6	74.7	114.6	207.0	58.1	154.9	86.8	42.2
2021	94.7	108.0	69.0	17.8	72.5	112.9	195.0	54.4	147.1	78.1	44.0
2022	90.9	104.3	66.1	18.5	73.3	111.8	172.6	44.4	141.7	68.2	41.0

Sources: Eurostat, European Commission, European Central Bank, Federal Statistical Office, Bundesbank calculations. Latest data are partly based on press reports and are

provisional. **1** Euro area: quarterly data seasonally and calendar adjusted. **2** Manufacturing, mining and energy: adjusted for working-day variations. **3** Manufacturing:

I. Key economic data for the euro area

Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovakia	Slovenia	Spain	Cyprus	Period
<b>Real gross domestic product <sup>1</sup></b>										
Annual percentage change										
- 0.0	- 0.9	- 8.2	- 3.9	- 6.6	- 8.3	- 3.3	- 4.2	- 11.2	- 3.4	2020
6.3	7.2	12.6	6.2	4.2	5.7	4.8	8.2	6.4	9.9	2021
2.4	1.4	8.2	4.3	4.8	6.8	1.7	2.5	5.8	5.1	2022
2.4	2.3	10.6	5.2	6.5	8.2	1.4	4.4	6.9	6.7	2022 Q2
2.1	2.1	6.4	3.0	2.0	5.0	1.5	0.9	5.5	4.2	Q3
0.1	- 2.5	7.3	2.9	1.8	3.1	1.2	- 0.2	3.8	2.3	Q4
- 2.4	- 1.4	6.4	1.9	1.9	2.7	0.5	1.0	4.5	3.0	2023 Q1
0.7	- 1.5	5.9	- 0.2	- 1.4	2.0	1.5	1.6	2.1	2.2	Q2
0.2	- 1.8	7.1	- 0.6	- 1.9	1.6	1.2	1.1	1.4	2.5	Q3
<b>Industrial production <sup>2</sup></b>										
Annual percentage change										
- 1.9	- 10.8	- 0.3	- 3.9	- 5.9	- 7.3	- 8.5	- 5.2	- 9.8	- 7.3	2020
20.2	8.4	0.1	5.0	11.2	3.5	10.3	10.2	7.5	6.4	2021
9.4	- 1.3	2.8	2.6	6.9	- 0.0	- 4.0	1.2	3.0	1.1	2022
9.2	- 1.6	- 4.0	4.7	8.4	2.0	- 3.1	2.8	5.0	3.0	2022 Q2
10.0	- 0.3	7.7	2.4	5.5	1.3	- 1.6	1.7	4.6	- 1.0	Q3
- 2.5	- 3.3	10.0	1.3	2.8	- 0.3	- 8.4	- 5.7	0.7	- 0.4	Q4
- 11.7	- 4.4	13.6	- 3.6	1.0	1.3	- 3.5	- 3.5	1.6	- 1.4	2023 Q1
- 0.4	- 6.9	6.6	- 9.4	- 0.4	- 4.9	0.6	- 4.2	- 2.1	0.4	Q2
- 5.0	- 7.4	1.6	- 8.0	- 1.4	- 4.9	- 0.1	- 8.1	- 2.1	2.7	Q3
<b>Capacity utilisation in industry <sup>3</sup></b>										
As a percentage of full capacity										
76.7	82.0	76.8	82.4	87.1	79.2	82.2	84.5	77.8	51.3	2021
77.4	80.8	64.7	83.7	87.7	81.9	83.3	85.0	78.7	58.2	2022
68.8	73.1	68.1	81.9	85.3	81.7	82.1	83.2	76.9	61.6	2023
76.8	81.4	67.6	83.9	87.9	81.6	83.5	84.1	78.9	58.2	2022 Q3
76.1	79.8	63.6	82.6	85.7	81.6	83.0	84.1	77.2	60.5	Q4
69.7	74.3	65.7	82.9	87.1	81.5	80.2	83.1	77.1	59.8	2023 Q1
70.6	75.5	53.3	82.5	86.3	83.5	84.0	83.9	76.3	60.9	Q2
67.1	72.0	69.4	81.3	84.6	80.9	83.0	83.0	76.2	62.7	Q3
67.9	70.5	84.1	80.9	83.2	80.9	81.0	82.6	77.8	63.1	Q4
<b>Standardised unemployment rate <sup>4</sup></b>										
As a percentage of civilian labour force										
e 8.6	e 6.8	e 4.4	e 3.9	e 5.4	e 6.9	e 6.7	e 5.0	e 15.5	e 7.6	2020
e 7.1	e 5.4	e 3.4	e 4.2	e 6.2	e 6.8	e 6.9	e 4.8	e 14.8	e 7.5	2021
e 5.9	e 4.6	e 2.9	e 3.6	e 4.8	e 6.2	e 6.2	e 4.0	e 13.0	e 6.8	2022
5.8	5.2	2.4	3.5	5.1	6.3	5.9	3.8	11.9	6.1	2023 June
6.3	5.2	2.3	3.6	5.7	6.3	5.8	3.8	12.0	6.1	July
6.7	5.3	2.5	3.6	5.4	6.3	5.8	3.8	11.9	6.0	Aug.
6.9	5.5	2.5	3.7	5.5	6.6	5.8	3.9	12.0	5.9	Sep.
6.5	5.5	2.5	3.6	5.1	6.7	5.8	4.1	12.0	5.8	Oct.
...	...	...	...	...	...	...	...	...	...	Nov.
<b>Harmonised Index of Consumer Prices</b>										
Annual percentage change										
1.1	0.0	0.8	1.1	1.4	- 0.1	2.0	- 0.3	- 0.3	- 1.1	2020
4.6	3.5	0.7	2.8	2.8	0.9	2.8	2.0	3.0	2.3	2021
18.9	8.2	6.1	11.6	8.6	8.1	12.1	9.3	8.3	8.1	2022
8.2	1.0	6.2	6.4	7.8	4.7	11.3	6.6	1.6	2.8	2023 June
7.2	2.0	5.6	5.3	7.0	4.3	10.3	5.7	2.1	2.4	July
6.4	3.5	5.0	3.4	7.5	5.3	9.6	6.1	2.4	3.1	Aug.
4.1	3.4	4.9	- 0.3	5.8	4.8	9.0	7.1	3.3	4.3	Sep.
3.1	2.1	4.2	- 1.0	4.9	3.2	7.8	6.6	3.5	3.6	Oct.
2.3	2.1	e 3.8	1.4	e 4.9	e 2.3	e 6.9	4.5	e 3.2	2.4	Nov.
<b>General government financial balance <sup>7</sup></b>										
As a percentage of GDP										
- 6.5	- 3.4	- 9.6	- 3.7	- 8.0	- 5.8	- 5.4	- 7.6	- 10.1	- 5.7	2020
- 1.1	0.6	- 7.5	- 2.2	- 5.8	- 2.9	- 5.2	- 4.6	- 6.7	- 1.9	2021
- 0.7	- 0.3	- 5.7	- 0.1	- 3.5	- 0.3	- 2.0	- 3.0	- 4.7	2.4	2022
<b>General government debt <sup>7</sup></b>										
As a percentage of GDP										
46.2	24.6	52.2	54.7	83.0	134.9	58.9	79.6	120.3	114.9	2020
43.4	24.5	54.0	51.7	82.5	124.5	61.1	74.4	116.8	99.3	2021
38.1	24.7	52.3	50.1	78.4	112.4	57.8	72.3	111.6	85.6	2022

quarterly data seasonally adjusted. Data collection at the beginning of the quarter.  
<sup>4</sup> Monthly data seasonally adjusted. <sup>5</sup> Influenced by a temporary reduction of value

added tax between July and December 2020. <sup>6</sup> Including Croatia from 2023 onwards.  
<sup>7</sup> According to Maastricht Treaty definition.

## II. Overall monetary survey in the euro area

### 1. The money stock and its counterparts \* a) Euro area <sup>1</sup>

€ 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								
2022 Mar.	149.8	104.5	26.4	45.3	36.0	4.1	- 24.1	- 28.2	- 2.1	2.8	- 0.7	- 21.7	17.5
Apr.	111.9	96.7	20.2	15.2	5.2	- 101.8	- 79.5	22.3	6.2	- 10.5	- 0.2	2.1	14.7
May	107.2	65.1	- 18.8	42.1	49.5	- 51.3	40.8	92.2	- 18.1	3.1	- 3.2	- 21.5	3.6
June	116.2	83.6	- 8.8	32.6	33.5	99.4	- 26.0	- 125.4	22.2	- 4.8	- 0.4	1.6	25.8
July	29.8	58.6	- 3.0	- 28.8	- 28.8	- 27.9	63.5	91.3	5.3	- 11.7	- 0.4	- 3.2	20.5
Aug.	- 10.7	26.1	- 18.8	- 36.8	- 31.2	46.8	69.2	22.5	- 15.2	- 22.1	0.8	2.1	4.0
Sep.	86.6	83.1	- 0.1	3.4	2.2	- 52.8	- 199.5	- 146.7	14.7	- 16.4	- 0.4	4.0	27.5
Oct.	- 12.5	0.1	- 6.1	- 12.6	- 9.7	- 0.8	169.5	170.3	- 12.3	- 14.7	0.1	11.2	- 8.9
Nov.	93.0	84.0	31.0	9.0	14.3	14.8	- 40.4	- 55.1	33.9	1.7	0.2	34.0	- 1.9
Dec.	- 122.2	- 88.9	- 0.9	- 33.2	- 41.3	0.4	- 256.7	- 257.0	46.9	10.0	0.1	0.7	36.1
2023 Jan.	- 10.1	- 0.7	- 14.4	- 9.5	- 4.2	11.6	126.7	115.1	30.1	- 6.2	2.2	57.3	- 23.2
Feb.	7.5	- 13.3	3.2	20.9	29.8	8.3	0.1	- 8.2	15.8	- 1.3	1.6	10.3	5.3
Mar.	33.8	41.1	11.7	- 7.2	- 9.7	75.1	112.5	37.3	28.2	10.8	1.3	5.6	10.6
Apr.	- 10.7	22.8	29.5	- 33.5	- 29.2	- 20.7	- 21.2	- 0.6	10.4	9.3	1.4	3.9	- 4.2
May	1.0	46.7	33.3	- 45.7	- 50.0	4.4	22.2	17.8	37.6	- 0.3	2.3	27.1	8.5
June	3.0	- 11.3	- 12.2	14.3	21.1	112.1	15.9	- 96.1	44.0	1.2	3.0	26.8	13.0
July	- 46.7	6.7	5.4	- 53.4	- 53.0	33.3	106.7	73.4	32.5	0.9	2.7	17.1	11.8
Aug.	- 56.6	- 67.3	- 12.6	10.8	13.5	33.5	61.8	28.4	22.2	- 2.4	4.0	11.1	9.4
Sep.	35.1	31.9	- 1.2	3.2	2.3	61.7	- 107.1	- 168.9	43.0	15.7	5.0	11.0	11.3
Oct.	- 36.5	5.0	- 10.9	- 41.5	- 41.1	60.6	54.4	- 6.2	22.8	- 9.5	4.7	27.3	0.3

### 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								
2022 Mar.	37.0	23.3	4.1	13.7	12.9	- 44.2	- 22.2	22.0	6.1	- 2.0	- 0.2	4.1	4.2
Apr.	19.0	18.9	2.7	0.1	- 4.5	- 19.1	- 13.0	- 32.1	4.4	- 2.7	- 0.2	3.2	4.1
May	39.1	28.5	3.5	10.6	13.5	- 29.8	- 0.9	28.9	2.0	- 2.4	- 0.1	2.0	2.5
June	32.6	25.5	- 4.1	7.1	4.8	- 22.4	- 9.4	13.0	3.8	- 3.1	- 0.2	- 3.8	10.8
July	18.2	30.6	10.6	- 12.4	- 13.4	42.7	4.3	- 38.5	9.3	- 2.0	- 0.2	8.5	3.0
Aug.	26.0	39.4	- 0.2	- 13.4	- 11.4	- 50.3	6.7	57.1	3.0	- 0.0	- 0.1	0.8	2.3
Sep.	21.5	23.1	0.1	- 1.7	- 4.5	- 27.4	1.6	29.0	4.1	- 0.3	- 0.0	- 0.6	5.0
Oct.	12.8	10.5	- 0.2	2.3	1.9	45.1	20.4	- 24.7	- 7.6	- 1.2	0.2	3.2	- 9.8
Nov.	25.4	26.2	1.4	- 0.9	0.8	38.0	8.9	- 29.1	9.8	1.9	0.2	7.1	0.6
Dec.	- 28.8	- 19.6	- 2.4	- 9.3	- 8.2	- 37.1	- 71.9	- 34.8	- 0.5	- 3.7	0.4	- 1.9	4.8
2023 Jan.	27.5	16.9	- 0.2	10.7	8.9	63.0	29.8	- 33.3	- 14.3	2.7	1.0	3.1	- 21.0
Feb.	9.2	8.3	- 0.2	0.9	1.8	58.4	- 2.0	- 60.3	3.3	0.6	1.2	- 2.1	3.5
Mar.	4.8	8.1	6.4	- 3.4	- 3.7	- 12.4	10.5	23.0	15.5	6.0	1.6	4.4	3.5
Apr.	- 3.7	13.0	1.2	- 16.7	- 20.2	62.7	- 15.2	- 77.9	5.0	2.0	1.5	- 3.0	4.5
May	5.0	11.3	- 1.3	- 6.3	- 4.7	9.6	16.5	6.9	16.9	2.7	2.2	6.1	5.8
June	1.5	- 1.9	4.1	3.4	5.4	7.6	- 6.6	- 14.3	9.7	- 0.9	2.7	- 0.3	8.2
July	5.1	6.8	- 1.1	- 1.7	- 4.7	34.0	8.3	- 25.7	24.9	- 0.3	3.0	10.2	12.0
Aug.	- 6.8	- 5.0	- 6.1	- 1.8	0.3	25.7	- 5.3	- 31.0	6.6	- 2.7	2.7	0.2	6.4
Sep.	- 8.2	1.7	0.8	- 9.9	- 13.3	- 0.1	- 2.8	- 2.7	21.1	0.1	2.9	11.6	6.4
Oct.	- 2.0	- 0.0	- 0.2	- 2.0	- 5.2	17.4	5.0	- 12.4	5.3	- 0.1	3.0	5.9	- 3.5

\* 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" of the Statistical Series Banking Statistics). <sup>1</sup> Source: ECB. <sup>2</sup> Excluding MFIs' portfolios. <sup>3</sup> After

deduction of inter-MFI participations. <sup>4</sup> Including the counterparts of monetary liabilities of central governments. <sup>5</sup> Including the monetary liabilities of central governments (Post Office, Treasury). <sup>6</sup> In Germany, only savings deposits. <sup>7</sup> Paper held by residents outside the euro area has been eliminated. <sup>8</sup> Less German MFIs' holdings



## II. Overall monetary survey in the euro area

### a) Euro area <sup>1</sup>

IV. De- posits of central gov- ernments	V. Other factors			VI. Money stock M3 (balance I plus II less III less IV less V)										Period
	Total <sup>4</sup>	of which: Intra- Eurosystem liability/ claim related to banknote issue	Total	Money stock M2						Repos transac- tions	Money market fund shares (net) <sup>2,7,8</sup>	Debt secur- ities with maturities of up to 2 years (incl. money market paper) (net) <sup>2,7</sup>		
				Money stock M1			Deposits with an agreed maturity of up to 2 years <sup>5</sup>	Deposits at agreed notice of up to 3 months <sup>5,6</sup>						
				Total	Currency in circu- lation	Overnight deposits <sup>5</sup>								
13.7	48.6	0.0	97.1	108.3	88.1	22.5	65.6	16.2	16.2	4.0	- 17.6	- 0.2	- 2.2	2022 Mar.
- 22.1	- 99.7	0.0	103.1	65.2	64.0	11.2	52.8	- 1.1	52.8	2.3	25.1	20.2	16.6	Apr.
- 28.9	56.2	0.0	53.6	63.4	67.3	7.8	59.6	- 15.9	59.6	11.9	4.7	- 10.1	- 5.2	May
69.6	65.7	0.0	73.3	79.6	52.3	6.6	45.7	24.1	45.7	3.1	- 32.5	- 1.0	11.2	June
- 31.2	-138.3	0.0	159.6	126.7	74.8	8.6	66.2	46.7	66.2	5.1	23.7	- 2.1	18.1	July
- 80.3	68.2	0.0	79.0	71.5	20.2	- 4.6	24.8	41.3	24.8	10.0	- 22.6	6.8	7.4	Aug.
7.3	19.8	0.0	1.6	- 1.7	- 100.8	- 1.4	- 99.4	99.7	- 99.4	- 0.6	- 19.5	- 8.4	21.7	Sep.
- 5.4	65.6	0.0	- 57.6	- 76.8	- 157.2	- 0.4	- 156.9	85.4	- 156.9	- 5.0	4.4	36.7	- 25.5	Oct.
- 10.5	- 1.7	0.0	69.8	20.6	- 30.3	- 3.5	- 26.8	59.2	- 26.8	- 8.3	27.4	22.3	16.4	Nov.
- 84.5	- 64.1	0.0	3.3	13.1	- 61.5	11.6	- 73.1	59.8	- 73.1	14.8	- 46.5	2.8	10.4	Dec.
- 38.7	125.6	0.0	- 133.4	- 149.4	- 231.6	- 13.3	- 218.4	76.0	- 218.4	6.2	35.1	6.6	- 8.0	2023 Jan.
20.3	21.9	0.0	- 42.0	- 63.4	- 135.5	- 3.5	- 132.0	72.1	- 132.0	0.0	- 2.2	- 6.4	29.8	Feb.
30.5	36.5	0.0	16.2	9.5	- 104.3	3.9	- 108.2	119.4	- 108.2	- 5.5	- 25.7	20.6	9.4	Mar.
- 26.5	- 15.2	0.0	- 1.1	- 18.3	- 53.0	4.1	- 57.1	46.1	- 57.1	- 11.4	6.7	11.5	0.2	Apr.
- 104.5	82.4	0.0	- 30.3	- 44.8	- 94.3	1.7	- 96.0	52.9	- 96.0	- 3.5	29.6	1.5	4.1	May
24.6	44.8	0.0	6.8	22.1	- 61.2	3.1	- 64.3	94.4	- 64.3	- 11.1	- 11.2	- 6.1	- 3.5	June
- 29.4	- 2.5	0.0	0.9	- 27.9	- 90.5	3.0	- 93.5	73.3	- 93.5	- 10.7	4.1	10.6	- 0.6	July
- 20.2	5.4	0.0	- 43.0	- 44.9	- 101.7	- 7.7	- 94.0	81.1	- 94.0	- 24.3	4.4	8.4	1.2	Aug.
35.1	- 16.6	0.0	45.7	44.5	- 11.7	- 3.2	- 8.5	79.8	- 8.5	- 23.6	- 5.8	- 0.7	- 2.5	Sep.
- 28.6	64.2	0.0	- 43.5	- 89.1	- 169.7	- 4.0	- 165.6	102.4	- 165.6	- 21.8	25.2	18.8	10.9	Oct.

### b) German contribution

IV. De- posits of central gov- ernments	V. Other factors			VI. Money stock M3 (balance I plus II less III less IV less V) <sup>10</sup>										Period
	Total	of which: Intra- Eurosystem liability/ claim related to banknote issue <sup>9,11</sup>	Currency in circu- lation	Components of the money stock						Money market fund shares (net) <sup>7,8</sup>	maturities with maturities of up to 2 years (incl. money market paper)(net) <sup>7</sup>			
				Total	Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits at agreed notice of up to 3 months <sup>6</sup>	Repos transac- tions						
- 0.1	- 13.2	5.8	4.2	- 0.1	- 7.4	8.4	- 1.6	8.4	- 1.6	0.5	0.2	- 0.1	0.1	2022 Mar.
- 3.0	32.9	3.4	2.3	3.7	- 3.4	10.4	- 0.4	10.4	- 0.4	- 2.0	- 0.2	- 0.6	0.6	Apr.
22.5	- 30.3	3.4	2.7	15.1	22.5	7.4	- 1.2	22.5	- 1.2	0.4	0.2	0.2	0.7	May
14.9	- 37.5	3.7	0.5	29.0	19.6	7.5	- 1.6	19.6	- 1.6	0.6	- 0.0	- 0.0	2.9	June
- 38.2	55.3	- 5.3	9.1	34.6	5.7	23.6	- 1.7	23.6	- 1.7	4.3	- 0.1	2.6	2.6	July
- 24.1	- 71.1	- 11.7	12.5	67.9	56.8	13.9	- 2.4	13.9	- 2.4	- 1.8	- 0.1	1.4	1.4	Aug.
4.7	- 1.1	3.3	0.3	- 13.6	- 56.8	45.1	- 5.3	45.1	- 5.3	- 2.6	0.1	6.0	6.0	Sep.
5.1	65.9	0.1	0.1	- 5.4	- 32.1	36.8	- 3.3	36.8	- 3.3	- 0.2	0.1	- 6.7	6.7	Oct.
22.6	13.6	- 0.0	0.3	17.3	12.6	4.3	- 5.5	4.3	- 5.5	3.2	0.0	2.7	2.7	Nov.
- 16.3	- 24.6	2.1	2.4	- 24.6	- 37.6	19.0	- 4.1	19.0	- 4.1	- 2.0	0.1	0.0	0.0	Dec.
- 42.9	147.9	2.3	- 5.1	- 0.2	- 37.1	38.4	- 6.5	38.4	- 6.5	- 0.1	- 0.2	5.4	5.4	2023 Jan.
12.9	50.9	1.1	- 0.7	0.4	- 33.2	32.6	- 8.0	32.6	- 8.0	1.3	- 0.1	7.8	7.8	Feb.
27.1	- 34.8	2.3	0.9	- 15.5	- 45.7	31.8	- 10.4	31.8	- 10.4	- 0.2	0.3	8.7	8.7	Mar.
- 39.0	86.7	1.9	0.7	6.3	- 11.7	25.3	- 10.2	25.3	- 10.2	0.7	0.2	1.9	1.9	Apr.
- 11.8	2.8	2.6	0.9	6.7	- 6.2	18.4	- 10.3	18.4	- 10.3	- 0.2	- 0.1	5.1	5.1	May
- 9.8	8.4	1.7	1.1	0.8	- 29.2	36.7	- 10.0	36.7	- 10.0	- 0.3	- 0.0	3.6	3.6	June
- 6.4	20.0	1.6	1.3	0.7	- 21.8	31.5	- 10.3	31.5	- 10.3	0.3	0.3	0.8	0.8	July
- 7.4	- 1.5	2.9	- 1.9	6.4	- 21.1	30.4	- 11.2	30.4	- 11.2	1.1	0.1	7.1	7.1	Aug.
- 11.6	- 12.1	3.6	- 1.7	- 5.7	- 13.3	17.8	- 8.6	17.8	- 8.6	- 1.0	0.1	- 0.7	- 0.7	Sep.
- 2.4	10.7	1.5	- 0.5	1.7	- 31.2	38.7	- 9.4	38.7	- 9.4	0.8	- 0.1	3.0	3.0	Oct.

of paper issued by euro area MFIs. <sup>9</sup> Including national banknotes still in circulation. <sup>10</sup> 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. <sup>11</sup> The

difference between the volume of euro banknotes actually issued by the Bundesbank and the amount disclosed in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2).

## II. Overall monetary survey in the euro area

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

End of month	Total assets or liabilities	Assets									
		Lending to non-banks (non-MFIs) in the euro area									
		Total	Enterprises and households				General government				Claims on non-euro area residents
Total	Loans		Debt securities 2	Shares and other equities	Total	Loans	Debt securities 3				
<b>Euro area (€ billion) <sup>1</sup></b>											
2021 Sep.	31,472.9	21,133.7	14,757.3	12,330.9	1,535.1	891.4	6,376.4	993.6	5,382.8	6,619.9	3,719.3
Oct.	31,778.8	21,201.7	14,817.8	12,379.4	1,548.1	890.3	6,384.0	987.7	5,396.3	6,825.2	3,751.9
Nov.	32,193.4	21,381.5	14,911.5	12,478.0	1,542.5	891.0	6,470.1	985.8	5,484.2	6,917.4	3,894.5
Dec.	31,777.4	21,384.4	14,917.2	12,462.9	1,567.3	887.0	6,467.2	988.5	5,478.8	6,738.7	3,654.2
2022 Jan.	32,417.1	21,571.9	15,046.8	12,609.0	1,553.2	884.6	6,525.0	999.2	5,525.9	6,914.5	3,930.7
Feb.	32,601.8	21,629.0	15,075.6	12,645.3	1,553.7	876.6	6,553.4	991.8	5,561.6	7,011.4	3,961.5
Mar.	32,937.3	21,737.1	15,176.1	12,722.0	1,587.4	866.7	6,561.1	1,001.4	5,559.7	6,996.1	4,204.1
Apr.	33,570.1	21,764.2	15,254.0	12,805.3	1,597.6	851.1	6,510.1	1,011.3	5,498.8	7,063.0	4,742.9
May	33,482.5	21,816.2	15,304.5	12,878.2	1,568.2	858.1	6,511.7	1,003.9	5,507.8	7,013.2	4,653.1
June	33,886.1	21,886.0	15,373.6	12,973.4	1,569.1	831.1	6,512.4	1,003.0	5,509.4	7,064.5	4,935.5
July	33,877.7	21,984.6	15,451.5	13,043.7	1,578.6	829.2	6,533.1	1,003.0	5,530.1	7,216.9	4,676.2
Aug.	34,342.9	21,872.4	15,459.5	13,080.1	1,553.7	825.7	6,413.0	996.9	5,416.1	7,301.6	5,168.9
Sep.	34,619.1	21,901.4	15,558.0	13,191.3	1,544.9	821.7	6,343.4	998.1	5,345.2	7,241.7	5,476.0
Oct.	34,551.1	21,891.6	15,553.1	13,190.6	1,533.0	829.6	6,338.5	995.2	5,343.3	7,336.9	5,322.6
Nov.	34,226.4	22,012.4	15,628.2	13,228.7	1,559.1	840.4	6,384.2	990.2	5,394.1	7,207.7	5,006.2
Dec.	33,866.4	21,792.5	15,515.4	13,124.3	1,555.4	835.7	6,277.1	998.9	5,278.2	6,873.4	5,200.5
2023 Jan.	33,828.2	21,883.3	15,553.1	13,171.7	1,545.6	835.8	6,330.2	1,000.3	5,330.0	6,982.9	4,962.0
Feb.	34,114.7	21,860.3	15,543.2	13,157.7	1,540.9	844.6	6,317.1	991.3	5,325.9	7,003.0	5,251.4
Mar.	33,955.0	21,921.0	15,575.3	13,175.7	1,552.2	847.4	6,345.7	995.3	5,350.3	7,101.4	4,932.6
Apr.	33,942.0	21,905.2	15,597.6	13,165.2	1,566.3	866.2	6,307.6	991.1	5,316.5	7,040.8	4,995.9
May	34,134.8	21,917.1	15,648.7	13,183.8	1,595.6	869.4	6,268.4	995.4	5,272.9	7,152.5	5,065.2
June	34,046.4	21,910.7	15,632.8	13,177.9	1,584.4	870.4	6,277.9	988.5	5,289.4	7,070.1	5,065.5
July	34,180.0	21,860.1	15,636.3	13,174.7	1,586.5	875.1	6,223.8	988.2	5,235.6	7,155.1	5,164.8
Aug.	34,233.1	21,805.6	15,568.6	13,119.1	1,576.8	872.8	6,237.0	986.1	5,250.9	7,253.3	5,174.2
Sep.	34,373.2	21,788.9	15,595.2	13,149.8	1,574.6	870.9	6,193.7	987.3	5,206.4	7,197.1	5,387.2
Oct.	34,338.7	21,744.9	15,590.9	13,159.9	1,555.1	876.0	6,154.0	984.1	5,169.9	7,268.4	5,325.3
<b>German contribution (€ billion)</b>											
2021 Sep.	7,398.6	5,110.8	3,840.8	3,336.4	224.7	279.7	1,270.1	280.7	989.4	1,335.1	952.6
Oct.	7,461.0	5,147.0	3,874.5	3,363.5	228.6	282.4	1,272.5	284.4	988.0	1,385.2	928.8
Nov.	7,575.0	5,210.7	3,904.2	3,389.9	229.0	285.3	1,306.4	280.7	1,025.7	1,396.4	967.9
Dec.	7,475.8	5,212.1	3,914.7	3,393.2	237.0	284.5	1,297.4	278.0	1,019.5	1,355.9	907.8
2022 Jan.	7,787.0	5,243.9	3,944.7	3,422.9	235.8	286.0	1,299.2	279.9	1,019.3	1,433.6	1,109.5
Feb.	7,871.3	5,262.9	3,968.5	3,445.2	238.0	285.3	1,294.3	277.8	1,016.5	1,464.4	1,144.0
Mar.	7,997.7	5,280.7	3,990.2	3,464.4	240.6	285.2	1,290.6	278.6	1,012.0	1,447.5	1,269.5
Apr.	8,259.4	5,278.9	4,008.0	3,481.9	240.1	286.1	1,270.9	283.2	987.7	1,464.0	1,516.5
May	8,228.4	5,304.5	4,034.5	3,506.0	240.8	287.7	1,270.0	280.3	989.7	1,445.0	1,479.0
June	8,413.5	5,322.6	4,058.9	3,537.6	237.8	283.5	1,263.7	282.5	981.2	1,466.1	1,624.8
July	8,287.9	5,375.0	4,096.1	3,560.3	252.7	283.2	1,278.8	283.6	995.2	1,481.5	1,431.4
Aug.	8,546.0	5,364.5	4,132.0	3,600.0	249.1	282.9	1,232.5	281.5	951.0	1,492.4	1,689.0
Sep.	8,857.6	5,356.3	4,153.9	3,624.8	246.1	283.0	1,202.4	284.3	918.1	1,502.4	1,998.8
Oct.	8,826.7	5,366.0	4,163.6	3,634.6	245.9	283.1	1,202.4	284.8	917.5	1,509.0	1,951.8
Nov.	8,653.9	5,402.0	4,189.2	3,656.3	249.8	283.1	1,212.8	283.4	929.4	1,502.4	1,749.6
Dec.	8,626.1	5,345.2	4,165.8	3,636.7	245.9	283.2	1,179.4	283.2	896.1	1,417.3	1,863.7
2023 Jan.	8,561.4	5,377.1	4,178.3	3,652.7	245.9	279.7	1,198.8	285.0	913.9	1,443.8	1,740.5
Feb.	8,712.0	5,371.7	4,186.6	3,662.2	243.6	280.9	1,185.1	284.0	901.1	1,443.9	1,896.4
Mar.	8,573.5	5,388.1	4,193.6	3,661.9	252.1	279.6	1,194.5	284.2	910.3	1,457.2	1,728.2
Apr.	8,559.3	5,383.7	4,206.2	3,672.7	252.4	281.1	1,177.5	287.7	889.8	1,435.7	1,739.8
May	8,614.3	5,389.9	4,217.4	3,685.4	252.1	279.9	1,172.6	286.1	886.4	1,468.3	1,756.1
June	8,647.9	5,387.4	4,215.9	3,679.0	255.5	281.4	1,171.5	284.2	887.4	1,433.5	1,826.9
July	8,779.6	5,390.2	4,222.0	3,685.7	255.6	280.6	1,168.3	287.2	881.1	1,439.0	1,950.5
Aug.	8,776.6	5,383.7	4,215.6	3,685.5	249.4	280.6	1,168.1	285.0	883.0	1,442.2	1,950.7
Sep.	8,834.2	5,362.1	4,216.4	3,686.3	248.5	281.5	1,145.8	288.4	857.4	1,446.5	2,025.5
Oct.	8,844.4	5,360.4	4,215.3	3,685.3	247.9	282.1	1,145.1	291.6	853.5	1,461.4	2,022.6

\* Monetary financial institutions (MFIs) comprise banks (including building and loan associations), money market funds, and the European Central Bank and national central banks (the Eurosystem). <sup>1</sup> Source: ECB. <sup>2</sup> Including money market paper of

enterprises. <sup>3</sup> Including Treasury bills and other money market paper issued by general government. <sup>4</sup> Euro currency in circulation (see also footnote 8 on p.12\*). Excluding MFIs' cash in hand (in euro). The German contribution includes the volume of

## II. Overall monetary survey in the euro area

Liabilities											End of month
Currency in circulation <sup>4</sup>	Deposits of non-banks (non-MFIs) in the euro area										
	Total	of which: in euro <sup>5</sup>	Enterprises and households						At agreed notice of <sup>6</sup>		
			Total	Overnight	With agreed maturities of			up to 3 months	over 3 months		
					up to 1 year	over 1 year and up to 2 years	over 2 years				
<b>Euro area (€ billion) <sup>1</sup></b>											
1,444.5	15,482.5	14,115.3	14,279.8	9,133.9	700.2	140.0	1,806.7	2,463.3	35.6	2021 Sep.	
1,450.3	15,542.2	14,177.1	14,350.0	9,205.6	707.1	148.0	1,795.5	2,458.8	34.9	Oct.	
1,456.3	15,548.8	14,218.9	14,375.7	9,255.0	697.0	143.3	1,786.3	2,459.8	34.3	Nov.	
1,477.0	15,617.2	14,347.7	14,502.1	9,363.7	704.9	131.3	1,805.2	2,463.5	33.6	Dec.	
1,477.9	15,694.2	14,327.3	14,526.9	9,353.8	706.6	135.3	1,820.2	2,479.3	31.8	2022 Jan.	
1,487.0	15,787.1	14,373.0	14,561.7	9,412.4	688.4	134.3	1,807.7	2,487.3	31.6	Feb.	
1,509.6	15,891.2	14,465.7	14,650.6	9,490.5	703.7	123.5	1,809.6	2,492.1	31.2	Mar.	
1,520.7	15,934.3	14,521.8	14,712.1	9,555.8	705.4	123.5	1,802.0	2,494.3	31.0	Apr.	
1,528.5	15,950.4	14,568.7	14,740.8	9,597.9	684.9	120.2	1,803.2	2,506.6	27.9	May	
1,535.1	16,100.5	14,633.1	14,810.3	9,643.8	704.8	123.4	1,800.3	2,510.4	27.5	June	
1,543.7	16,184.3	14,738.3	14,937.4	9,735.4	741.0	127.1	1,791.0	2,515.8	27.1	July	
1,539.1	16,161.9	14,793.1	14,985.4	9,754.1	781.5	125.9	1,770.0	2,526.0	28.0	Aug.	
1,537.7	16,199.4	14,785.2	15,036.4	9,688.0	913.3	125.5	1,756.3	2,525.7	27.6	Sep.	
1,537.2	16,095.8	14,708.2	14,936.7	9,507.4	993.0	130.3	1,741.7	2,522.3	42.1	Oct.	
1,533.7	16,084.9	14,722.7	14,917.6	9,442.3	1,042.9	134.6	1,741.1	2,514.5	42.3	Nov.	
1,545.3	15,997.0	14,765.9	14,929.5	9,374.2	1,099.5	133.9	1,749.5	2,530.0	42.4	Dec.	
1,533.4	15,876.9	14,667.4	14,844.9	9,208.5	1,163.7	146.1	1,746.4	2,532.0	48.2	2023 Jan.	
1,529.9	15,843.6	14,624.9	14,773.2	9,064.0	1,223.7	157.3	1,746.5	2,531.8	49.9	Feb.	
1,533.8	15,891.6	14,649.1	14,788.3	8,969.5	1,311.8	174.0	1,756.9	2,524.8	51.4	Mar.	
1,537.9	15,848.9	14,649.2	14,784.7	8,918.3	1,346.2	187.9	1,765.7	2,513.9	52.8	Apr.	
1,539.7	15,718.1	14,616.6	14,756.8	8,834.7	1,387.5	200.1	1,768.2	2,511.0	55.2	May	
1,542.7	15,760.6	14,649.0	14,755.9	8,755.3	1,455.9	218.2	1,768.4	2,499.9	58.2	June	
1,545.9	15,696.0	14,619.2	14,725.4	8,662.9	1,512.3	231.6	1,768.5	2,489.2	60.9	July	
1,538.2	15,646.9	14,595.1	14,694.0	8,578.0	1,579.2	240.8	1,765.9	2,465.1	65.0	Aug.	
1,535.0	15,756.4	14,654.5	14,766.9	8,569.2	1,647.6	255.2	1,783.1	2,441.7	70.1	Sep.	
1,531.0	15,635.0	14,574.9	14,700.5	8,420.4	1,736.3	275.3	1,773.2	2,420.4	74.9	Oct.	
<b>German contribution (€ billion)</b>											
329.8	4,340.5	4,064.1	3,919.8	2,662.1	132.2	31.2	533.6	535.8	24.8	2021 Sep.	
331.4	4,354.3	4,080.9	3,950.3	2,681.4	143.0	31.1	534.8	535.5	24.6	Oct.	
332.6	4,390.5	4,107.1	3,968.0	2,710.9	132.5	30.3	534.6	535.5	24.3	Nov.	
337.1	4,425.2	4,113.0	3,968.5	2,691.5	141.2	30.1	544.6	537.0	24.1	Dec.	
337.9	4,418.1	4,139.2	4,006.8	2,737.3	135.4	29.7	543.6	537.4	23.4	2022 Jan.	
340.1	4,444.1	4,161.0	4,017.1	2,752.3	132.4	29.4	542.3	537.7	23.1	Feb.	
344.3	4,441.6	4,159.0	4,014.6	2,755.3	130.7	29.3	540.4	536.0	22.9	Mar.	
346.7	4,445.6	4,158.1	4,019.8	2,754.8	140.0	29.4	537.7	535.1	22.7	Apr.	
349.4	4,478.3	4,170.7	4,016.7	2,769.9	125.8	29.7	534.8	533.9	22.6	May	
349.9	4,517.1	4,194.6	4,031.6	2,787.1	127.8	30.1	531.9	532.3	22.4	June	
359.0	4,507.6	4,222.4	4,070.3	2,813.6	142.1	31.0	530.6	530.6	22.3	July	
371.5	4,552.6	4,289.4	4,135.2	2,870.1	153.3	30.6	530.7	528.3	22.2	Aug.	
371.8	4,541.5	4,267.4	4,135.1	2,834.9	193.7	30.9	530.3	523.0	22.2	Sep.	
371.8	4,546.8	4,270.2	4,140.4	2,804.0	233.2	31.6	529.3	519.8	22.4	Oct.	
371.5	4,578.7	4,283.7	4,146.3	2,806.0	240.1	32.1	531.0	514.4	22.6	Nov.	
374.0	4,534.2	4,260.8	4,119.2	2,764.3	260.2	34.1	527.1	510.4	23.0	Dec.	
368.9	4,489.3	4,257.7	4,126.0	2,749.9	286.6	36.9	529.6	499.1	24.0	2023 Jan.	
368.1	4,496.6	4,250.9	4,106.5	2,706.5	314.2	39.1	530.3	491.2	25.2	Feb.	
369.0	4,505.7	4,236.8	4,090.4	2,667.4	336.4	42.4	536.3	481.0	26.8	Mar.	
369.8	4,473.0	4,248.0	4,104.2	2,660.3	360.2	46.1	538.3	471.0	28.3	Apr.	
370.7	4,469.7	4,256.0	4,103.8	2,647.5	373.8	50.3	540.9	460.8	30.5	May	
371.7	4,460.3	4,259.3	4,096.2	2,616.5	400.5	54.1	541.0	450.9	33.2	June	
373.1	4,455.4	4,259.2	4,106.1	2,603.8	426.9	57.6	540.8	440.7	36.2	July	
371.2	4,460.4	4,259.8	4,101.7	2,577.8	455.8	61.5	538.1	429.6	38.9	Aug.	
369.4	4,448.9	4,258.5	4,104.2	2,568.6	468.0	66.2	538.5	421.1	41.8	Sep.	
369.0	4,447.3	4,259.1	4,129.2	2,553.2	507.9	73.0	538.5	411.7	44.8	Oct.	

euro banknotes put into circulation by the Bundesbank in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2). The volume of currency actually put into circulation by the

Bundesbank can be calculated by adding to this total the item "Intra-Eurosystem liability/claim related to banknote issue" (see "Other liability items"). <sup>5</sup> Excluding central governments' deposits. <sup>6</sup> In Germany, only savings deposits.

## II. Overall monetary survey in the euro area

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

Liabilities (cont'd)													
Deposits of non-banks (non-MFIs) in the euro area (cont'd)													
End of month	General government								Repo transactions with non-banks in the euro area		Money market fund shares (net) <sup>3</sup>	Debt securities	
	Central government	Other general government							Total	of which: Enterprises and households		Total	of which: Denominated in euro
		Total	Overnight	With agreed maturities of			At agreed notice of 2						
			up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months						
<b>Euro area (€ billion) <sup>1</sup></b>													
2021 Sep.	742.6	460.1	334.6	46.3	16.6	41.3	18.1	3.3	260.8	260.7	597.0	2,013.4	1,344.0
Oct.	740.3	451.9	323.3	48.1	18.0	41.6	17.7	3.3	272.2	272.2	630.3	2,040.1	1,356.4
Nov.	691.5	481.6	349.8	50.3	19.1	41.7	17.5	3.3	267.7	267.6	654.8	2,046.7	1,355.2
Dec.	646.7	468.4	337.4	49.7	19.4	41.1	17.6	3.2	234.3	233.1	647.5	2,019.7	1,346.8
2022 Jan.	711.0	456.2	306.6	67.4	19.6	41.2	17.6	3.8	291.8	291.6	621.2	2,049.2	1,351.4
Feb.	755.6	469.9	314.1	73.5	19.8	41.3	17.6	3.7	301.3	301.1	584.0	2,044.8	1,358.7
Mar.	769.7	470.9	304.7	82.5	20.5	42.4	17.3	3.4	283.8	283.6	583.8	2,026.7	1,358.6
Apr.	747.7	474.5	306.7	83.4	21.2	42.6	17.2	3.4	310.1	309.9	604.0	2,073.8	1,362.8
May	718.8	490.8	316.7	88.4	22.3	43.3	16.8	3.3	313.0	312.9	593.9	2,038.0	1,337.7
June	788.4	501.8	325.2	90.9	22.9	43.3	16.2	3.2	281.2	281.1	592.9	2,069.3	1,361.0
July	757.2	489.8	302.8	100.4	24.2	42.9	16.2	3.3	306.0	305.9	590.8	2,090.9	1,361.1
Aug.	676.9	499.6	309.1	104.6	24.0	42.5	16.1	3.2	283.8	283.7	597.5	2,113.5	1,375.1
Sep.	684.3	478.8	281.7	111.2	24.5	42.3	16.0	3.2	264.8	264.7	589.1	2,153.5	1,415.1
Oct.	678.9	480.2	287.2	109.2	24.3	41.5	14.7	3.2	268.8	268.8	625.8	2,130.5	1,416.5
Nov.	668.8	498.6	306.2	109.2	25.1	40.8	14.2	3.2	295.4	295.4	648.0	2,159.0	1,441.3
Dec.	584.0	483.5	296.0	103.6	27.2	40.2	13.5	3.0	248.3	248.3	650.9	2,166.2	1,474.6
2023 Jan.	551.2	480.7	283.1	113.0	27.5	40.6	12.8	3.7	284.0	284.0	657.6	2,204.8	1,510.2
Feb.	572.0	498.4	297.4	115.1	28.7	40.3	13.2	3.7	281.6	281.5	651.2	2,259.2	1,531.4
Mar.	602.7	500.6	288.4	125.7	28.4	39.6	14.7	3.7	255.3	255.2	671.9	2,257.0	1,551.1
Apr.	576.2	488.0	277.7	123.3	29.7	39.4	14.2	3.7	261.7	261.3	683.3	2,253.1	1,561.0
May	471.6	489.8	277.0	126.7	29.3	39.4	13.8	3.6	291.9	287.8	684.8	2,298.9	1,589.8
June	496.1	508.6	287.8	134.7	29.4	39.3	13.8	3.6	280.4	280.3	678.8	2,312.9	1,600.3
July	466.6	504.0	281.1	137.7	28.4	39.4	13.9	3.6	284.1	283.4	689.4	2,400.7	1,646.0
Aug.	446.4	506.5	282.9	138.6	28.0	39.6	13.8	3.5	288.9	288.9	698.0	2,420.1	1,656.2
Sep.	481.6	507.9	285.0	136.7	29.3	39.7	13.8	3.4	281.7	281.7	697.3	2,443.1	1,668.6
Oct.	453.1	481.4	266.4	130.9	28.5	39.2	13.1	3.3	306.8	306.6	716.2	2,504.8	1,705.4
<b>German contribution (€ billion)</b>													
2021 Sep.	175.2	245.6	158.2	39.8	13.4	31.7	2.3	0.2	11.2	11.2	2.2	530.1	305.5
Oct.	171.3	232.7	142.7	40.9	14.8	31.8	2.3	0.2	10.8	10.8	2.1	547.9	316.4
Nov.	178.4	244.1	155.2	38.8	16.1	31.6	2.2	0.2	6.1	6.1	1.8	556.5	324.8
Dec.	206.2	250.5	161.9	39.1	16.4	30.7	2.3	0.2	5.8	4.8	2.1	547.6	316.3
2022 Jan.	168.1	243.3	139.1	54.6	16.5	30.7	2.2	0.2	4.7	4.7	2.2	562.8	325.1
Feb.	170.6	256.3	147.8	59.2	16.3	30.6	2.2	0.2	5.8	5.8	2.3	572.5	338.8
Mar.	170.6	256.4	137.6	68.8	17.0	30.7	2.2	0.1	6.3	6.3	2.4	581.5	354.8
Apr.	167.6	258.2	137.6	70.0	17.6	30.6	2.2	0.2	4.4	4.4	2.2	596.5	357.3
May	190.1	271.4	144.2	75.3	18.5	31.1	2.2	0.2	4.8	4.8	2.4	596.8	359.0
June	205.0	280.5	147.7	80.5	19.0	31.0	2.2	0.1	5.4	5.4	2.3	604.2	362.6
July	166.8	270.4	128.3	89.0	20.2	30.6	2.2	0.1	9.8	9.8	2.4	613.8	369.1
Aug.	142.7	274.6	129.4	92.2	20.4	30.4	2.2	0.1	8.0	8.0	2.3	625.7	384.5
Sep.	147.4	259.1	109.0	96.6	20.8	30.3	2.2	0.1	5.4	5.4	2.4	640.0	395.3
Oct.	152.5	253.9	108.1	93.1	20.5	30.1	2.1	0.1	5.2	5.2	2.5	633.9	398.1
Nov.	175.5	256.9	114.7	88.9	21.5	29.8	1.9	0.1	8.3	8.3	2.5	634.2	402.6
Dec.	159.2	255.8	117.3	83.2	23.9	29.6	1.8	0.1	6.3	6.3	2.6	631.2	409.3
2023 Jan.	116.4	246.9	99.4	92.2	23.8	29.8	1.6	0.1	6.1	6.1	2.4	639.6	417.9
Feb.	129.3	260.8	110.3	94.6	24.6	29.7	1.5	0.1	7.5	7.5	2.3	651.5	427.1
Mar.	156.4	258.8	102.2	101.4	24.1	29.6	1.4	0.1	7.2	7.2	2.6	658.0	440.3
Apr.	117.4	251.4	97.3	97.8	25.4	29.5	1.3	0.1	7.9	7.9	2.7	654.9	446.8
May	105.6	260.2	104.8	99.5	25.0	29.7	1.2	0.1	7.7	7.7	2.6	670.6	458.1
June	95.9	268.2	106.1	106.5	24.9	29.5	1.1	0.1	7.3	7.3	2.6	671.6	452.8
July	89.5	259.9	96.6	109.1	23.7	29.5	0.9	0.1	7.6	7.6	2.9	679.9	457.6
Aug.	96.8	261.9	100.9	107.1	23.3	29.6	0.9	0.1	8.7	8.7	3.0	688.8	469.0
Sep.	85.2	259.5	97.5	107.0	24.5	29.6	0.8	0.1	7.8	7.8	3.0	705.6	470.0
Oct.	82.8	235.3	81.6	99.3	24.1	29.4	0.7	0.1	8.5	8.5	2.9	713.0	476.2

\* Monetary financial institutions (MFIs) comprise banks (including building and loan associations), money market funds, and the European Central Bank and national central banks (the Eurosystem). <sup>1</sup> Source: ECB. <sup>2</sup> In Germany, only savings deposits. <sup>3</sup> Excluding holdings of MFIs; for the German contribution, excluding German MFIs' portfolios of securities issued by MFIs in the euro area. <sup>4</sup> In Germany, bank debt securities with maturities of up to one year are classed as money market paper.

<sup>5</sup> Excluding liabilities arising from securities issued. <sup>6</sup> After deduction of inter-MFI participations. <sup>7</sup> 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. <sup>8</sup> Including DEM banknotes still in circulation (see also footnote 4 on p. 10\*). <sup>9</sup> For the German contribution, the difference between the volume of euro banknotes

## II. Overall monetary survey in the euro area

issued (net) <sup>3</sup>								Memo item:					End of month	
With maturities of			Liabilities to non-euro area residents <sup>5</sup>	Capital and reserves <sup>6</sup>	Excess of inter-MFI liabilities	Other liability items		Monetary aggregates <sup>7</sup> (from 2002 German contribution excludes currency in circulation)			Monetary capital formation <sup>13</sup>	Monetary liabilities of central governments (Post Office, Treasury) <sup>14</sup>		
up to 1 year <sup>4</sup>	over 1 year and up to 2 years	over 2 years				Total <sup>8</sup>	of which: Intra-Eurosystem-liability/claim related to banknote issue <sup>9</sup>	M1 <sup>10</sup>	M2 <sup>11</sup>	M3 <sup>12</sup>				
<b>Euro area (€ billion) <sup>1</sup></b>														
15.9	17.7	1,979.7	5,212.8	2,997.6	–	16.5	3,480.9	0.0	11,076.5	14,485.0	15,233.9	6,864.2	187.6	2021 Sep.
23.0	17.6	1,999.5	5,409.6	2,999.7	–	49.4	3,483.7	0.0	11,143.6	14,565.3	15,366.7	6,874.5	188.4	Oct.
19.3	17.8	2,009.6	5,499.4	3,037.4		1.1	3,681.3	0.0	11,227.0	14,638.0	15,451.9	6,912.5	189.9	Nov.
12.3	18.0	1,989.3	5,370.5	3,026.8		12.7	3,371.8	0.0	11,347.0	14,759.7	15,543.3	6,899.2	195.2	Dec.
22.0	18.5	2,008.7	5,541.7	3,001.7		22.9	3,716.5	0.0	11,310.9	14,760.3	15,545.3	6,907.4	196.2	2022 Jan.
33.4	5.7	2,005.7	5,629.5	2,994.0		16.8	3,757.2	0.0	11,387.0	14,829.6	15,584.6	6,883.9	195.2	Feb.
30.7	6.2	1,989.8	5,610.2	3,003.0		38.0	3,991.1	0.0	11,476.5	14,939.8	15,683.6	6,879.4	195.4	Mar.
39.0	16.2	2,018.6	5,747.7	2,979.2	–	2.7	4,402.9	0.0	11,556.7	15,025.8	15,810.5	6,876.8	197.5	Apr.
34.0	15.6	1,988.4	5,795.3	2,915.9		15.6	4,332.0	0.0	11,618.5	15,081.7	15,855.7	6,782.0	199.3	May
47.8	14.4	2,007.0	5,719.3	2,905.2		25.9	4,656.7	0.0	11,679.3	15,172.5	15,942.3	6,786.6	199.6	June
15.1	16.4	2,059.5	5,862.8	2,970.9		7.7	4,320.5	0.0	11,762.1	15,310.8	16,065.7	6,894.6	204.2	July
16.7	19.0	2,077.8	5,914.8	2,890.5		33.9	4,808.0	0.0	11,775.7	15,377.4	16,137.0	6,812.0	197.0	Aug.
34.9	19.5	2,099.1	5,898.7	2,845.0		16.1	5,114.8	0.0	11,681.3	15,419.6	16,179.9	6,773.5	196.2	Sep.
3.8	24.0	2,102.8	6,038.5	2,819.3		38.9	4,996.2	0.0	11,505.4	15,322.1	16,100.0	6,750.6	196.4	Oct.
23.7	22.8	2,112.5	5,881.3	2,857.3		66.8	4,700.0	0.0	11,062.4	15,322.7	16,151.4	6,797.1	200.1	Nov.
31.7	23.2	2,111.2	5,553.5	2,817.9		57.2	4,830.1	0.0	11,382.0	15,315.7	16,132.1	6,764.4	192.7	Dec.
17.6	27.8	2,159.4	5,636.6	2,861.7		84.9	4,688.2	0.0	11,195.3	15,211.7	16,043.2	6,860.0	191.6	2023 Jan.
47.0	30.4	2,181.8	5,670.8	2,810.8		81.4	4,986.3	0.0	11,062.4	15,153.3	16,008.8	6,832.9	192.2	Feb.
54.0	30.4	2,172.6	5,657.4	2,893.2		89.4	4,705.3	0.0	10,951.2	15,153.6	16,012.9	6,917.5	182.5	Mar.
50.2	32.9	2,170.0	5,633.4	2,885.4		113.5	4,724.8	0.0	10,893.7	15,131.8	16,006.6	6,917.0	182.9	Apr.
56.0	32.8	2,210.1	5,722.1	2,908.2		158.9	4,812.3	0.0	10,806.8	15,098.3	15,989.8	6,984.6	178.5	May
49.9	33.1	2,229.9	5,584.3	2,885.5		149.8	4,851.3	0.0	10,741.1	15,115.8	15,989.3	6,984.9	178.0	June
47.1	34.2	2,319.3	5,595.4	2,907.4		102.7	4,958.4	0.0	10,647.7	15,083.3	15,984.4	7,099.2	180.5	July
50.8	33.5	2,335.8	5,655.8	2,926.0		121.5	4,937.8	0.0	10,553.4	15,041.6	15,946.7	7,136.0	176.9	Aug.
45.3	36.5	2,361.3	5,540.7	2,886.4		111.5	5,120.9	0.0	10,546.7	15,093.7	16,000.8	7,144.1	180.3	Sep.
56.8	36.7	2,411.3	5,510.3	2,917.1		120.6	5,096.9	0.0	10,374.9	15,001.7	15,955.2	7,219.0	179.5	Oct.
<b>German contribution (€ billion)</b>														
13.1	7.0	510.1	1,165.5	781.6	–	1,156.2	1,723.6	497.5	2,820.3	3,575.1	3,608.5	1,881.9	0.0	2021 Sep.
13.3	7.2	527.5	1,165.8	783.9	–	1,110.5	1,706.6	500.8	2,824.1	3,591.6	3,625.0	1,902.8	0.0	Oct.
14.5	7.4	534.6	1,227.7	803.0	–	1,154.8	1,744.2	504.5	2,866.1	3,621.4	3,651.2	1,928.3	0.0	Nov.
16.1	7.5	524.0	1,305.6	796.1	–	1,297.0	1,690.3	509.8	2,853.4	3,619.4	3,651.0	1,919.7	0.0	Dec.
13.6	7.7	541.5	1,271.1	778.4	–	1,169.6	1,919.3	511.1	2,876.4	3,652.3	3,680.4	1,917.7	0.0	2022 Jan.
14.7	7.5	550.4	1,275.8	774.8	–	1,172.9	1,969.0	514.2	2,900.0	3,677.2	3,707.4	1,921.4	0.0	Feb.
14.8	7.3	559.5	1,299.3	781.2	–	1,190.8	2,076.2	520.0	2,892.9	3,677.0	3,707.8	1,934.7	0.0	Mar.
14.6	7.1	574.8	1,284.0	769.2	–	1,168.1	2,325.6	523.3	2,892.4	3,686.8	3,715.1	1,935.2	0.0	Apr.
14.9	7.3	574.6	1,307.0	748.6	–	1,199.2	2,289.8	526.8	2,914.0	3,699.5	3,728.9	1,911.8	0.0	May
18.7	6.6	578.9	1,317.0	743.1	–	1,255.4	2,479.8	530.5	2,934.8	3,726.6	3,759.7	1,907.5	0.0	June
21.2	6.8	585.8	1,287.5	779.7	–	1,189.6	2,276.7	525.2	2,941.9	3,757.1	3,797.3	1,949.2	0.0	July
21.8	7.6	596.2	1,349.3	739.6	–	1,271.6	2,540.1	513.5	2,999.5	3,826.5	3,866.3	1,919.1	0.0	Aug.
27.5	8.1	604.3	1,385.2	711.9	–	1,287.1	2,858.3	516.8	2,944.0	3,811.2	3,854.6	1,899.2	0.0	Sep.
19.1	9.7	605.0	1,355.1	693.8	–	1,215.2	2,804.7	516.8	2,912.1	3,812.3	3,848.8	1,880.8	0.0	Oct.
20.8	11.2	602.2	1,310.2	714.6	–	1,191.2	2,596.7	516.8	2,920.8	3,819.7	3,862.5	1,900.3	0.0	Nov.
20.2	11.7	599.3	1,265.7	690.1	–	1,230.4	2,726.5	518.9	2,881.6	3,795.1	3,835.9	1,869.2	0.0	Dec.
24.0	13.1	602.4	1,226.5	689.1	–	1,117.5	2,625.9	521.2	2,849.3	3,789.5	3,835.2	1,874.9	0.0	2023 Jan.
29.3	15.8	606.4	1,171.8	668.4	–	1,073.2	2,787.2	522.2	2,816.8	3,782.0	3,836.8	1,860.1	0.0	Feb.
36.2	17.5	604.3	1,188.0	700.6	–	1,129.7	2,641.2	524.5	2,769.6	3,756.4	3,819.8	1,897.7	0.0	Mar.
37.0	18.5	599.4	1,107.1	704.2	–	1,028.5	2,637.8	526.4	2,757.6	3,759.4	3,825.5	1,899.8	0.0	Apr.
41.2	19.5	609.9	1,122.5	715.6	–	1,036.9	2,662.4	529.0	2,752.3	3,762.8	3,833.9	1,926.7	0.0	May
44.6	19.2	607.9	1,099.9	709.8	–	1,026.8	2,723.1	530.7	2,722.6	3,760.6	3,834.2	1,921.6	0.0	June
44.5	19.9	615.4	1,070.7	724.0	–	996.4	2,835.7	532.2	2,700.4	3,759.3	3,834.2	1,946.1	0.0	July
51.0	20.6	617.2	1,044.4	734.2	–	998.8	2,835.9	535.1	2,678.7	3,756.9	3,840.1	1,958.1	0.0	Aug.
48.5	22.6	634.5	1,048.4	722.8	–	1,000.9	2,898.6	538.7	2,666.2	3,753.7	3,835.5	1,967.4	0.0	Sep.
49.6	24.4	639.0	1,034.8	733.8	–	996.5	2,900.6	540.2	2,634.9	3,751.6	3,837.0	1,985.8	0.0	Oct.

actually issued by the Bundesbank and the amount disclosed in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2). **10** Overnight deposits (excluding central governments' deposits), and (for the euro area) currency in circulation, central governments' overnight monetary liabilities, which are not included in the consolidated balance sheet. **11** M1 plus deposits with agreed maturities of up to two years and at agreed

notice of up to three months (excluding central governments' deposits) and (for the euro area) central governments' monetary liabilities with such maturities. **12** M2 plus repo transactions, money market fund shares, money market paper and debt securities up to two years. **13** Deposits with agreed maturities of over two years and at agreed notice of over three months, debt securities with maturities of over two years, capital and reserves. **14** Non-existent in Germany.

## II. Overall monetary survey in the euro area

### 3. Banking systems liquidity position \* Stocks

€ billion; period averages of daily positions

Reserve maintenance period ending in <sup>1</sup>	Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current account balances (including minimum reserves) <sup>7</sup>	Base money <sup>8</sup>
	Net assets in gold and foreign currency	Monetary policy operations of the Eurosystem				Deposit facility	Other liquidity-absorbing operations <sup>4</sup>	Banknotes in circulation <sup>5</sup>	Central government deposits	Other factors (net) <sup>6</sup>		
		Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations <sup>3</sup>							
<b>Eurosystem <sup>2</sup></b>												
2021 Nov.	835.1	0.2	2,209.9	0.0	4,512.3	738.5	0.0	1,507.4	671.3	833.7	3,806.5	6,052.4
Dec.	839.2	0.2	2,208.8	0.0	4,655.6	745.0	0.0	1,521.4	628.3	965.7	3,843.3	6,109.7
2022 Jan.	.	.	.	.	.	.	.	.	.	.	.	.
Feb.	877.7	0.3	2,201.5	0.0	4,750.2	734.2	0.0	1,540.6	582.0	1,160.5	3,812.3	6,087.1
Mar.	887.2	0.3	2,201.3	0.0	4,842.0	746.0	0.0	1,550.6	642.6	1,091.1	3,900.8	6,197.3
Apr.	913.2	0.4	2,199.8	0.0	4,889.2	714.9	0.0	1,575.9	667.8	1,116.7	3,927.3	6,218.1
May	.	.	.	.	.	.	.	.	.	.	.	.
June	934.2	0.5	2,198.8	0.0	4,939.1	681.3	0.0	1,591.5	624.1	1,129.1	4,046.1	6,319.0
July	943.7	1.0	2,149.4	0.0	4,958.8	678.7	0.0	1,604.0	667.6	1,158.0	3,943.3	6,226.0
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	950.1	1.7	2,124.9	0.0	4,954.8	707.0	0.0	1,585.3	553.9	1,249.2	3,936.1	6,228.5
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
Nov.	955.8	4.0	2,118.8	0.0	4,948.3	4,490.0	0.0	1,563.7	536.7	1,104.4	332.0	6,385.7
Dec.	960.4	1.9	1,947.1	0.0	4,946.1	4,521.5	0.0	1,560.8	492.5	1,066.9	213.8	6,296.2
2023 Jan.	.	.	.	.	.	.	.	.	.	.	.	.
Feb.	940.4	1.2	1,303.3	0.1	4,942.1	4,051.6	0.0	1,565.6	372.8	1,001.6	195.6	5,812.7
Mar.	916.8	0.9	1,233.3	0.0	4,939.0	4,103.0	0.0	1,553.9	380.2	861.8	191.1	5,848.0
Apr.	.	.	.	.	.	.	.	.	.	.	.	.
May	945.0	1.4	1,117.7	0.1	4,905.6	3,996.1	0.0	1,559.8	360.6	870.5	182.7	5,738.6
June	948.2	1.6	1,100.5	0.1	4,884.1	4,126.4	0.0	1,563.7	256.4	806.6	181.6	5,871.7
July	.	.	.	.	.	.	.	.	.	.	.	.
Aug.	927.8	10.9	682.0	0.1	4,853.0	3,704.4	0.0	1,567.0	254.4	770.5	177.4	5,448.9
Sep.	924.3	5.6	601.0	0.1	4,811.2	3,647.4	0.0	1,564.2	222.5	733.8	174.3	5,386.0
Oct.	931.2	8.1	515.4	0.1	4,767.9	3,577.4	0.0	1,554.7	222.7	693.3	174.6	5,306.7
Nov.	.	.	.	.	.	.	.	.	.	.	.	.
<b>Deutsche Bundesbank</b>												
2021 Nov.	200.3	0.1	439.1	0.0	978.5	204.4	0.0	367.4	217.7	-235.2	1,061.6	1,633.3
Dec.	201.3	0.0	440.3	0.0	1,015.8	206.4	0.0	370.9	220.4	-219.4	1,077.1	1,654.4
2022 Jan.	.	.	.	.	.	.	.	.	.	.	.	.
Feb.	212.4	0.3	421.7	0.0	1,034.0	204.5	0.0	374.6	205.6	-165.1	1,048.8	1,627.9
Mar.	215.6	0.1	421.7	0.0	1,057.9	211.8	0.0	378.1	191.1	-193.7	1,108.0	1,698.0
Apr.	223.9	0.1	420.8	0.0	1,068.7	197.7	0.0	384.9	196.7	-189.1	1,123.3	1,705.9
May	.	.	.	.	.	.	.	.	.	.	.	.
June	230.4	0.1	420.2	0.0	1,087.4	189.9	0.0	388.0	196.9	-183.1	1,147.4	1,725.3
July	231.7	0.3	409.1	0.0	1,084.3	185.8	0.0	390.3	214.9	-175.4	1,109.7	1,685.8
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	232.1	0.3	403.6	0.0	1,076.8	228.5	0.0	379.5	157.9	-161.8	1,108.8	1,716.8
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
Nov.	231.7	0.8	400.5	0.0	1,071.5	1,304.0	0.0	379.0	127.2	-231.4	125.9	1,808.8
Dec.	232.4	0.5	352.5	0.0	1,079.2	1,346.6	0.0	378.8	121.0	-242.4	60.5	1,785.9
2023 Jan.	.	.	.	.	.	.	.	.	.	.	.	.
Feb.	229.8	0.4	231.9	0.1	1,076.8	1,234.6	0.0	377.2	77.8	-205.4	54.8	1,666.7
Mar.	228.9	0.4	212.8	0.0	1,077.0	1,263.7	0.0	374.5	69.2	-242.5	54.2	1,692.4
Apr.	.	.	.	.	.	.	.	.	.	.	.	.
May	239.2	0.7	200.2	0.1	1,066.1	1,228.0	0.0	375.7	73.4	-221.1	50.1	1,653.9
June	241.7	0.7	198.9	0.1	1,056.8	1,256.3	0.0	377.2	54.7	-241.8	52.0	1,685.4
July	.	.	.	.	.	.	.	.	.	.	.	.
Aug.	236.2	1.5	142.4	0.1	1,048.8	1,175.5	0.0	377.5	49.9	-222.5	48.4	1,601.5
Sep.	234.5	0.8	131.2	0.1	1,041.3	1,177.8	0.0	377.3	40.1	-235.4	48.0	1,603.1
Oct.	235.7	1.3	96.3	0.0	1,024.0	1,151.1	0.0	374.9	28.7	-245.4	47.9	1,574.0
Nov.	.	.	.	.	.	.	.	.	.	.	.	.

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

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



## II. Overall monetary survey in the euro area

### Flows

Liquidity-providing factors					Liquidity-absorbing factors					Credit institutions' current account balances (including minimum reserves) <sup>7</sup>	Base money <sup>8</sup>	Reserve maintenance period ending in <sup>1</sup>
Net assets in gold and foreign currency	Monetary policy operations of the Eurosystem				Deposit facility	Other liquidity-absorbing operations <sup>4</sup>	Banknotes in circulation <sup>5</sup>	Central government deposits	Other factors (net) <sup>6</sup>			
	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations <sup>3</sup>								
<b>Eurosystem <sup>2</sup></b>												
+ 8.4	± 0.0	- 3.3	± 0.0	+ 133.4	- 28.1	± 0.0	+ 7.5	+ 35.6	+ 43.3	+ 80.3	+ 59.6	2021 Nov.
+ 4.1	± 0.0	- 1.1	± 0.0	+ 143.3	+ 6.5	± 0.0	+ 14.0	- 43.0	+ 132.0	+ 36.8	+ 57.3	Dec.
+ 38.5	+ 0.1	- 7.3	± 0.0	+ 94.6	- 10.8	± 0.0	+ 19.2	- 46.3	+ 194.8	- 31.0	- 22.6	2022 Jan.
+ 9.5	± 0.0	- 0.2	± 0.0	+ 91.8	+ 11.8	± 0.0	+ 10.0	+ 60.6	- 69.4	+ 88.5	+ 110.2	Feb.
+ 26.0	+ 0.1	- 1.5	± 0.0	+ 47.2	- 31.1	± 0.0	+ 25.3	+ 25.2	+ 25.6	+ 26.5	+ 20.8	Mar.
+ 21.0	+ 0.1	- 1.0	± 0.0	+ 49.9	- 33.6	± 0.0	+ 15.6	- 43.7	+ 12.4	+ 118.8	+ 100.9	Apr.
+ 9.5	+ 0.5	- 49.4	± 0.0	+ 19.7	- 2.6	± 0.0	+ 12.5	+ 43.5	+ 28.9	- 102.8	- 93.0	May
+ 6.4	+ 0.7	- 24.5	± 0.0	- 4.0	+ 28.3	± 0.0	- 18.7	-113.7	+ 91.2	- 7.2	+ 2.5	June
+ 5.7	+ 2.3	- 6.1	± 0.0	- 6.5	+3,783.0	± 0.0	- 21.6	- 17.2	- 144.8	-3,604.1	+ 157.2	July
+ 4.6	- 2.1	- 171.7	± 0.0	- 2.2	+ 31.5	± 0.0	- 2.9	- 44.2	- 37.5	- 118.2	- 89.5	Aug.
- 20.0	- 0.7	- 643.8	+ 0.1	- 4.0	- 469.9	± 0.0	+ 4.8	-119.7	- 65.3	- 18.2	- 483.5	2023 Jan.
- 23.6	- 0.3	- 70.0	- 0.1	- 3.1	+ 51.4	± 0.0	- 11.7	+ 7.4	- 139.8	- 4.5	+ 35.3	Feb.
+ 28.2	+ 0.5	- 115.6	+ 0.1	- 33.4	- 106.9	± 0.0	+ 5.9	- 19.6	+ 8.7	- 8.4	- 109.4	Mar.
+ 3.2	+ 0.2	- 17.2	± 0.0	- 21.5	+ 130.3	± 0.0	+ 3.9	-104.2	- 63.9	- 1.1	+ 133.1	Apr.
- 20.4	+ 9.3	- 418.5	± 0.0	- 31.1	- 422.0	± 0.0	+ 3.3	- 2.0	- 36.1	- 4.2	- 422.8	May
- 3.5	- 5.3	- 81.0	± 0.0	- 41.8	- 57.0	± 0.0	- 2.8	- 31.9	- 36.7	- 3.1	- 62.9	June
+ 6.9	+ 2.5	- 85.6	± 0.0	- 43.3	- 70.0	± 0.0	- 9.5	+ 0.2	- 40.5	+ 0.3	- 79.3	July
												Aug.
												Sep.
												Oct.
												Nov.
<b>Deutsche Bundesbank</b>												
+ 1.3	+ 0.0	+ 2.4	- 0.0	+ 27.8	- 6.4	± 0.0	+ 2.4	+ 13.4	+ 5.7	+ 16.3	+ 12.3	2021 Nov.
+ 1.0	- 0.1	+ 1.2	- 0.0	+ 37.3	+ 2.1	± 0.0	+ 3.5	+ 2.7	+ 15.7	+ 15.6	+ 21.1	Dec.
+ 11.1	+ 0.2	- 18.6	+ 0.0	+ 18.2	- 2.0	± 0.0	+ 3.7	- 14.7	+ 54.3	- 28.3	- 26.6	2022 Jan.
+ 3.2	- 0.1	- 0.0	+ 0.0	+ 23.9	+ 7.4	± 0.0	+ 3.5	- 14.5	- 28.6	+ 59.2	+ 70.1	Feb.
+ 8.2	- 0.0	- 0.9	- 0.0	+ 10.8	- 14.2	± 0.0	+ 6.8	+ 5.6	+ 4.6	+ 15.2	+ 7.9	Mar.
+ 6.6	+ 0.1	- 0.6	- 0.0	+ 18.7	- 7.7	± 0.0	+ 3.0	+ 0.2	+ 6.0	+ 24.1	+ 19.4	Apr.
+ 1.3	+ 0.2	- 11.1	- 0.0	- 3.1	- 4.1	± 0.0	+ 2.4	+ 18.0	+ 7.7	- 37.7	- 39.5	May
+ 0.4	+ 0.0	- 5.5	- 0.0	- 7.5	+ 42.7	± 0.0	- 10.8	- 57.1	+ 13.5	- 0.9	+ 31.0	June
- 0.5	+ 0.5	- 3.1	+ 0.0	- 5.3	+1,075.5	± 0.0	- 0.6	- 30.7	- 69.6	- 982.9	+ 92.0	July
+ 0.7	- 0.4	- 48.0	+ 0.0	+ 7.7	+ 42.7	± 0.0	- 0.1	- 6.2	- 11.0	- 65.4	- 22.9	Aug.
- 2.5	- 0.1	- 120.6	+ 0.1	- 2.4	- 112.0	± 0.0	- 1.6	- 43.2	+ 37.0	- 5.6	- 119.3	2023 Jan.
- 1.0	+ 0.0	- 19.1	- 0.0	+ 0.2	+ 29.1	± 0.0	- 2.7	- 8.6	- 37.1	- 0.7	+ 25.7	Feb.
+ 10.3	+ 0.2	- 12.7	+ 0.0	- 11.0	- 35.7	± 0.0	+ 1.2	+ 4.1	+ 21.4	- 4.1	- 38.5	Mar.
+ 2.6	+ 0.1	- 1.3	+ 0.0	- 9.3	+ 28.3	± 0.0	+ 1.4	- 18.7	- 20.7	+ 1.9	+ 31.5	Apr.
- 5.6	+ 0.8	- 56.5	- 0.0	- 8.0	- 80.8	± 0.0	+ 0.4	- 4.7	+ 19.3	- 3.5	- 83.9	May
- 1.7	- 0.7	- 11.2	+ 0.0	- 7.5	+ 2.3	± 0.0	- 0.2	- 9.8	- 13.0	- 0.4	+ 1.6	June
+ 1.2	+ 0.5	- 35.0	- 0.0	- 17.3	- 26.7	± 0.0	- 2.4	- 11.5	- 9.9	- 0.0	- 29.1	July
												Aug.
												Sep.
												Oct.
												Nov.

allocated to the ECB on a monthly basis. The counterpart of this adjustment is shown under "Other factors". The remaining 92% of the value of the euro banknotes in circulation is allocated, likewise on a monthly basis, to the NCBS, with each NCB showing in its balance sheet the share of the euro banknotes issued corresponding to its paid-up share in the ECB's capital. The difference between the value of the euro banknotes allocated to an NCB and the value of the euro banknotes which that NCB has put into circulation is likewise shown under "Other factors". From 2003 euro

banknotes only. <sup>6</sup> Remaining items in the consolidated financial statement of the Eurosystem and the financial statement of the Bundesbank. <sup>7</sup> Equal to the difference between the sum of liquidity-providing factors and the sum of liquidity-absorbing factors. <sup>8</sup> Calculated as the sum of the "Deposit facility", "Banknotes in circulation" and "Credit institutions' current account balances".

### III. Consolidated financial statement of the Eurosystem

#### 1. Assets \*

€ billion

As at reporting date	Total assets	Gold and gold receivables	Claims on non-euro area residents denominated in foreign currency			Claims on euro area residents denominated in foreign currency	Claims on non-euro area residents denominated in euro			
			Total	Receivables from the IMF	Balances with banks, security investments, external loans and other external assets		Total	Balances with banks, security investments and loans	Claims arising from the credit facility under ERM II	
<b>Eurosystem <sup>1</sup></b>										
2023 May 12	7,728.5	632.9	499.0	230.4	268.7	14.5	12.9	12.9	–	–
19	7,730.1	632.9	500.6	230.4	270.2	13.7	12.9	12.9	–	–
26	7,713.7	632.8	500.2	230.4	269.9	13.9	13.8	13.8	–	–
June 2	7,712.7	632.8	500.8	230.5	270.3	13.9	13.4	13.4	–	–
9	7,714.4	632.8	500.5	231.0	269.6	14.1	13.4	13.4	–	–
16	7,709.7	632.8	502.4	231.0	271.4	13.1	13.7	13.7	–	–
23	7,710.6	632.8	500.3	231.1	269.2	14.8	13.8	13.8	–	–
30	7,219.7	609.3	497.5	229.1	268.5	13.3	15.8	15.8	–	–
July 7	7,206.9	609.3	499.1	229.1	270.0	12.1	13.9	13.9	–	–
14	7,205.5	609.3	497.7	229.0	268.6	13.7	14.1	14.1	–	–
21	7,186.9	609.3	496.6	228.9	267.6	14.3	14.2	14.2	–	–
28	7,189.3	609.3	497.8	229.0	268.8	12.9	14.2	14.2	–	–
Aug. 4	7,164.6	609.3	497.0	229.1	267.9	14.0	14.1	14.1	–	–
11	7,166.5	609.3	498.2	229.6	268.6	13.3	14.2	14.2	–	–
18	7,153.1	609.3	498.7	230.0	268.7	13.6	14.3	14.3	–	–
25	7,154.9	609.3	497.9	230.0	268.0	13.9	14.3	14.3	–	–
Sep. 1	7,168.2	609.3	498.7	231.3	267.4	14.2	14.1	14.1	–	–
8	7,153.1	609.3	498.3	231.3	267.1	14.3	14.0	14.0	–	–
15	7,135.7	609.3	497.2	231.3	265.9	14.7	14.2	14.2	–	–
22	7,142.0	609.3	497.3	231.3	266.0	14.5	14.5	14.5	–	–
29	7,066.5	613.3	502.4	234.2	268.2	15.4	14.2	14.2	–	–
Oct. 6	7,057.1	613.3	504.0	234.2	269.8	14.9	14.6	14.6	–	–
13	7,056.7	613.3	504.8	234.2	270.6	14.5	14.6	14.6	–	–
20	7,038.0	613.3	504.9	234.0	270.8	14.5	14.6	14.6	–	–
27	7,019.7	613.3	506.1	234.1	271.9	14.0	14.9	14.9	–	–
Nov. 3	7,001.6	613.3	506.4	234.2	272.1	13.6	14.8	14.8	–	–
10	6,998.9	613.3	506.2	234.3	272.0	14.5	15.2	15.2	–	–
17	7,001.1	613.3	507.1	234.0	273.0	14.5	15.0	15.0	–	–
24	6,995.8	613.3	507.4	234.1	273.3	14.2	15.2	15.2	–	–
Dec. 1	7,002.0	613.3	507.4	234.1	273.3	13.9	15.0	15.0	–	–
<b>Deutsche Bundesbank</b>										
2023 May 12	2,699.7	196.4	91.9	57.8	34.1	0.0	0.1	0.1	–	–
19	2,675.2	196.4	91.9	57.8	34.1	0.0	0.1	0.1	–	–
26	2,689.2	196.3	91.9	57.8	34.1	0.0	0.1	0.1	–	–
June 2	2,675.0	196.3	91.9	57.8	34.1	0.0	–	–	–	–
9	2,664.6	196.3	92.3	58.2	34.1	0.0	–	–	–	–
16	2,671.3	196.3	92.3	58.2	34.1	0.0	–	–	–	–
23	2,646.6	196.3	92.4	58.2	34.2	0.0	–	–	–	–
30	2,590.6	189.0	91.8	57.9	33.9	0.0	1.9	1.9	–	–
July 7	2,569.4	189.0	91.8	57.9	33.8	0.0	–	–	–	–
14	2,551.9	189.0	91.7	57.9	33.9	0.0	–	–	–	–
21	2,550.2	189.0	91.7	57.9	33.8	0.0	–	–	–	–
28	2,547.0	189.0	91.7	57.9	33.8	0.0	–	–	–	–
Aug. 4	2,562.8	189.0	91.9	58.0	33.9	0.0	–	–	–	–
11	2,552.0	189.0	91.6	58.0	33.7	0.0	–	–	–	–
18	2,559.4	189.0	92.2	58.2	34.0	0.0	–	–	–	–
25	2,550.9	189.0	92.0	58.2	33.7	0.0	–	–	–	–
Sep. 1	2,577.3	189.0	91.9	58.2	33.6	0.0	–	–	–	–
8	2,561.7	189.0	91.9	58.2	33.7	0.0	–	–	–	–
15	2,551.1	189.0	91.7	58.2	33.5	0.0	–	–	–	–
22	2,528.2	189.0	91.8	58.2	33.6	0.0	–	–	–	–
29	2,510.1	190.2	92.3	58.9	33.3	0.0	–	–	–	–
Oct. 6	2,506.6	190.2	92.3	58.9	33.4	0.0	–	–	–	–
13	2,504.5	190.2	92.5	58.9	33.6	0.0	–	–	–	–
20	2,509.3	190.2	92.7	58.9	33.8	0.0	–	–	–	–
27	2,512.0	190.2	93.1	58.9	34.2	0.0	–	–	–	–
Nov. 3	2,535.6	190.2	93.3	59.0	34.3	0.0	–	–	–	–
10	2,532.7	190.2	93.5	59.0	34.4	0.0	–	–	–	–
17	2,513.2	190.2	93.3	58.9	34.4	0.0	–	–	–	–
24	2,522.1	190.2	93.3	58.9	34.4	0.0	–	–	–	–
Dec. 1	2,511.5	190.2	93.2	58.9	34.3	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 end of the quarter. <sup>1</sup> Source: ECB.

### III. Consolidated financial statement of the Eurosystem

Lending to euro area credit institutions related to monetary policy operations denominated in euro							Other claims on euro area credit institutions denomi- nated in euro	Securities of euro area residents in euro			General government debt deno- minated in euro	Other assets	As at reporting date	
Total	Main re- financing opera- tions	Longer- term re- financing opera- tions	Fine- tuning reverse opera- tions	Structural reverse opera- tions	Marginal lending facility	Credits related to margin calls		Total	Securities held for monetary policy purposes	Other securities				
<b>Eurosystem <sup>1</sup></b>														
1,101.8	1.3	1,100.4	–	–	–	–	37.2	5,081.4	4,900.1	181.2	21.5	327.5	2023 May	12
1,101.9	1.4	1,100.4	–	–	–	–	38.2	5,076.8	4,895.2	181.6	21.5	331.7		19
1,102.6	2.0	1,100.4	–	–	0.1	–	37.7	5,064.0	4,879.3	184.7	21.5	327.3		26
1,103.2	2.5	1,100.7	–	–	–	–	37.7	5,067.3	4,881.1	186.2	21.5	322.2	June	2
1,102.1	1.3	1,100.7	–	–	0.1	–	36.4	5,066.9	4,880.2	186.7	21.5	326.8		9
1,101.9	1.2	1,100.7	–	–	0.1	–	42.1	5,054.0	4,867.8	186.2	21.5	328.3		16
1,102.0	1.2	1,100.7	–	–	0.1	–	43.1	5,052.9	4,866.2	186.7	21.5	329.4		23
616.7	18.6	598.0	–	–	0.2	–	42.6	5,045.1	4,858.9	186.2	21.0	358.4		30
610.5	12.5	598.0	–	–	0.0	–	41.9	5,047.8	4,860.1	187.7	21.0	351.2	July	7
609.9	11.8	598.0	–	–	0.1	–	33.6	5,050.5	4,860.6	189.9	21.0	355.8		14
608.1	10.0	598.0	–	–	0.1	–	38.2	5,031.5	4,841.8	189.8	21.0	353.7		21
611.7	11.0	600.4	–	–	0.2	–	33.9	5,027.2	4,837.3	189.8	21.0	361.4		28
607.8	7.4	600.4	–	–	0.0	–	35.6	5,011.7	4,822.4	189.4	21.0	354.1	Aug.	4
606.1	5.7	600.4	–	–	0.0	–	29.3	5,014.2	4,824.7	189.4	21.0	361.1		11
605.9	5.2	600.4	–	–	0.3	–	30.2	4,999.3	4,808.8	190.5	21.0	360.8		18
606.4	5.9	600.4	–	–	0.0	–	28.3	4,999.8	4,808.3	191.6	21.0	364.0		25
608.9	7.0	601.9	–	–	0.1	–	31.1	5,001.9	4,809.5	192.4	21.0	369.1	Sep.	1
605.8	3.9	601.9	–	–	0.0	–	24.5	5,003.0	4,810.2	192.7	21.0	362.9		8
605.9	4.0	601.9	–	–	0.0	–	27.2	4,986.1	4,793.2	192.9	21.0	360.2		15
605.9	4.0	601.9	–	–	0.0	–	33.4	4,984.5	4,789.2	195.3	21.0	361.6		22
509.8	11.4	498.5	–	–	–	–	35.2	4,976.4	4,779.8	196.6	21.0	378.7		29
506.3	7.8	498.5	–	–	0.0	–	23.4	4,977.6	4,777.8	199.8	21.0	382.0	Oct.	6
506.0	7.5	498.5	–	–	0.0	–	26.9	4,974.1	4,772.9	201.2	21.0	381.6		13
506.2	7.7	498.5	–	–	0.0	–	24.6	4,957.0	4,754.0	203.0	21.0	382.0		20
506.6	10.5	495.8	–	–	0.3	–	24.5	4,936.6	4,734.6	202.0	21.0	382.7		27
504.0	8.1	495.8	–	–	–	–	25.8	4,925.3	4,724.6	200.7	21.0	377.5	Nov.	3
502.7	6.9	495.8	–	–	–	–	25.8	4,922.2	4,721.7	200.5	21.0	378.0		10
503.0	7.1	495.8	–	–	0.0	–	24.7	4,921.9	4,720.9	201.1	21.0	380.6		17
503.2	7.3	495.8	–	–	0.0	–	23.9	4,917.6	4,715.7	201.9	21.0	380.1		24
504.4	8.5	496.0	–	–	–	–	31.6	4,911.2	4,709.4	201.7	21.0	384.3	Dec.	1
<b>Deutsche Bundesbank</b>														
199.7	0.8	198.9	–	–	–	–	5.7	1,064.2	1,064.2	–	4.4	1,137.4	2023 May	12
199.6	0.7	198.9	–	–	–	–	8.4	1,055.8	1,055.8	–	4.4	1,118.6		19
199.7	0.8	198.9	–	–	0.1	–	8.8	1,057.1	1,057.1	–	4.4	1,130.9		26
199.9	1.0	198.9	–	–	–	–	7.6	1,058.4	1,058.4	–	4.4	1,116.5	June	2
199.5	0.5	198.9	–	–	0.1	–	9.1	1,057.0	1,057.0	–	4.4	1,105.9		9
199.5	0.5	198.9	–	–	0.1	–	11.3	1,050.0	1,050.0	–	4.4	1,117.5		16
199.5	0.5	198.9	–	–	0.1	–	10.3	1,050.5	1,050.5	–	4.4	1,093.3		23
134.0	2.8	131.1	–	–	0.2	–	10.3	1,048.1	1,048.1	–	4.4	1,111.0		30
132.6	1.5	131.1	–	–	0.0	–	11.6	1,048.8	1,048.8	–	4.4	1,091.2	July	7
132.5	1.3	131.1	–	–	0.1	–	9.8	1,048.9	1,048.9	–	4.4	1,075.6		14
132.5	1.3	131.1	–	–	0.1	–	11.4	1,047.8	1,047.8	–	4.4	1,073.4		21
133.2	1.7	131.2	–	–	0.2	–	12.3	1,048.6	1,048.6	–	4.4	1,067.8		28
132.1	0.9	131.2	–	–	0.0	–	11.5	1,049.2	1,049.2	–	4.4	1,084.6	Aug.	4
131.9	0.7	131.2	–	–	0.0	–	12.0	1,050.2	1,050.2	–	4.4	1,072.9		11
131.8	0.2	131.2	–	–	0.3	–	13.0	1,039.8	1,039.8	–	4.4	1,089.1		18
132.2	1.0	131.2	–	–	0.0	–	10.0	1,038.8	1,038.8	–	4.4	1,084.5		25
132.5	1.3	131.2	–	–	0.1	–	12.0	1,039.5	1,039.5	–	4.4	1,107.9	Sep.	1
131.9	0.6	131.2	–	–	0.0	–	10.2	1,039.7	1,039.7	–	4.4	1,094.5		8
131.8	0.6	131.2	–	–	0.0	–	9.7	1,030.6	1,030.6	–	4.4	1,093.8		15
131.9	0.7	131.2	–	–	0.0	–	11.3	1,027.8	1,027.8	–	4.4	1,071.9		22
91.3	2.0	89.3	–	–	–	–	9.6	1,027.0	1,027.0	–	4.4	1,095.4		29
90.3	1.1	89.3	–	–	–	–	9.6	1,027.2	1,027.2	–	4.4	1,092.5	Oct.	6
90.3	1.0	89.3	–	–	0.0	–	11.6	1,020.4	1,020.4	–	4.4	1,095.0		13
90.4	1.1	89.3	–	–	0.0	–	10.9	1,019.4	1,019.4	–	4.4	1,101.2		20
91.4	1.8	89.2	–	–	0.3	–	11.6	1,019.8	1,019.8	–	4.4	1,101.4		27
90.2	0.9	89.2	–	–	0.0	–	11.5	1,020.6	1,020.6	–	4.4	1,125.3	Nov.	3
89.9	0.7	89.2	–	–	–	–	12.6	1,018.9	1,018.9	–	4.4	1,123.1		10
90.2	0.9	89.2	–	–	0.0	–	11.5	1,018.3	1,018.3	–	4.4	1,105.3		17
90.1	0.9	89.2	–	–	0.0	–	11.8	1,015.7	1,015.7	–	4.4	1,116.5		24
90.0	0.9	89.1	–	–	–	–	12.0	1,015.6	1,015.6	–	4.4	1,106.0	Dec.	1

### III. Consolidated financial statement of the Eurosystem

#### 2. Liabilities \*

€ billion

As at reporting date	Total liabilities	Banknotes in circulation <sup>1</sup>	Liabilities to euro area credit institutions related to monetary policy operations denominated in euro						Other liabilities to euro area credit institutions denominated in euro	Debt certificates issued	Liabilities to other euro area residents denominated in euro		
			Total	Current accounts (covering the minimum reserve system)	Deposit facility	Fixed-term deposits	Fine-tuning reverse operations	Deposits related to margin calls			Total	General government	Other liabilities
<b>Eurosystem <sup>3</sup></b>													
2023 May 12	7,728.5	1,562.2	4,302.7	171.2	4,131.2	–	–	0.3	39.5	–	352.4	265.1	87.3
19	7,730.1	1,562.2	4,280.8	156.3	4,124.2	–	–	0.3	40.8	–	375.4	289.9	85.4
26	7,713.7	1,563.6	4,290.6	155.7	4,134.6	–	–	0.3	39.5	–	349.4	261.5	87.9
June 2	7,712.7	1,565.5	4,321.5	157.5	4,163.7	–	–	0.3	40.7	–	327.4	233.4	94.1
9	7,714.4	1,565.5	4,343.6	162.5	4,180.7	–	–	0.3	37.4	–	318.3	228.0	90.3
16	7,709.7	1,564.4	4,309.6	193.6	4,115.6	–	–	0.3	37.2	–	337.6	239.8	97.8
23	7,710.6	1,563.8	4,289.7	185.2	4,104.4	–	–	0.1	41.0	–	351.1	255.9	95.2
30	7,219.7	1,566.1	3,751.3	174.5	3,576.8	–	–	0.0	51.9	–	353.0	258.1	94.9
July 7	7,206.9	1,568.2	3,836.7	166.9	3,669.8	–	–	0.0	34.3	–	318.4	230.9	87.6
14	7,205.5	1,568.8	3,827.8	156.4	3,671.4	–	–	0.0	32.3	–	338.9	250.6	88.2
21	7,186.9	1,567.7	3,791.3	157.3	3,634.0	–	–	0.0	33.9	–	346.8	260.8	86.0
28	7,189.3	1,569.0	3,770.2	185.1	3,585.1	–	–	0.0	32.8	–	370.5	281.6	88.9
Aug. 4	7,164.6	1,569.4	3,818.4	168.0	3,650.3	–	–	0.0	30.9	–	305.9	219.0	86.9
11	7,166.5	1,569.6	3,821.8	177.2	3,644.6	–	–	0.0	33.2	–	311.2	224.6	86.5
18	7,153.1	1,567.0	3,812.6	149.5	3,663.0	–	–	0.0	33.7	–	305.5	219.0	86.5
25	7,154.9	1,563.1	3,815.8	148.6	3,667.1	–	–	0.0	35.1	–	313.6	227.8	85.8
Sep. 1	7,168.2	1,562.3	3,821.1	163.6	3,657.5	–	–	0.0	37.2	–	311.9	220.8	91.1
8	7,153.1	1,560.5	3,841.8	159.4	3,682.4	–	–	0.0	37.5	–	299.0	214.2	84.8
15	7,135.7	1,558.7	3,813.2	223.3	3,589.9	–	–	0.0	33.7	–	316.1	232.1	84.1
22	7,142.0	1,556.2	3,823.4	162.6	3,660.8	–	–	0.0	38.7	–	310.3	228.0	82.4
29	7,066.5	1,557.6	3,640.8	173.8	3,467.0	–	–	0.0	46.2	–	350.0	262.1	87.9
Oct. 6	7,057.1	1,556.9	3,756.3	153.2	3,603.1	–	–	0.0	33.1	–	289.1	211.5	77.7
13	7,056.7	1,554.6	3,763.4	161.0	3,602.3	–	–	0.0	35.6	–	305.2	224.1	81.1
20	7,038.0	1,551.7	3,749.9	162.5	3,587.3	–	–	0.0	35.5	–	293.0	217.3	75.7
27	7,019.7	1,552.4	3,733.7	200.4	3,533.3	–	–	0.0	35.9	–	285.6	205.2	80.4
Nov. 3	7,001.6	1,553.2	3,716.4	167.1	3,549.3	–	–	0.0	37.6	–	281.4	200.5	80.9
10	6,998.9	1,550.0	3,715.8	154.9	3,560.9	–	–	0.0	37.8	–	284.9	206.1	78.8
17	7,001.1	1,547.9	3,726.7	162.6	3,564.1	–	–	0.0	37.5	–	280.2	202.0	78.2
24	6,995.8	1,547.2	3,706.3	157.0	3,549.3	–	–	0.0	37.4	–	289.4	210.3	79.1
Dec. 1	7,002.0	1,549.8	3,722.2	163.0	3,559.2	–	–	0.0	36.1	–	267.1	184.2	83.0
<b>Deutsche Bundesbank</b>													
2023 May 12	2,699.7	376.3	1,317.2	46.8	1,270.1	–	–	0.3	11.8	–	74.1	53.8	20.3
19	2,675.2	377.2	1,300.0	39.7	1,260.0	–	–	0.3	11.7	–	78.3	58.6	19.7
26	2,689.2	378.4	1,302.1	38.7	1,263.1	–	–	0.3	11.3	–	91.3	71.1	20.2
June 2	2,675.0	376.6	1,314.2	38.7	1,275.3	–	–	0.3	11.7	–	69.5	48.2	21.2
9	2,664.6	377.3	1,306.8	45.3	1,261.2	–	–	0.3	11.5	–	71.6	49.8	21.8
16	2,671.3	377.7	1,312.0	58.1	1,253.6	–	–	0.3	9.1	–	72.2	47.7	24.6
23	2,646.6	377.3	1,285.3	52.8	1,232.4	–	–	0.0	10.6	–	73.5	51.0	22.5
30	2,590.6	376.6	1,202.5	49.1	1,153.3	–	–	0.0	14.4	–	71.8	48.1	23.7
July 7	2,569.4	377.7	1,228.2	42.2	1,185.9	–	–	0.0	10.6	–	64.6	42.1	22.5
14	2,551.9	378.0	1,201.0	41.8	1,159.2	–	–	0.0	7.7	–	78.2	57.6	20.6
21	2,550.2	377.5	1,209.1	42.2	1,166.9	–	–	0.0	9.1	–	65.8	45.0	20.8
28	2,547.0	378.6	1,193.6	59.1	1,134.4	–	–	0.0	8.4	–	74.7	54.0	20.7
Aug. 4	2,562.8	378.1	1,227.7	51.2	1,176.5	–	–	0.0	6.8	–	57.1	37.9	19.2
11	2,552.0	378.2	1,221.6	63.1	1,158.4	–	–	0.0	8.4	–	55.9	35.8	20.1
18	2,559.4	377.9	1,222.5	35.6	1,186.9	–	–	0.0	9.4	–	60.4	40.3	20.0
25	2,550.9	377.7	1,223.6	34.7	1,188.8	–	–	0.0	9.3	–	56.8	38.4	18.5
Sep. 1	2,577.3	375.8	1,244.3	42.7	1,201.6	–	–	0.0	10.9	–	59.0	38.7	20.3
8	2,561.7	376.6	1,235.5	41.5	1,194.0	–	–	0.0	9.4	–	56.2	37.6	18.5
15	2,551.1	376.8	1,208.2	66.8	1,141.4	–	–	0.0	7.4	–	70.2	52.5	17.8
22	2,528.2	376.4	1,206.6	44.8	1,161.8	–	–	0.0	9.8	–	56.6	38.4	18.3
29	2,510.1	374.6	1,149.6	48.6	1,101.0	–	–	0.0	11.7	–	53.8	35.1	18.7
Oct. 6	2,506.6	375.0	1,201.7	40.2	1,161.5	–	–	0.0	7.8	–	39.0	24.7	14.3
13	2,504.5	374.6	1,193.8	40.4	1,153.4	–	–	0.0	8.0	–	45.5	29.3	16.1
20	2,509.3	374.1	1,210.3	40.7	1,169.6	–	–	0.0	7.5	–	36.1	21.0	15.1
27	2,512.0	374.6	1,205.4	57.0	1,148.4	–	–	0.0	7.0	–	39.7	24.0	15.7
Nov. 3	2,535.6	373.5	1,230.9	47.9	1,183.0	–	–	0.0	6.8	–	36.7	20.5	16.2
10	2,532.7	372.9	1,219.5	41.0	1,178.5	–	–	0.0	8.4	–	37.8	22.4	15.5
17	2,513.2	372.7	1,205.5	40.4	1,165.0	–	–	0.0	6.9	–	34.2	18.9	15.3
24	2,522.1	372.4	1,221.3	39.9	1,181.4	–	–	0.0	7.6	–	28.8	13.3	15.5
Dec. 1	2,511.5	372.8	1,207.9	42.8	1,165.0	–	–	0.0	7.3	–	31.5	15.5	16.1

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

rates at the end of the quarter. <sup>1</sup> In accordance with the accounting procedure chosen by the Eurosystem for the issue of euro banknotes, a share of 8% of the total value of the euro banknotes in circulation is allocated to the ECB on a monthly basis. The counterpart of this adjustment is disclosed as an "Intra-Eurosystem liability related to

### 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>2</sup>	Intra-Eurosystem liability related to euro banknote issue <sup>1</sup>	Revaluation accounts	Capital and reserves	As at reporting date
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
<b>Eurosystem <sup>3</sup></b>										
255.7	11.3	5.1	5.1	–	180.3	277.0	–	622.2	120.2	2023 May 12
252.4	11.4	7.0	7.0	–	180.3	277.6	–	622.2	120.2	19
253.1	11.4	7.6	7.6	–	180.3	275.7	–	622.2	120.2	26
245.4	11.7	7.5	7.5	–	180.3	270.3	–	622.2	120.2	June 2
237.8	12.2	7.1	7.1	–	180.3	269.8	–	622.2	120.2	9
248.5	12.5	7.1	7.1	–	180.3	270.3	–	622.2	120.2	16
252.0	13.0	6.7	6.7	–	180.3	270.6	–	622.2	120.2	23
300.3	13.4	6.6	6.6	–	178.4	281.5	–	597.0	120.2	30
258.8	13.5	6.5	6.5	–	178.4	274.9	–	597.0	120.2	July 7
250.5	13.6	6.0	6.0	–	178.4	272.1	–	597.0	120.2	14
257.1	13.5	6.7	6.7	–	178.4	274.2	–	597.0	120.2	21
255.9	13.8	4.4	4.4	–	178.4	277.1	–	597.0	120.2	28
253.5	13.7	3.8	3.8	–	178.4	273.4	–	597.0	120.2	Aug. 4
245.7	13.9	4.5	4.5	–	178.4	271.0	–	597.0	120.2	11
245.9	14.3	6.3	6.3	–	178.4	272.4	–	597.0	120.2	18
238.9	14.5	5.5	5.5	–	178.4	272.7	–	597.0	120.2	25
242.4	14.3	4.3	4.3	–	178.4	279.1	–	597.0	120.2	Sep. 1
233.9	13.9	3.1	3.1	–	178.4	267.7	–	597.0	120.2	8
234.2	13.8	3.5	3.5	–	178.4	266.8	–	597.0	120.2	15
232.7	13.9	4.3	4.3	–	178.4	266.9	–	597.0	120.2	22
273.5	13.6	3.9	3.9	–	180.7	275.7	–	604.2	120.2	29
228.3	14.5	3.2	3.2	–	180.7	270.4	–	604.2	120.2	Oct. 6
208.3	14.8	3.3	3.3	–	180.7	266.4	–	604.2	120.2	13
215.5	15.5	4.1	4.1	–	180.7	267.7	–	604.2	120.2	20
222.3	15.7	4.2	4.2	–	180.7	264.7	–	604.2	120.2	27
226.5	15.6	3.9	3.9	–	180.7	262.0	–	604.2	120.2	Nov. 3
228.2	16.1	4.2	4.2	–	180.7	256.7	–	604.2	120.2	10
227.1	16.2	3.9	3.9	–	180.7	256.6	–	604.2	120.2	17
233.8	16.1	4.8	4.8	–	180.7	255.7	–	604.2	120.2	24
237.3	15.9	4.8	4.8	–	180.7	263.8	–	604.2	120.2	Dec. 1
<b>Deutsche Bundesbank</b>										
114.2	0.1	0.0	0.0	–	46.5	34.4	526.4	193.2	5.5	2023 May 12
101.3	0.1	0.0	0.0	–	46.5	35.0	526.4	193.2	5.5	19
99.2	0.1	0.0	0.0	–	46.5	35.2	526.4	193.2	5.5	26
94.2	0.1	0.0	0.0	–	46.5	34.5	529.0	193.2	5.5	June 2
88.4	0.1	0.0	0.0	–	46.5	34.6	529.0	193.2	5.5	9
91.4	0.1	0.0	0.0	–	46.5	34.7	529.0	193.2	5.5	16
90.7	0.1	0.1	0.1	–	46.5	34.8	529.0	193.2	5.5	23
122.0	0.2	–	–	–	46.0	35.4	530.7	185.5	5.5	30
85.1	0.2	–	–	–	46.0	35.4	530.7	185.5	5.5	July 7
83.7	0.2	–	–	–	46.0	35.4	530.7	185.5	5.5	14
85.2	0.1	–	–	–	46.0	35.5	530.7	185.5	5.5	21
88.1	0.1	–	–	–	46.0	35.7	530.7	185.5	5.5	28
88.4	0.1	0.2	0.2	–	46.0	35.0	532.2	185.5	5.5	Aug. 4
83.3	0.1	0.0	0.0	–	46.0	35.1	532.2	185.5	5.5	11
82.7	0.1	0.5	0.5	–	46.0	36.5	532.2	185.5	5.5	18
76.6	0.1	0.5	0.5	–	46.0	37.0	532.2	185.5	5.5	25
77.9	0.1	0.2	0.2	–	46.0	36.7	535.1	185.5	5.5	Sep. 1
74.9	0.1	0.2	0.2	–	46.0	36.5	535.1	185.5	5.5	8
79.4	0.1	–0.0	–0.0	–	46.0	36.8	535.1	185.5	5.5	15
69.5	0.1	0.0	0.0	–	46.0	36.9	535.1	185.5	5.5	22
104.8	0.1	0.0	0.0	–	46.6	37.3	538.7	187.4	5.5	29
67.6	0.1	0.0	0.0	–	46.6	37.1	538.7	187.4	5.5	Oct. 6
67.1	0.1	0.0	0.0	–	46.6	37.2	538.7	187.4	5.5	13
65.7	0.1	0.0	0.0	–	46.6	37.2	538.7	187.4	5.5	20
69.6	0.1	0.2	0.2	–	46.6	37.1	538.7	187.4	5.5	27
71.3	0.1	0.0	0.0	–	46.6	36.5	540.2	187.4	5.5	Nov. 3
77.5	0.1	0.0	0.0	–	46.6	36.6	540.2	187.4	5.5	10
77.4	0.1	0.0	0.0	–	46.6	36.7	540.2	187.4	5.5	17
75.4	0.1	0.0	0.0	–	46.6	36.8	540.2	187.4	5.5	24
74.3	0.1	0.0	0.0	–	46.6	36.7	541.3	187.4	5.5	Dec. 1

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

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

#### IV. Banks

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

###### Assets

€ billion

Period	Balance sheet total 1	Cash in hand	Lending to banks (MFIs) in the euro area						Lending to non-banks (non-MFIs) in the				
			to banks in the home country			to banks in other Member States			to non-banks in the home country				
			Total	Total	Loans	Securities issued by banks	Total	Loans	Securities issued by banks	Total	Total	Enterprises and households	
												Total	Loans
<b>End of year or month</b>													
2013	7,528.9	18.7	2,145.0	1,654.8	1,239.1	415.7	490.2	324.6	165.6	3,594.3	3,202.1	2,616.3	2,354.0
2014	7,802.3	19.2	2,022.8	1,530.5	1,147.2	383.3	492.3	333.9	158.4	3,654.5	3,239.4	2,661.2	2,384.8
2015	7,665.2	19.5	2,013.6	1,523.8	1,218.0	305.8	489.8	344.9	144.9	3,719.9	3,302.5	2,727.4	2,440.0
2016	7,792.6	26.0	2,101.4	1,670.9	1,384.2	286.7	430.5	295.0	135.5	3,762.9	3,344.5	2,805.6	2,512.0
2017	7,710.8	32.1	2,216.3	1,821.1	1,556.3	264.8	395.2	270.1	125.2	3,801.7	3,400.7	2,918.8	2,610.1
2018	7,776.0	40.6	2,188.0	1,768.3	1,500.7	267.5	419.7	284.8	134.9	3,864.0	3,458.2	3,024.3	2,727.0
2019	8,311.0	43.4	2,230.1	1,759.8	1,493.5	266.3	470.4	327.6	142.8	4,020.1	3,584.9	3,168.7	2,864.9
2020	8,943.3	47.5	2,622.7	2,177.9	1,913.5	264.4	444.8	307.1	137.7	4,179.6	3,709.8	3,297.0	2,993.1
2021	9,172.2	49.7	2,789.6	2,333.0	2,069.6	263.4	456.6	324.4	132.2	4,350.4	3,860.4	3,468.8	3,147.6
2022	10,517.9	20.0	2,935.2	2,432.2	2,169.2	263.0	502.9	359.6	143.3	4,584.6	4,079.3	3,702.9	3,365.4
2022 Jan.	9,717.0	47.7	3,029.2	2,522.4	2,258.2	264.2	506.8	375.0	131.8	4,378.1	3,875.3	3,484.8	3,162.4
Feb.	9,842.7	47.7	3,082.6	2,564.8	2,299.1	265.8	517.8	383.9	133.9	4,396.3	3,889.1	3,504.4	3,181.6
Mar.	9,962.9	50.0	3,066.9	2,546.2	2,281.9	264.3	520.7	387.1	133.7	4,426.8	3,916.4	3,526.5	3,204.1
Apr.	10,268.8	51.0	3,112.2	2,578.0	2,313.7	264.2	534.2	400.5	133.8	4,434.6	3,929.2	3,546.3	3,223.8
May	10,258.0	50.0	3,122.7	2,592.6	2,326.2	266.4	530.1	397.8	132.3	4,460.3	3,949.5	3,567.4	3,244.7
June	10,428.9	51.8	3,096.5	2,570.9	2,306.2	264.7	525.6	394.1	131.5	4,494.4	3,969.5	3,589.6	3,268.8
July	10,267.9	42.3	3,086.0	2,557.4	2,291.5	266.0	528.6	396.8	131.8	4,528.3	4,008.2	3,627.9	3,293.6
Aug.	10,627.2	23.6	3,166.4	2,625.3	2,359.2	266.1	541.1	409.1	132.0	4,555.4	4,039.2	3,664.4	3,331.1
Sep.	11,063.0	20.7	3,268.0	2,714.2	2,442.2	272.0	553.7	419.7	134.0	4,579.6	4,057.2	3,685.0	3,351.1
Oct.	11,036.0	20.0	3,259.8	2,696.8	2,424.2	272.6	563.0	416.3	146.7	4,591.1	4,077.8	3,699.7	3,365.9
Nov.	10,762.4	19.1	3,180.1	2,630.6	2,360.1	270.5	549.5	403.2	146.2	4,610.5	4,089.4	3,715.1	3,379.3
Dec.	10,517.9	20.0	2,935.2	2,432.2	2,169.2	263.0	502.9	359.6	143.3	4,584.6	4,079.3	3,702.9	3,365.4
2023 Jan.	10,585.0	18.2	3,085.7	2,550.5	2,288.2	262.3	535.1	383.8	151.4	4,600.1	4,080.1	3,706.1	3,372.3
Feb.	10,760.9	18.0	3,085.7	2,541.4	2,274.9	266.5	544.3	390.6	153.8	4,614.2	4,094.2	3,714.7	3,381.3
Mar.	10,553.8	17.9	3,041.3	2,497.8	2,229.3	268.4	543.5	391.2	152.3	4,620.6	4,094.7	3,718.2	3,386.0
Apr.	10,564.3	18.9	3,047.7	2,507.0	2,237.3	269.7	540.7	384.5	156.2	4,630.5	4,096.8	3,721.7	3,390.4
May	10,653.7	18.2	3,091.2	2,550.3	2,279.7	270.6	541.0	383.4	157.5	4,642.2	4,103.4	3,733.0	3,400.9
June	10,577.7	17.7	2,967.0	2,434.5	2,166.3	268.2	532.5	371.5	161.0	4,646.7	4,108.0	3,734.5	3,397.1
July	10,743.2	17.2	3,002.4	2,456.4	2,188.8	267.6	546.0	384.8	161.2	4,651.1	4,114.5	3,738.2	3,402.0
Aug.	10,735.3	17.5	2,994.8	2,455.6	2,187.1	268.4	539.2	377.9	161.4	4,649.4	4,111.7	3,733.9	3,400.6
Sep.	10,737.5	18.0	2,916.4	2,371.6	2,106.3	265.3	544.8	382.8	162.0	4,649.8	4,113.1	3,735.7	3,401.7
Oct.	10,796.5	17.5	2,979.3	2,429.7	2,164.4	265.3	549.6	387.6	162.1	4,653.6	4,116.6	3,736.1	3,401.5
<b>Changes 3</b>													
2014	206.8	0.4	- 126.2	- 128.6	- 95.3	- 33.4	2.4	7.2	- 4.8	55.1	40.0	52.3	36.8
2015	- 191.4	0.3	- 18.2	- 12.1	66.1	- 78.2	- 6.1	6.6	- 12.8	64.8	64.1	68.1	56.6
2016	184.3	6.5	120.3	178.4	195.3	- 16.8	- 58.1	- 49.2	- 8.8	57.5	53.4	88.8	81.0
2017	8.0	6.1	135.9	165.0	182.6	- 17.6	- 29.1	- 19.6	- 9.5	51.3	63.5	114.8	101.1
2018	101.8	8.5	- 29.2	- 49.7	- 53.4	3.7	20.6	13.0	7.6	78.7	71.9	118.1	127.8
2019	483.4	2.8	20.7	- 3.8	- 2.3	- 1.5	24.5	16.9	7.5	161.8	130.5	148.2	140.9
2020	769.5	4.1	505.4	524.2	512.6	11.6	- 18.8	- 16.2	- 2.6	161.0	130.0	132.3	132.2
2021	207.2	2.2	161.3	155.6	156.4	- 0.8	5.7	11.7	- 5.9	175.7	154.6	173.7	155.9
2022	1,170.5	- 29.7	149.5	103.7	100.5	3.2	45.8	33.1	12.7	242.4	223.1	237.5	220.6
2022 Feb.	128.5	- 0.0	52.7	41.4	39.7	1.7	11.3	9.1	2.2	20.4	15.8	21.3	20.9
Mar.	119.7	2.2	- 15.5	- 18.4	- 17.2	- 1.2	2.9	3.0	- 0.1	31.4	27.6	22.2	22.6
Apr.	283.1	1.0	41.6	30.8	30.8	0.0	10.8	10.6	0.2	7.5	12.8	19.7	19.4
May	1.1	- 1.0	12.4	15.3	12.8	2.5	- 2.9	- 1.5	- 1.3	27.4	21.2	21.6	21.3
June	178.6	1.7	- 28.2	- 22.2	- 20.6	- 1.6	- 6.0	- 5.3	- 0.6	32.9	19.9	22.0	23.7
July	- 177.9	- 9.5	- 12.8	- 14.2	- 15.0	0.8	1.4	1.4	0.0	29.7	36.0	36.0	22.6
Aug.	359.0	- 18.7	83.5	71.7	70.7	1.0	11.8	11.3	0.4	28.1	31.4	36.5	37.5
Sep.	428.4	- 2.9	99.8	88.6	82.4	6.2	11.3	9.0	2.3	27.0	17.2	19.5	18.7
Oct.	- 19.3	- 0.7	- 6.7	- 17.0	- 17.7	0.6	10.3	- 2.4	12.7	12.4	21.1	15.3	15.5
Nov.	- 245.9	- 0.9	- 75.9	- 65.0	- 63.0	- 2.0	- 10.9	- 10.5	- 0.5	21.4	13.0	17.1	15.1
Dec.	- 225.1	0.9	- 240.0	- 196.2	- 189.2	- 7.1	- 43.8	- 41.2	- 2.6	- 24.0	- 8.4	- 9.9	- 11.6
2023 Jan.	87.5	- 1.8	155.0	122.2	119.3	2.8	32.8	24.0	8.9	22.8	6.5	8.1	8.0
Feb.	167.0	- 0.2	- 0.8	- 9.1	- 13.4	4.3	8.3	5.8	2.5	13.4	13.6	7.9	8.3
Mar.	- 195.2	- 0.1	- 42.8	- 43.2	- 45.0	1.8	0.4	1.9	- 1.5	8.2	2.0	5.0	6.2
Apr.	16.7	1.0	7.7	9.8	8.1	1.7	- 2.1	- 6.0	3.9	11.0	3.0	4.2	5.1
May	91.9	- 0.7	41.9	42.2	41.3	0.9	- 0.2	- 1.6	1.3	12.3	6.8	11.5	10.6
June	- 65.9	- 0.5	- 121.0	- 113.5	- 112.5	- 1.1	- 7.5	- 11.0	3.5	4.7	5.5	2.5	- 1.7
July	170.6	- 0.5	34.6	22.2	22.7	- 0.6	12.4	12.2	0.2	6.0	7.6	4.7	5.8
Aug.	- 15.1	0.3	- 7.6	- 1.1	- 1.9	- 0.8	- 6.5	- 6.6	0.1	- 0.5	- 2.4	- 3.9	- 1.0
Sep.	- 10.0	0.6	- 80.3	- 84.3	- 81.2	- 3.1	4.0	3.3	0.6	0.8	1.9	2.3	1.6
Oct.	60.3	- 0.5	62.9	58.2	58.2	- 0.0	4.8	4.7	0.1	4.9	4.5	1.4	0.7

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

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



IV. Banks

euro area										Claims on non-euro area residents			Period
to non-banks in other Member States										Total	of which: Loans	Other assets <sup>1</sup>	
General government				Enterprises and households		General government							
Securities	Total	Loans	Securities <sup>2</sup>	Total	Total	of which: Loans	Total	Loans	Securities	Total	of which: Loans	Other assets <sup>1</sup>	
<b>End of year or month</b>													
262.3	585.8	339.2	246.6	392.3	267.6	144.6	124.6	27.8	96.9	921.2	690.5	849.7	2013
276.4	578.2	327.9	250.4	415.0	270.0	142.7	145.0	31.9	113.2	1,050.1	805.0	1,055.8	2014
287.4	575.1	324.5	250.6	417.5	276.0	146.4	141.5	29.4	112.1	1,006.5	746.3	905.6	2015
293.6	538.9	312.2	226.7	418.4	281.7	159.5	136.7	28.5	108.2	1,058.2	802.3	844.1	2016
308.7	481.9	284.3	197.6	401.0	271.8	158.3	129.1	29.8	99.3	991.9	745.3	668.9	2017
297.2	433.9	263.4	170.5	405.8	286.7	176.5	119.2	28.6	90.6	1,033.2	778.5	650.2	2018
303.8	416.2	254.7	161.6	435.2	312.6	199.0	122.6	29.4	93.2	1,035.8	777.5	981.5	2019
303.9	412.8	252.3	160.5	469.8	327.5	222.2	142.3	29.7	112.7	1,003.2	751.2	1,090.3	2020
321.2	391.6	245.1	146.5	490.1	362.7	244.0	127.4	28.4	99.0	1,094.2	853.3	888.3	2021
337.5	376.4	248.0	128.4	505.3	384.9	270.2	120.4	30.8	89.6	1,137.2	882.9	1,841.0	2022
322.4	390.6	246.9	143.6	502.7	377.7	260.4	125.0	28.5	96.5	1,171.3	925.2	1,090.8	2022 Jan.
322.8	384.8	244.7	140.0	507.2	381.4	262.7	125.8	28.6	97.2	1,190.1	939.6	1,125.9	Feb.
322.3	390.0	245.2	144.8	510.4	379.5	259.4	130.9	29.0	101.9	1,169.2	921.9	1,249.9	Mar.
322.5	382.9	246.5	136.4	505.4	378.8	257.8	126.7	32.2	94.4	1,174.5	926.0	1,496.5	Apr.
322.7	382.1	244.5	137.7	510.9	383.7	260.7	127.1	31.4	95.7	1,166.1	917.3	1,458.8	May
320.9	379.9	244.9	135.0	524.9	388.1	268.4	136.8	33.2	103.6	1,182.4	925.1	1,603.8	June
334.3	380.3	245.8	134.5	520.2	383.8	266.0	136.4	33.4	103.0	1,199.9	941.5	1,411.5	July
333.3	374.8	243.4	131.4	516.2	387.1	268.6	129.1	33.7	95.4	1,211.7	952.6	1,670.0	Aug.
333.9	372.2	244.5	127.7	522.4	390.5	273.1	132.0	35.4	96.6	1,220.9	961.0	1,973.8	Sep.
333.8	378.1	246.0	132.1	513.3	385.7	268.4	127.6	34.4	93.2	1,234.2	975.7	1,930.8	Oct.
335.9	374.2	246.3	127.9	521.1	394.0	276.5	127.1	32.7	94.4	1,224.6	963.4	1,728.1	Nov.
337.5	376.4	248.0	128.4	505.3	384.9	270.2	120.4	30.8	89.6	1,137.2	882.9	1,841.0	Dec.
333.8	374.0	250.3	123.7	520.1	393.5	280.2	126.6	30.2	96.4	1,161.9	904.0	1,719.2	2023 Jan.
333.5	379.5	248.2	131.3	520.0	393.3	279.2	126.8	31.3	95.4	1,167.6	904.4	1,873.3	Feb.
332.2	376.5	248.9	127.6	526.0	397.5	275.7	128.4	30.9	97.5	1,168.5	902.6	1,705.4	Mar.
331.2	375.1	250.9	124.2	533.7	405.8	280.9	128.0	32.3	95.7	1,149.9	883.9	1,717.3	Apr.
332.1	370.5	249.8	120.7	538.7	407.7	284.6	131.0	31.9	99.1	1,177.7	912.0	1,724.4	May
337.4	373.4	248.7	124.7	538.7	403.1	279.6	135.6	31.0	104.5	1,150.6	886.7	1,795.7	June
336.2	376.4	252.1	124.3	536.6	407.3	282.8	129.3	30.7	98.7	1,156.3	895.0	1,916.3	July
333.3	377.9	249.5	128.4	537.7	404.5	282.9	133.2	31.1	102.1	1,157.7	899.2	1,915.9	Aug.
334.1	377.4	252.0	125.4	536.7	404.7	282.5	132.0	32.0	100.0	1,163.8	902.7	1,989.6	Sep.
334.7	380.5	255.1	125.4	537.0	405.6	282.9	131.4	32.0	99.4	1,165.9	909.5	1,980.1	Oct.
<b>Changes <sup>3</sup></b>													
15.5	- 12.3	- 15.1	2.9	15.1	0.4	- 4.0	14.6	0.9	13.8	83.6	72.0	194.0	2014
11.5	- 3.9	- 4.2	0.3	0.7	4.4	1.8	- 3.7	- 1.0	- 2.8	- 88.3	- 101.0	- 150.1	2015
7.8	- 35.4	- 12.1	- 23.3	4.0	8.2	14.6	- 4.2	- 0.9	- 3.3	51.4	55.0	- 51.4	2016
13.7	- 51.3	- 22.8	- 28.5	12.2	3.4	4.0	- 8.7	0.1	- 8.9	- 12.3	- 6.7	- 173.1	2017
- 9.8	- 46.2	- 19.1	- 27.0	6.8	18.2	18.6	- 11.4	- 1.5	- 9.9	29.0	18.9	14.8	2018
7.3	- 17.7	- 8.6	- 9.1	31.3	29.5	26.9	1.7	0.0	1.7	- 32.1	- 33.3	330.3	2019
0.2	- 2.4	- 1.7	- 0.7	31.0	30.6	20.9	0.3	- 0.4	0.7	- 9.7	- 8.2	108.8	2020
17.8	- 19.1	- 6.1	- 13.1	21.1	35.5	22.6	- 14.3	- 1.1	- 13.2	71.7	84.9	- 203.7	2021
16.9	- 14.4	1.9	- 16.3	19.3	20.7	24.4	- 1.4	2.6	- 3.9	15.0	- 0.8	793.3	2022
0.5	- 5.5	- 2.1	- 3.4	4.6	3.7	2.5	0.9	0.1	0.8	20.6	15.8	34.9	2022 Feb.
- 0.4	5.5	0.5	5.0	3.8	- 1.7	- 3.3	5.5	0.4	5.1	- 22.2	- 19.2	123.7	Mar.
0.2	- 6.8	1.4	- 8.2	- 5.3	- 1.6	- 2.7	- 3.7	3.2	- 6.9	- 13.8	- 14.2	246.6	Apr.
0.3	- 0.4	- 2.0	1.6	6.2	5.4	3.3	0.8	- 0.8	1.7	- 1.0	- 2.0	- 36.6	May
- 1.7	- 2.1	0.4	- 2.5	13.0	3.0	6.1	10.0	1.9	8.1	- 10.0	- 18.2	182.3	June
13.4	0.0	0.9	- 0.8	- 6.3	- 5.2	- 2.9	- 1.1	0.1	- 1.3	7.8	8.0	- 193.2	July
- 1.0	- 5.1	- 2.3	- 2.8	- 3.3	3.4	2.5	- 6.7	0.4	- 7.0	7.2	6.5	258.9	Aug.
0.8	- 2.4	1.1	- 3.5	9.9	3.3	4.0	6.6	1.7	4.8	0.7	0.1	303.7	Sep.
- 0.3	5.9	1.4	4.4	- 8.7	- 4.4	- 4.6	- 4.3	- 1.0	- 3.3	19.7	20.4	- 44.0	Oct.
2.0	- 4.1	0.0	- 4.1	8.4	9.2	9.6	- 0.8	- 1.7	0.9	8.8	4.8	- 199.3	Nov.
1.8	1.5	0.9	0.6	- 15.6	- 9.3	- 6.2	- 6.4	- 1.9	- 4.5	- 75.0	- 69.5	112.9	Dec.
0.1	- 1.6	2.3	- 3.9	16.3	9.4	10.0	6.9	- 0.6	7.5	33.4	27.8	- 121.8	2023 Jan.
- 0.4	5.6	- 2.0	7.7	- 0.2	- 0.7	- 1.4	0.5	1.1	- 0.7	- 1.7	- 6.6	156.4	Feb.
- 1.2	- 3.0	0.8	- 3.7	6.1	4.6	- 3.0	1.5	- 0.4	1.9	9.6	6.5	- 170.1	Mar.
- 1.0	- 1.2	2.1	- 3.3	8.0	8.5	5.4	- 0.5	1.4	- 1.9	- 14.9	- 15.4	11.9	Apr.
0.9	- 4.7	- 1.2	- 3.5	5.4	2.1	3.9	3.4	- 0.4	3.7	28.3	28.1	10.1	May
4.2	3.0	- 1.1	4.1	- 0.9	- 5.5	- 5.9	4.6	- 0.9	5.5	- 9.4	- 8.3	60.3	June
- 1.2	3.0	3.4	- 0.4	- 1.7	4.4	3.4	- 6.1	- 0.3	- 5.7	10.3	12.6	120.4	July
- 2.8	1.5	- 2.6	- 4.1	1.9	- 1.9	- 1.0	3.8	0.5	- 3.4	- 5.1	- 1.9	- 2.2	Aug.
0.7	- 0.4	2.6	- 2.9	- 1.2	- 0.0	- 0.7	- 1.1	0.9	- 2.0	- 2.3	- 4.4	71.3	Sep.
0.6	3.1	3.1	- 0.1	0.4	0.9	0.4	- 0.5	0.0	- 0.6	2.3	6.9	- 9.4	Oct.

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

#### IV. Banks

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

€ billion

Period	Deposits of banks (MFIs) in the euro area				Deposits of non-banks (non-MFIs) in the euro area								
	Balance sheet total 1	of banks			Total	Deposits of non-banks in the home country					Deposits of non-banks		
		Total	in the home country	in other Member States		Total	Overnight	With agreed maturities		At agreed notice		Total	Overnight
								Total	of which: up to 2 years	Total	of which: up to 3 months		
End of year or month													
2013	7,528.9	1,345.4	1,140.3	205.1	3,130.5	3,031.5	1,405.3	1,016.2	293.7	610.1	532.4	81.3	33.8
2014	7,802.3	1,324.0	1,112.3	211.7	3,197.7	3,107.4	1,514.3	985.4	298.1	607.7	531.3	79.7	34.4
2015	7,665.2	1,267.8	1,065.9	201.9	3,307.1	3,215.1	1,670.2	948.4	291.5	596.4	534.5	80.8	35.3
2016	7,792.6	1,205.2	1,033.2	172.0	3,411.3	3,318.5	1,794.8	935.3	291.2	588.5	537.0	84.2	37.2
2017	7,710.8	1,233.6	1,048.6	184.9	3,529.1	3,411.1	1,936.6	891.7	274.2	582.8	541.0	108.6	42.5
2018	7,776.0	1,213.8	1,021.8	192.0	3,642.8	3,527.0	2,075.5	872.9	267.2	578.6	541.1	104.5	45.0
2019	8,311.0	1,242.8	1,010.4	232.4	3,778.1	3,649.8	2,230.9	843.7	261.7	575.1	540.5	116.3	54.6
2020	8,943.3	1,493.2	1,237.0	256.3	4,021.6	3,836.7	2,508.4	767.8	227.1	560.5	533.2	135.1	57.0
2021	9,172.2	1,628.6	1,338.6	289.9	4,129.9	3,931.8	2,649.3	721.3	203.9	561.2	537.1	153.8	70.7
2022	10,517.9	1,618.6	1,231.6	387.0	4,343.5	4,093.8	2,712.1	848.6	353.7	533.2	510.2	180.5	84.1
2022 Jan.	9,717.0	1,725.2	1,363.7	361.5	4,195.2	3,979.5	2,686.4	732.3	215.9	560.7	537.4	166.7	86.2
Feb.	9,842.7	1,743.7	1,369.7	374.0	4,209.7	3,993.9	2,699.7	733.4	217.5	560.8	537.7	169.3	90.1
Mar.	9,962.9	1,737.5	1,367.8	369.8	4,212.3	3,990.1	2,690.3	740.9	226.7	559.0	536.1	177.7	99.4
Apr.	10,268.8	1,766.8	1,384.4	382.3	4,223.7	4,003.6	2,700.1	745.6	234.6	557.9	535.2	175.5	93.4
May	10,258.0	1,765.9	1,393.7	372.2	4,236.1	4,013.3	2,718.3	738.4	229.4	556.5	534.0	176.2	97.1
June	10,428.9	1,744.4	1,384.7	359.7	4,235.0	4,008.2	2,708.8	744.7	238.3	554.7	532.4	180.5	102.7
July	10,267.9	1,772.1	1,383.3	388.9	4,267.6	4,041.3	2,722.8	765.6	259.2	552.9	530.7	179.5	99.0
Aug.	10,627.2	1,785.7	1,403.5	382.2	4,322.0	4,089.0	2,760.7	777.8	272.2	550.5	528.3	185.0	103.0
Sep.	11,063.0	1,814.5	1,415.7	398.8	4,342.6	4,105.7	2,748.5	812.0	306.6	545.2	523.1	191.1	102.4
Oct.	11,036.0	1,837.4	1,419.0	418.4	4,359.6	4,122.0	2,741.6	838.3	334.6	542.1	519.8	190.0	92.4
Nov.	10,762.4	1,773.7	1,345.0	428.7	4,401.0	4,132.6	2,752.4	843.3	344.7	536.8	514.3	193.1	97.3
Dec.	10,517.9	1,618.6	1,231.6	387.0	4,343.5	4,093.8	2,712.1	848.6	353.7	533.2	510.2	180.5	84.1
2023 Jan.	10,585.0	1,642.4	1,231.2	411.2	4,392.0	4,124.2	2,706.4	895.1	397.6	522.7	498.8	188.7	94.3
Feb.	10,760.9	1,633.5	1,226.0	407.5	4,391.4	4,113.2	2,670.6	926.7	428.4	515.9	490.8	191.2	97.2
Mar.	10,553.8	1,618.0	1,210.4	407.6	4,368.3	4,092.1	2,625.3	959.7	462.3	507.2	480.5	197.9	98.8
Apr.	10,564.3	1,632.8	1,227.7	405.1	4,370.1	4,099.8	2,620.9	980.3	482.3	498.6	470.4	199.5	93.6
May	10,653.7	1,622.7	1,229.8	392.9	4,384.2	4,108.2	2,613.0	1,004.7	504.1	490.6	460.2	201.6	97.9
June	10,577.7	1,530.6	1,149.6	381.0	4,378.1	4,110.1	2,586.3	1,040.5	541.1	483.3	450.2	196.6	90.9
July	10,743.2	1,563.0	1,159.8	403.2	4,382.4	4,116.2	2,569.6	1,070.7	572.0	475.9	439.9	197.0	90.2
Aug.	10,735.3	1,549.2	1,162.1	387.0	4,388.3	4,124.6	2,555.7	1,101.4	603.4	467.5	428.7	191.6	87.5
Sep.	10,737.5	1,500.0	1,112.7	387.3	4,384.5	4,126.8	2,545.8	1,119.2	620.4	461.8	420.1	193.4	89.5
Oct.	10,796.5	1,530.2	1,132.3	397.9	4,397.9	4,135.1	2,528.4	1,151.4	653.5	455.4	410.8	198.0	88.2
Changes 4													
2014	206.8	- 28.4	- 32.2	3.9	62.7	71.6	106.0	- 32.1	3.1	- 2.4	- 2.4	- 2.5	- 0.0
2015	- 191.4	- 62.1	- 50.3	- 11.9	104.1	104.8	153.2	- 37.0	- 10.1	- 11.3	4.2	- 0.4	- 0.3
2016	184.3	- 31.6	- 2.2	- 29.4	105.7	105.2	124.3	- 11.1	1.4	- 8.0	2.4	2.7	1.9
2017	8.0	30.6	14.8	15.8	124.2	107.7	145.8	- 32.5	- 15.3	- 5.6	1.5	16.4	5.8
2018	101.8	- 20.1	- 25.7	5.6	112.4	114.7	137.7	- 18.8	- 6.5	- 4.3	1.2	- 4.3	2.3
2019	483.4	12.6	- 10.0	22.6	132.1	120.0	154.1	- 30.6	- 6.6	- 3.4	- 0.6	10.6	8.7
2020	769.5	340.0	317.0	23.0	244.9	188.4	277.6	- 74.7	- 34.9	- 14.5	- 7.2	18.7	1.8
2021	207.2	133.4	103.4	30.0	107.3	96.2	141.4	- 45.8	- 23.3	0.6	3.9	16.6	13.6
2022	1,170.5	- 15.6	- 105.9	90.3	208.9	165.9	60.6	132.8	148.1	- 27.5	- 26.3	18.4	12.8
2022 Feb.	128.5	19.3	6.1	13.2	14.2	14.6	13.4	1.1	1.6	0.1	0.3	2.2	3.5
Mar.	119.7	- 6.6	- 2.1	- 4.5	2.2	- 4.2	- 9.7	7.3	9.2	- 1.8	- 1.6	8.3	9.3
Apr.	283.1	25.1	15.6	9.5	8.0	11.0	7.5	4.1	7.2	- 0.6	- 0.4	- 3.1	- 6.6
May	1.1	0.7	9.8	- 9.1	13.6	10.6	18.9	- 6.9	- 5.0	- 1.3	- 1.2	1.0	3.9
June	178.6	- 24.2	- 9.7	- 14.5	- 2.8	- 6.6	- 10.7	5.9	8.5	- 1.8	- 1.6	4.1	5.6
July	- 177.9	24.6	- 1.6	26.2	29.3	30.8	13.0	19.6	19.9	- 1.8	- 1.7	- 2.0	- 3.9
Aug.	359.0	15.5	23.0	- 7.5	53.6	47.1	37.2	12.4	12.9	- 2.4	- 2.4	5.3	3.8
Sep.	428.4	25.2	11.7	13.5	19.0	15.4	- 13.3	34.0	34.1	- 5.3	- 5.3	5.6	- 0.9
Oct.	- 19.3	24.2	3.8	20.3	17.2	16.2	- 7.3	26.6	28.2	- 3.1	- 3.3	- 0.7	- 9.7
Nov.	- 245.9	- 60.3	- 73.0	12.7	45.6	21.3	14.3	12.2	10.1	- 5.3	- 5.4	- 3.2	5.4
Dec.	- 225.1	- 152.7	- 112.7	- 40.0	- 55.4	- 37.3	- 39.2	5.6	9.4	- 3.7	- 4.1	- 11.9	- 12.8
2023 Jan.	87.5	23.3	0.0	23.3	49.1	30.9	- 10.4	46.7	44.0	- 5.5	- 6.4	8.2	10.1
Feb.	167.0	- 10.3	- 5.6	- 4.7	- 1.8	- 11.8	- 36.4	31.3	30.7	- 6.7	- 7.9	2.1	2.7
Mar.	- 195.2	- 13.4	- 14.7	1.3	- 21.7	- 20.0	- 44.1	32.8	33.5	- 8.7	- 10.3	7.1	1.8
Apr.	16.7	15.5	17.5	- 1.9	2.4	8.1	- 4.1	20.8	20.2	- 8.6	- 10.1	1.8	- 5.1
May	91.9	- 10.1	2.1	- 12.1	13.1	8.4	- 7.9	24.3	21.7	- 8.0	- 10.2	1.1	4.2
June	- 65.9	- 90.3	- 79.4	- 11.0	- 6.3	1.5	- 26.3	35.0	36.1	- 7.3	- 9.9	- 4.7	- 6.9
July	170.6	31.5	10.4	21.1	4.9	6.5	- 16.4	30.2	31.0	- 7.3	- 10.3	0.6	- 0.7
Aug.	- 15.1	- 13.3	2.8	- 16.1	6.4	7.9	- 13.6	30.0	30.7	- 8.5	- 11.2	- 4.4	- 2.4
Sep.	- 10.0	- 50.7	- 49.8	- 0.8	- 5.1	1.3	- 10.5	17.5	17.0	- 5.7	- 8.6	1.5	1.7
Oct.	60.3	30.7	20.1	10.7	13.5	8.4	- 17.4	32.2	33.0	- 6.4	- 9.4	4.5	- 1.2

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

IV. Banks

in other Member States <sup>2</sup>				Deposits of central governments		Liabilities arising from repos with non-banks in the euro area	Money market fund shares issued <sup>3</sup>	Debt securities issued <sup>3</sup>		Liabilities to non-euro area residents	Capital and reserves	Other Liabilities <sup>1</sup>	Period
With agreed maturities		At agreed notice		Total	of which: domestic central governments			Total	of which: with maturities of up to 2 years <sup>3</sup>				
Total	of which: up to 2 years	Total	of which: up to 3 months										
<b>End of year or month</b>													
44.0	16.9	3.5	2.7	17.6	16.0	6.7	4.1	1,115.2	39.0	479.5	503.0	944.5	2013
42.0	15.9	3.3	2.7	10.6	10.5	3.4	3.5	1,077.6	39.6	535.3	535.4	1,125.6	2014
42.2	16.0	3.3	2.8	11.3	9.6	2.5	3.5	1,017.7	48.3	526.2	569.3	971.1	2015
43.9	15.8	3.1	2.6	8.6	7.9	2.2	2.4	1,030.3	47.2	643.4	591.5	906.3	2016
63.2	19.7	2.9	2.6	9.4	8.7	3.3	2.1	994.5	37.8	603.4	686.0	658.8	2017
56.7	15.8	2.8	2.5	11.3	10.5	0.8	2.4	1,034.0	31.9	575.9	695.6	610.7	2018
59.0	16.5	2.7	2.4	12.0	11.2	1.5	1.9	1,063.2	32.3	559.4	728.6	935.6	2019
75.6	30.6	2.6	2.3	49.8	48.6	9.4	2.5	1,056.9	21.2	617.6	710.8	1,031.3	2020
80.7	22.8	2.4	2.2	44.2	43.5	2.2	2.3	1,110.8	27.5	757.2	732.3	809.0	2021
94.3	32.4	2.2	2.0	69.2	66.8	3.4	2.7	1,185.1	40.8	800.4	747.2	1,817.1	2022
78.1	20.3	2.4	2.2	48.9	45.5	3.0	2.3	1,126.9	25.3	907.4	721.2	1,036.0	2022 Jan.
76.8	19.8	2.4	2.2	46.4	42.8	2.4	2.4	1,141.1	26.2	945.9	717.7	1,080.0	Feb.
75.9	19.0	2.4	2.2	44.5	42.1	2.8	2.5	1,148.9	25.9	926.4	736.8	1,195.6	Mar.
79.8	22.5	2.4	2.2	44.6	42.2	2.3	2.3	1,161.1	26.3	939.2	734.6	1,438.9	Apr.
76.8	19.9	2.3	2.1	46.6	42.8	1.9	2.5	1,164.1	27.7	958.5	732.3	1,396.8	May
75.5	19.1	2.3	2.1	46.2	43.0	2.0	2.5	1,164.7	32.2	945.7	752.0	1,582.6	June
78.1	23.2	2.3	2.1	46.8	44.0	4.2	2.5	1,177.1	35.9	926.6	743.6	1,374.2	July
79.7	24.3	2.3	2.1	47.9	44.0	4.8	2.4	1,183.7	38.6	950.2	741.8	1,636.6	Aug.
86.4	31.2	2.3	2.1	45.9	43.3	3.2	2.5	1,203.3	45.8	987.2	758.0	1,951.6	Sep.
95.4	39.7	2.2	2.1	47.6	44.9	4.0	2.6	1,202.6	39.4	980.8	751.8	1,897.2	Oct.
93.5	31.3	2.2	2.0	75.4	71.1	4.7	2.6	1,202.3	42.2	939.7	747.3	1,691.1	Nov.
94.3	32.4	2.2	2.0	69.2	66.8	3.4	2.7	1,185.1	40.8	800.4	747.2	1,817.1	Dec.
92.3	30.4	2.2	2.0	79.1	73.8	3.9	2.5	1,205.2	47.4	890.6	728.9	1,719.6	2023 Jan.
91.8	30.0	2.2	1.9	87.0	82.5	5.0	2.4	1,221.5	55.6	901.8	724.9	1,880.4	Feb.
97.0	28.5	2.1	1.9	78.2	73.3	4.7	2.6	1,231.2	64.6	863.1	734.8	1,731.0	Mar.
103.7	33.9	2.1	1.9	70.8	65.9	5.4	2.8	1,235.3	67.3	856.2	735.7	1,726.0	Apr.
101.6	30.7	2.1	1.8	74.4	62.4	6.0	2.6	1,257.3	72.3	888.2	746.9	1,745.8	May
103.6	32.5	2.0	1.8	71.4	64.0	4.8	2.6	1,253.9	75.7	853.4	749.6	1,804.7	June
104.8	33.2	2.0	1.7	69.2	61.5	6.5	2.9	1,262.0	76.3	855.0	757.2	1,914.3	July
102.0	32.4	2.0	1.7	72.2	61.5	5.8	3.0	1,271.3	83.5	840.0	765.2	1,912.5	Aug.
102.0	32.6	2.0	1.7	64.3	60.0	4.9	3.0	1,280.7	82.6	825.8	765.1	1,973.5	Sep.
107.8	37.7	2.0	1.6	64.9	59.7	6.2	2.9	1,288.5	84.7	842.8	753.8	1,974.2	Oct.
<b>Changes <sup>4</sup></b>													
- 2.3	-	1.2	- 0.2	- 6.4	- 4.8	- 3.4	- 0.6	- 63.7	- 0.2	35.9	26.1	178.3	2014
- 0.1	0.0	0.0	- 0.1	- 0.4	- 1.9	- 1.0	- 0.0	- 86.8	- 7.7	- 30.3	28.0	- 143.2	2015
1.1	0.0	- 0.3	- 0.1	- 2.2	- 1.2	- 0.3	- 1.1	8.6	- 1.3	116.1	26.4	- 39.5	2016
10.8	4.2	- 0.1	- 0.0	- 0.0	- 0.0	- 1.1	- 0.3	- 3.3	- 8.5	- 16.1	34.1	- 162.3	2017
- 6.4	- 4.1	- 0.1	- 0.1	2.1	2.1	- 2.6	0.3	30.0	- 5.9	- 36.0	7.4	10.3	2018
2.0	0.6	- 0.1	- 0.1	1.4	1.4	5.6	- 0.5	22.3	0.1	- 47.9	30.0	329.1	2019
17.0	14.3	- 0.1	- 0.1	37.8	37.3	3.6	0.6	11.8	- 9.3	61.6	- 1.5	108.5	2020
3.1	- 8.0	- 0.2	- 0.1	- 5.5	- 5.0	- 7.9	0.3	40.6	6.9	124.9	16.6	- 207.9	2021
5.8	8.5	- 0.3	- 0.2	24.6	23.0	1.2	0.4	67.2	12.6	45.6	5.0	857.7	2022
- 1.3	- 0.5	- 0.0	- 0.0	- 2.5	- 2.7	- 0.5	0.1	15.0	- 1.0	39.4	- 3.2	44.2	2022 Feb.
- 1.0	- 0.8	- 0.0	- 0.0	- 2.0	- 0.6	0.3	0.2	6.9	- 0.3	- 20.7	19.0	118.4	Mar.
3.6	3.2	- 0.0	- 0.0	0.1	0.0	- 0.5	- 0.3	3.4	0.2	0.4	- 5.8	252.8	Apr.
- 2.9	- 2.5	- 0.0	- 0.0	2.0	0.6	- 0.4	0.2	6.4	1.4	23.9	- 1.0	- 42.4	May
- 1.5	- 1.0	- 0.0	- 0.0	- 0.4	0.2	0.1	- 0.0	- 4.8	4.3	- 6.3	17.6	199.0	June
1.9	3.7	- 0.0	- 0.0	0.5	1.1	2.1	0.1	9.1	3.5	- 24.8	- 10.5	- 207.8	July
1.6	1.0	- 0.0	- 0.0	1.1	0.0	0.6	- 0.1	4.1	2.7	20.1	- 3.1	268.3	Aug.
6.5	6.7	- 0.0	- 0.0	- 2.0	- 0.7	- 1.6	0.1	15.8	7.0	31.8	14.9	323.1	Sep.
9.1	8.7	- 0.0	- 0.0	1.7	1.6	0.8	0.1	1.8	- 6.3	- 2.8	- 5.3	- 55.3	Oct.
- 8.6	- 8.3	- 0.0	- 0.0	27.5	25.8	0.8	0.0	7.4	2.4	- 29.9	- 1.1	- 208.4	Nov.
1.0	0.9	- 0.0	- 0.0	- 6.3	- 4.3	- 1.3	0.1	- 11.5	- 1.2	- 132.1	1.9	125.9	Dec.
- 1.9	- 1.8	- 0.0	- 0.0	9.9	6.9	0.5	- 0.2	22.4	6.6	95.0	- 17.6	- 85.0	2023 Jan.
- 0.6	- 0.6	- 0.0	- 0.0	7.9	8.7	1.2	- 0.1	13.0	8.1	6.9	- 5.0	163.2	Feb.
5.3	- 1.4	- 0.0	- 0.0	- 8.8	- 9.2	- 0.3	0.3	13.6	9.2	- 33.8	11.2	- 151.2	Mar.
- 6.9	5.5	- 0.0	- 0.0	- 7.4	- 7.4	0.7	0.1	5.7	2.7	- 4.9	1.8	- 4.7	Apr.
- 3.1	- 3.3	- 0.0	- 0.0	- 3.6	- 3.5	0.6	- 0.1	23.4	6.5	32.0	9.4	23.5	May
2.1	2.0	- 0.0	- 0.0	- 3.0	1.6	- 1.1	- 0.0	0.4	4.1	- 28.3	3.6	56.2	June
- 1.2	0.7	- 0.0	- 0.0	- 2.1	- 2.5	1.7	0.3	10.2	0.7	4.2	8.1	109.7	July
- 2.1	- 0.1	- 0.0	- 0.0	- 2.9	- 0.0	- 0.7	0.1	7.0	7.1	- 18.9	- 7.2	- 2.8	Aug.
- 0.2	0.1	- 0.0	- 0.0	- 7.9	- 1.5	- 0.9	0.1	5.8	- 1.0	- 19.2	- 1.0	61.1	Sep.
5.8	5.1	- 0.0	- 0.0	0.6	- 0.3	1.3	- 0.1	7.1	1.9	17.0	- 11.1	1.8	Oct.

<sup>3</sup> In Germany, debt securities with maturities of up to one year are classed as money market paper; up to the January 2002 Monthly Report they were published together

with money market fund shares. <sup>4</sup> Statistical breaks have been eliminated from the flow figures (see also footnote \* in Table II.1).

## IV. Banks

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

€ billion

End of month	Number of reporting institutions	Balance sheet total <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:			Securities issued by non-banks		
					Balances and loans	Securities issued by banks		Loans	for up to and including 1 year	for more than 1 year			
<b>All categories of banks</b>													
2023 May	1,383	10,716.8	68.0	3,694.9	3,203.2	487.4	5,004.1	490.7	3,797.9	0.2	698.6	97.4	1,852.5
June	1,375	10,639.8	70.5	3,543.4	3,053.2	485.6	5,003.9	478.6	3,795.4	0.2	711.0	97.4	1,924.6
July	1,370	10,805.6	87.6	3,563.9	3,073.6	485.0	5,011.3	486.5	3,804.7	0.1	700.4	97.3	2,045.4
Aug.	1,361	10,797.6	64.9	3,589.1	3,099.2	485.0	5,001.5	468.1	3,812.6	0.1	702.0	96.6	2,045.6
Sep.	1,353	10,799.9	68.2	3,508.2	3,022.6	481.1	5,006.9	477.4	3,809.0	0.1	700.8	96.7	2,119.9
Oct.	1,346	10,859.4	80.1	3,563.0	3,077.7	480.9	5,008.6	479.1	3,813.0	0.1	698.8	97.0	2,110.6
<b>Commercial banks <sup>6</sup></b>													
2023 Sep.	240	5,076.7	24.5	1,652.1	1,564.9	86.9	1,618.5	314.8	1,043.9	0.1	249.6	31.0	1,750.6
Oct.	240	5,130.7	33.9	1,695.5	1,608.4	86.6	1,620.5	319.8	1,044.4	0.1	247.6	31.2	1,749.6
<b>Big banks <sup>7</sup></b>													
2023 Sep.	3	2,579.9	12.1	661.5	628.7	32.8	749.4	157.6	455.2	0.0	132.3	25.2	1,131.7
Oct.	3	2,600.9	23.2	684.3	650.8	33.5	750.6	163.3	452.2	0.0	130.5	25.3	1,117.6
<b>Regional banks and other commercial banks</b>													
2023 Sep.	131	2,000.5	9.1	666.6	615.6	50.7	717.5	108.9	495.7	0.1	108.1	4.2	603.2
Oct.	131	2,034.1	7.8	686.5	636.3	49.7	719.1	109.6	498.6	0.1	107.9	4.3	616.4
<b>Branches of foreign banks</b>													
2023 Sep.	106	496.3	3.3	324.0	320.6	3.4	151.7	48.3	93.0	–	9.2	1.6	15.7
Oct.	106	495.6	2.9	324.7	321.2	3.4	150.8	46.9	93.6	–	9.2	1.6	15.7
<b>Landesbanken</b>													
2023 Sep.	6	917.1	2.2	340.3	286.8	52.6	434.2	46.1	346.4	0.0	36.3	9.6	130.7
Oct.	6	925.9	9.7	348.0	294.7	52.4	429.1	42.9	344.9	0.0	36.1	9.6	129.5
<b>Savings banks</b>													
2023 Sep.	354	1,545.1	21.7	262.9	145.9	116.9	1,219.2	54.3	997.1	–	167.2	16.3	25.1
Oct.	354	1,547.7	19.5	267.5	150.5	117.0	1,219.2	54.7	997.8	–	166.3	16.4	25.3
<b>Credit cooperatives</b>													
2023 Sep.	711	1,158.0	14.9	202.7	93.7	108.7	888.5	34.7	735.1	0.0	118.7	20.0	31.8
Oct.	705	1,163.0	10.9	210.1	101.9	108.1	890.1	34.4	737.2	0.0	118.5	20.1	31.8
<b>Mortgage banks</b>													
2023 Sep.	7	221.4	0.1	15.4	8.8	6.6	200.4	3.4	182.3	–	14.7	0.1	5.3
Oct.	7	223.2	0.1	17.2	10.6	6.6	200.3	3.3	182.5	–	14.4	0.1	5.5
<b>Building and loan associations</b>													
2023 Sep.	17	258.8	0.2	41.7	25.9	15.8	212.7	1.2	189.4	.	22.2	0.3	4.0
Oct.	16	258.4	0.1	41.1	25.3	15.8	212.9	1.2	189.8	.	22.0	0.3	4.0
<b>Banks with special, development and other central support tasks</b>													
2023 Sep.	18	1,622.8	4.6	993.1	896.6	93.5	433.3	22.8	314.7	0.0	92.2	19.4	172.4
Oct.	18	1,610.5	5.8	983.6	886.2	94.5	436.6	22.9	316.5	–	93.9	19.5	165.0
<b>Memo item: Foreign banks <sup>8</sup></b>													
2023 Sep.	137	2,548.1	10.7	863.2	826.5	36.5	691.5	146.3	417.8	0.1	120.3	3.5	979.1
Oct.	137	2,557.5	8.0	878.6	841.9	36.2	690.9	144.0	420.0	0.1	121.0	3.5	976.4
<b>of which: Banks majority-owned by foreign banks <sup>9</sup></b>													
2023 Sep.	31	2,051.8	7.4	539.2	505.8	33.1	539.9	97.9	324.8	0.1	111.1	1.9	963.4
Oct.	31	2,061.8	5.1	554.0	520.7	32.8	540.1	97.1	326.5	0.1	111.8	1.9	960.7

\* 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 (Handelsgesetzbuch) read in conjunction with Section 35 (1) number 1a of the Credit Institution Accounting Regulation (Verordnung über die Rechnungslegung der Kreditinstitute) are classified under "Other assets and liabilities" as of the December 2010 reporting date. Trading portfolio derivatives are listed separately in the Statistical Series Banking statistics, in Tables I.1 to I.3. <sup>2</sup> For building and loan associations: including deposits under savings

IV. Banks

Deposits of banks (MFIs)			Deposits of non-banks (non-MFIs)						Bearer debt securities outstanding <sup>5</sup>	Capital including published reserves, participation rights capital, funds for general banking risks	Other liabilities <sup>1</sup>	End of month		
Total	of which:		Total	of which:			Memo item: Liabilities arising from repos <sup>3</sup>	Savings deposits <sup>4</sup>						
	Sight deposits	Time deposits		Sight deposits	Time deposits <sup>2</sup>			Total					of which: At 3 months' notice	Bank savings bonds
					for up to and including 1 year	for more than 1 year <sup>2</sup>								
<b>All categories of banks</b>														
2,288.9	733.9	1,554.9	4,608.9	2,843.2	531.5	672.8	86.6	495.5	464.5	65.9	1,342.1	603.8	1,873.2	2023 May
2,175.4	699.0	1,476.4	4,587.8	2,806.5	548.2	672.4	73.8	488.1	454.5	72.6	1,332.1	608.1	1,936.3	June
2,212.3	717.1	1,495.1	4,591.2	2,786.2	572.0	672.6	81.2	480.7	444.1	79.7	1,335.1	610.3	2,056.7	July
2,184.0	705.0	1,479.0	4,596.2	2,766.9	597.8	667.8	78.9	472.2	432.8	91.4	1,346.6	610.8	2,060.0	Aug.
2,118.8	674.3	1,444.5	4,593.2	2,764.3	593.6	671.1	80.8	466.5	424.2	97.8	1,351.5	611.6	2,124.8	Sep.
2,153.0	694.8	1,458.2	4,621.0	2,751.3	624.2	673.1	88.2	460.1	414.7	112.4	1,351.6	611.8	2,122.0	Oct.
<b>Commercial banks <sup>6</sup></b>														
1,111.3	515.5	595.7	1,868.7	1,203.1	312.5	241.0	79.0	85.2	67.9	26.8	204.7	213.1	1,678.9	2023 Sep.
1,138.5	541.8	596.6	1,894.3	1,199.2	333.5	242.3	86.3	85.8	66.0	33.4	204.4	213.1	1,680.4	Oct.
<b>Big banks <sup>7</sup></b>														
416.5	182.0	234.5	864.8	525.4	186.5	73.5	39.3	75.4	58.9	4.1	152.6	79.7	1,066.3	2023 Sep.
423.7	181.5	242.2	882.5	532.5	196.2	73.3	49.0	76.4	57.4	4.1	152.5	79.7	1,062.6	Oct.
<b>Regional banks and other commercial banks</b>														
439.8	204.8	235.0	798.9	537.2	82.9	146.5	39.7	9.5	8.7	22.7	51.3	116.3	594.1	2023 Sep.
466.2	234.0	232.2	801.5	524.6	90.5	147.9	37.3	9.2	8.4	29.3	50.5	116.3	599.7	Oct.
<b>Branches of foreign banks</b>														
255.0	128.7	126.3	205.0	140.5	43.1	21.0	0.0	0.3	0.3	0.1	0.7	17.0	18.5	2023 Sep.
248.6	126.3	122.3	210.4	142.1	46.8	21.1	0.0	0.2	0.2	0.1	1.5	17.1	18.1	Oct.
<b>Landesbanken</b>														
220.9	37.8	183.1	298.3	149.4	71.2	72.3	1.0	4.6	4.6	0.8	212.3	43.1	142.5	2023 Sep.
224.6	37.5	187.1	302.6	145.4	79.6	71.7	1.1	4.5	4.5	1.4	215.2	43.1	140.3	Oct.
<b>Savings banks</b>														
171.0	5.3	165.7	1,155.5	781.6	75.4	16.1	–	229.9	212.6	52.5	20.6	141.0	57.1	2023 Sep.
172.0	5.3	166.6	1,154.8	776.5	77.4	16.6	–	225.5	208.1	58.8	21.3	141.1	58.5	Oct.
<b>Credit cooperatives</b>														
161.3	4.4	156.9	845.3	555.3	95.4	31.0	–	146.4	138.7	17.2	8.0	105.2	38.2	2023 Sep.
161.4	3.8	157.6	848.6	552.5	100.9	33.0	–	143.8	135.8	18.4	8.1	105.3	39.6	Oct.
<b>Mortgage banks</b>														
41.6	3.7	37.9	56.2	2.5	7.2	46.5	0.6	–	–	–	107.1	8.9	7.6	2023 Sep.
44.6	3.6	40.9	54.5	2.5	6.3	45.8	0.6	–	–	–	107.6	8.9	7.6	Oct.
<b>Building and loan associations</b>														
37.1	3.7	33.4	193.6	3.7	2.2	187.2	–	0.4	0.4	0.1	6.1	13.0	9.1	2023 Sep.
37.3	3.1	34.2	193.2	3.4	2.3	186.9	–	0.4	0.4	0.1	6.1	13.0	8.9	Oct.
<b>Banks with special, development and other central support tasks</b>														
375.6	103.9	271.8	175.6	68.7	29.5	77.1	0.2	–	–	–	792.8	87.3	191.5	2023 Sep.
374.7	99.6	275.1	173.0	71.7	24.0	76.9	0.2	–	–	–	788.9	87.3	186.7	Oct.
<b>Memo item: Foreign banks <sup>8</sup></b>														
658.8	333.1	325.7	766.9	508.5	132.9	103.0	47.5	10.3	9.9	12.1	50.7	100.6	971.0	2023 Sep.
676.5	361.0	315.5	768.6	495.5	141.8	103.8	43.1	10.0	9.6	17.5	50.1	100.6	961.7	Oct.
<b>of which: Banks majority-owned by foreign banks <sup>9</sup></b>														
403.8	204.4	199.4	562.0	368.0	89.8	82.1	47.5	10.1	9.7	12.0	50.0	83.5	952.5	2023 Sep.
427.9	234.7	193.2	558.2	353.4	94.9	82.7	43.1	9.8	9.3	17.4	48.6	83.6	943.6	Oct.

and loan contracts (see Table IV.12). <sup>3</sup> Included in time deposits. <sup>4</sup> Excluding deposits under savings and loan contracts (see also footnote 2). <sup>5</sup> Including subordinated negotiable bearer debt securities; excluding non-negotiable bearer debt securities. <sup>6</sup> Commercial banks comprise the sub-groups "Big banks", "Regional banks and other commercial banks" and "Branches of foreign banks". <sup>7</sup> Deutsche Bank AG, Dresdner Bank AG (up to Nov. 2009), Commerzbank AG, UniCredit Bank AG (formerly Bayerische Hypo- und Vereinsbank AG), Deutsche Postbank AG (from December 2004 up to April

2018) and DB Privat- und Firmenkundenbank AG (from May 2018) (see the explanatory notes in the Statistical Series Banking statistics, Table I.3, banking group "Big banks"). <sup>8</sup> Sum of the banks majority-owned by foreign banks and included in other categories of banks and the category "Branches (with dependent legal status) of foreign banks". <sup>9</sup> Separate presentation of the banks majority-owned by foreign banks included in other banking categories.

#### IV. Banks

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

€ billion

Period	Cash in hand (euro area banknotes and coins)	Credit balances with the Bundesbank	Lending to domestic banks (MFIs)					Lending to domestic non-banks (non-MFIs)					
			Total	Credit balances and loans	Bills	Negotiable money market paper issued by banks	Securities issued by banks	Memo item: Fiduciary loans	Total	Loans	Bills	Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks 1
<b>End of year or month *</b>													
2013	18.5	85.6	1,545.6	1,153.1	0.0	1.7	390.8	2.2	3,131.6	2,692.6	0.5	1.2	437.2
2014	18.9	81.3	1,425.9	1,065.6	0.0	2.1	358.2	1.7	3,167.3	2,712.2	0.4	0.7	454.0
2015	19.2	155.0	1,346.6	1,062.6	0.0	1.7	282.2	1.7	3,233.9	2,764.0	0.4	0.4	469.0
2016	25.8	284.0	1,364.9	1,099.8	0.0	0.8	264.3	2.0	3,274.3	2,823.8	0.3	0.4	449.8
2017	31.9	392.5	1,407.5	1,163.4	0.0	0.7	243.4	1.9	3,332.6	2,894.0	0.4	0.7	437.5
2018	40.4	416.1	1,323.5	1,083.8	0.0	0.8	239.0	5.9	3,394.5	2,990.2	0.2	0.2	403.9
2019	43.2	476.6	1,254.7	1,016.2	0.0	0.7	237.9	4.5	3,521.5	3,119.2	0.3	3.3	398.7
2020	47.2	792.9	1,367.9	1,119.7	0.0	0.7	247.5	8.8	3,647.0	3,245.1	0.2	4.0	397.7
2021	49.4	905.0	1,409.6	1,163.7	-	0.5	245.3	10.3	3,798.1	3,392.4	0.3	2.6	402.8
2022	19.8	67.3	2,347.0	2,101.4	-	1.0	244.6	12.1	4,015.6	3,613.1	0.2	2.7	399.6
2022 May	49.4	1,122.8	1,452.7	1,202.9	-	0.7	249.1	9.9	3,886.7	3,488.9	0.2	3.2	394.4
June	51.1	1,090.9	1,462.8	1,214.8	-	0.8	247.2	9.8	3,906.6	3,513.4	0.2	3.7	389.3
July	41.6	1,084.2	1,454.9	1,206.8	-	0.8	247.2	9.8	3,945.0	3,539.1	0.2	3.6	402.2
Aug.	23.1	1,126.7	1,480.7	1,232.0	-	1.3	247.5	9.9	3,976.0	3,574.3	0.1	3.9	397.7
Sep.	20.4	122.4	2,573.9	2,319.2	-	1.4	253.2	9.8	3,993.6	3,595.3	0.2	3.6	394.5
Oct.	19.7	86.6	2,592.3	2,337.0	-	1.5	253.7	10.0	4,014.1	3,611.6	0.2	4.3	398.0
Nov.	18.8	88.4	2,524.4	2,271.2	-	1.5	251.7	11.1	4,025.7	3,625.3	0.2	3.6	396.7
Dec.	19.8	67.3	2,347.0	2,101.4	-	1.0	244.6	12.1	4,015.6	3,613.1	0.2	2.7	399.6
2023 Jan.	18.0	89.5	2,443.6	2,198.1	-	1.0	244.5	12.7	4,016.2	3,622.4	0.1	4.3	389.4
Feb.	17.8	52.2	2,471.9	2,222.2	-	1.0	248.8	12.8	4,030.2	3,629.4	0.1	2.9	397.9
Mar.	17.7	53.5	2,426.8	2,175.1	-	1.0	250.7	12.6	4,030.5	3,634.7	0.1	4.3	391.4
Apr.	18.7	54.2	2,434.7	2,182.3	-	1.1	251.3	12.7	4,032.5	3,641.2	0.1	3.2	388.1
May	18.1	48.7	2,483.6	2,230.4	-	0.8	252.4	12.7	4,039.0	3,650.5	0.1	2.2	386.2
June	17.5	51.6	2,366.1	2,114.1	-	0.9	251.0	12.7	4,042.1	3,645.6	0.1	2.9	393.5
July	17.0	69.9	2,369.8	2,118.4	-	1.1	250.3	12.8	4,048.7	3,653.9	0.1	3.2	391.6
Aug.	17.3	46.7	2,392.0	2,139.7	-	1.2	251.1	12.9	4,046.7	3,649.9	0.1	2.5	394.2
Sep.	17.9	49.6	2,305.0	2,056.1	-	1.0	247.8	12.9	4,048.1	3,653.5	0.1	3.4	391.1
Oct.	17.4	62.2	2,350.8	2,101.9	-	0.8	248.0	13.1	4,051.8	3,656.5	0.1	3.0	392.2
<b>Changes *</b>													
2014	+ 0.4	- 4.3	- 119.3	- 87.1	+ 0.0	+ 0.4	- 32.6	+ 0.1	+ 36.7	+ 20.6	- 0.1	- 0.6	+ 16.8
2015	+ 0.3	+ 73.7	- 80.7	- 4.3	- 0.0	- 0.4	- 75.9	- 0.1	+ 68.9	+ 54.1	- 0.0	- 0.3	+ 15.1
2016	+ 6.5	+ 129.1	+ 48.1	+ 66.9	- 0.0	- 0.9	- 17.9	+ 0.4	+ 43.7	+ 62.8	- 0.1	- 0.1	- 18.9
2017	+ 6.1	+ 108.4	+ 50.3	+ 70.4	- 0.0	+ 0.0	- 20.1	- 0.1	+ 57.0	+ 70.2	+ 0.0	+ 0.4	- 13.6
2018	+ 8.5	+ 24.0	- 81.0	- 76.6	+ 0.0	+ 0.1	- 4.4	+ 3.8	+ 71.5	+ 105.4	- 0.1	- 0.5	- 33.2
2019	+ 2.8	+ 59.7	- 63.0	- 61.1	- 0.0	- 0.2	- 1.6	- 1.4	+ 126.7	+ 129.1	+ 0.1	+ 3.1	- 5.5
2020	+ 4.1	+ 316.4	+ 201.2	+ 191.6	- 0.0	+ 0.0	+ 9.6	+ 4.3	+ 123.2	+ 123.6	- 0.1	+ 0.7	- 1.0
2021	+ 2.2	+ 111.8	+ 44.1	+ 46.3	- 0.0	- 0.2	- 2.0	+ 1.5	+ 152.2	+ 147.8	+ 0.0	- 2.2	+ 6.6
2022	- 29.6	- 836.6	+ 938.0	+ 938.1	-	+ 0.2	- 0.3	+ 1.7	+ 216.7	+ 220.1	- 0.1	+ 0.1	- 3.3
2022 May	- 1.0	- 77.7	+ 92.4	+ 90.0	-	+ 0.1	+ 2.3	- 0.0	+ 20.1	+ 18.9	- 0.1	- 0.3	+ 1.5
June	+ 1.7	- 31.9	+ 10.1	+ 11.9	-	+ 0.1	- 1.9	- 0.1	+ 19.9	+ 24.5	- 0.0	+ 0.5	- 5.1
July	- 9.5	- 6.8	- 7.5	- 7.6	-	+ 0.1	- 0.0	- 0.1	+ 36.1	+ 23.5	+ 0.0	- 0.1	+ 12.7
Aug.	- 18.5	+ 42.5	+ 29.0	+ 28.3	-	+ 0.2	+ 0.5	+ 0.1	+ 30.9	+ 35.1	- 0.0	+ 0.3	- 4.5
Sep.	- 2.7	- 1,004.3	+ 1,092.9	+ 1,087.0	-	+ 0.2	+ 5.7	- 0.0	+ 16.5	+ 19.9	+ 0.1	- 0.3	- 3.2
Oct.	- 0.7	- 35.8	+ 18.5	+ 17.8	-	+ 0.1	+ 0.6	+ 0.2	+ 20.7	+ 16.6	- 0.0	+ 0.7	+ 3.5
Nov.	- 0.8	+ 1.8	- 67.6	- 65.5	-	- 0.0	- 2.1	+ 1.1	+ 12.0	+ 13.9	- 0.0	- 0.7	- 1.3
Dec.	+ 1.0	- 19.9	- 177.4	- 169.9	-	- 0.5	- 7.0	+ 1.0	- 9.6	- 11.7	+ 0.0	- 0.9	+ 2.9
2023 Jan.	- 1.8	+ 22.2	+ 96.7	+ 96.7	-	+ 0.0	- 0.1	+ 0.6	+ 0.6	+ 9.2	- 0.1	+ 1.6	- 10.3
Feb.	- 0.2	+ 37.4	+ 28.6	+ 24.3	-	+ 0.0	+ 4.3	+ 0.2	+ 13.3	+ 6.3	- 0.0	- 1.5	+ 8.5
Mar.	- 0.1	+ 1.3	- 45.1	- 47.0	-	+ 0.0	+ 1.9	- 0.1	+ 0.9	+ 6.0	+ 0.0	+ 1.4	- 6.5
Apr.	+ 1.0	+ 0.7	+ 7.8	+ 7.2	-	+ 0.1	+ 0.6	+ 0.1	+ 2.1	+ 6.5	+ 0.0	- 1.2	- 3.2
May	- 0.7	- 5.5	+ 48.9	+ 48.1	-	- 0.3	+ 1.1	- 0.0	+ 6.5	+ 9.4	+ 0.0	- 1.0	- 1.9
June	- 0.5	+ 2.9	- 116.9	- 115.7	-	+ 0.1	- 1.3	+ 0.0	+ 4.4	- 3.7	- 0.0	+ 0.7	+ 7.4
July	- 0.5	+ 18.4	+ 3.7	+ 4.3	-	+ 0.2	- 0.8	+ 0.1	+ 6.6	+ 8.3	- 0.0	+ 0.2	- 1.9
Aug.	+ 0.3	- 23.2	+ 22.0	+ 21.3	-	+ 0.1	+ 0.8	+ 0.1	- 1.9	- 4.0	+ 0.0	- 0.6	+ 2.7
Sep.	+ 0.6	+ 2.8	- 87.0	- 83.6	-	- 0.2	- 3.3	+ 0.1	+ 1.3	+ 3.7	+ 0.0	+ 0.9	- 3.2
Oct.	- 0.5	+ 12.6	+ 45.8	+ 45.8	-	- 0.2	+ 0.2	+ 0.2	+ 3.7	+ 3.0	- 0.0	- 0.4	+ 1.1

\* 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 debt securities arising from the exchange of

equalisation claims (see also footnote 2). 2 Including debt securities arising from the exchange of equalisation claims. 3 Including liabilities arising from registered debt securities, registered money market paper and non-negotiable bearer debt securities;

IV. Banks

Equalisation claims 2	Memo item: Fiduciary loans	Participating interests in domestic banks and enterprises	Deposits of domestic banks (MFIs) 3					Deposits of domestic non-banks (non-MFIs)					Period	
			Total	Sight deposits 4	Time deposits 4	Redis-counted bills 5	Memo item: Fiduciary loans	Total	Sight deposits 6	Time deposits 6	Savings deposits 7	Bank savings bonds 8		Memo item: Fiduciary loans
<b>End of year or month *</b>														
-	31.6	92.3	1,140.3	125.6	1,014.7	0.0	33.2	3,048.7	1,409.9	952.0	610.1	76.6	32.9	2013
-	26.5	94.3	1,111.9	127.8	984.0	0.0	11.7	3,118.2	1,517.8	926.7	607.8	66.0	30.9	2014
-	20.4	89.6	1,065.6	131.1	934.5	0.0	6.1	3,224.7	1,673.7	898.4	596.5	56.1	29.3	2015
-	19.1	91.0	1,032.9	129.5	903.3	0.1	5.6	3,326.7	1,798.2	889.6	588.5	50.4	28.8	2016
-	19.1	88.1	1,048.2	110.7	937.4	0.0	5.1	3,420.9	1,941.0	853.2	582.9	43.7	30.0	2017
-	18.0	90.9	1,020.9	105.5	915.4	0.0	4.7	3,537.6	2,080.1	841.5	578.6	37.3	33.9	2018
-	17.3	90.4	1,010.2	107.2	902.9	0.0	4.4	3,661.0	2,236.3	816.2	575.2	33.2	32.5	2019
-	23.5	78.3	1,236.7	125.0	1,111.6	0.0	13.1	3,885.2	2,513.0	783.3	560.6	28.3	34.4	2020
-	25.7	79.2	1,338.4	117.2	1,221.3	0.0	16.4	3,976.3	2,654.6	736.0	561.2	24.5	34.2	2021
-	25.6	80.3	1,231.6	136.9	1,094.7	0.0	15.7	4,162.0	2,720.6	873.5	533.2	34.6	35.9	2022
-	26.2	78.6	1,393.7	142.7	1,251.0	0.0	17.1	4,056.8	2,724.3	752.1	556.6	23.8	33.6	2022 May
-	26.1	78.8	1,384.7	147.1	1,237.6	0.0	16.9	4,051.8	2,714.4	758.8	554.8	23.8	33.4	June
-	25.9	80.3	1,383.3	134.3	1,249.0	0.0	16.6	4,086.4	2,729.0	780.4	553.0	24.1	33.0	July
-	25.9	79.8	1,403.5	136.0	1,267.5	-	16.5	4,134.3	2,766.8	792.0	550.6	25.0	33.0	Aug.
-	25.8	80.2	1,415.7	149.2	1,266.5	0.0	16.7	4,149.9	2,755.6	823.1	545.2	25.9	33.2	Sep.
-	25.8	80.4	1,419.0	138.1	1,280.9	0.0	16.1	4,168.4	2,748.7	849.3	542.2	28.1	33.6	Oct.
-	25.9	80.2	1,345.0	135.4	1,209.6	0.0	16.1	4,205.6	2,767.9	869.3	536.9	31.5	34.8	Nov.
-	25.6	80.3	1,231.6	136.9	1,094.7	0.0	15.7	4,162.0	2,720.6	873.5	533.2	34.6	35.9	Dec.
-	25.6	80.0	1,231.2	142.6	1,088.7	0.0	15.6	4,199.7	2,722.8	913.5	522.7	40.6	36.9	2023 Jan.
-	25.6	80.2	1,226.0	140.7	1,085.3	0.0	15.6	4,197.1	2,687.7	947.9	516.0	45.5	37.2	Feb.
-	24.6	80.3	1,210.4	137.0	1,073.4	0.0	15.2	4,167.4	2,639.8	968.6	507.2	51.7	36.4	Mar.
-	24.7	80.9	1,227.7	140.8	1,086.9	0.0	15.2	4,167.3	2,632.0	978.5	498.6	58.3	36.5	Apr.
-	24.7	81.1	1,229.8	137.8	1,091.9	0.0	15.1	4,172.9	2,623.9	993.0	490.6	65.4	36.6	May
-	24.4	81.2	1,149.6	134.0	1,015.6	0.0	14.6	4,176.3	2,600.9	1,020.0	483.3	72.1	36.5	June
-	24.4	81.0	1,159.8	134.8	1,025.0	0.0	14.6	4,180.2	2,582.2	1,042.9	475.9	79.1	36.7	July
-	24.4	80.3	1,162.1	138.5	1,023.7	0.0	14.5	4,188.4	2,568.4	1,061.7	467.5	90.7	36.9	Aug.
-	24.2	80.4	1,112.7	137.4	975.3	0.0	14.1	4,189.3	2,558.0	1,072.5	461.8	97.0	37.1	Sep.
-	24.1	80.3	1,132.3	136.7	995.6	0.0	14.0	4,198.0	2,544.5	1,086.5	455.4	111.6	37.3	Oct.
<b>Changes *</b>														
-	- 1.9	+ 2.0	- 29.0	+ 2.2	- 31.2	- 0.0	- 0.6	+ 69.7	+ 107.9	- 25.3	- 2.4	- 10.6	- 2.0	2014
-	- 2.1	- 4.3	- 46.6	+ 3.3	- 50.0	+ 0.0	- 1.3	+ 106.5	+ 156.2	- 28.3	- 11.3	- 10.1	- 1.6	2015
-	- 1.3	+ 1.5	- 1.7	+ 0.3	- 2.0	+ 0.0	- 0.5	+ 104.7	+ 124.5	- 6.9	- 7.9	- 5.0	- 0.5	2016
-	- 0.0	- 1.6	+ 11.0	- 18.4	+ 29.4	- 0.0	- 0.5	+ 103.1	+ 142.8	- 27.5	- 5.6	- 6.7	+ 0.4	2017
-	- 1.0	+ 3.1	- 25.0	- 3.1	- 21.9	+ 0.0	- 0.4	+ 117.7	+ 139.3	- 10.8	- 4.3	- 6.5	+ 3.9	2018
-	- 0.7	+ 0.1	- 8.6	+ 1.6	- 10.2	+ 0.0	- 0.3	+ 122.5	+ 155.8	- 25.7	- 3.4	- 4.1	- 1.4	2019
-	+ 5.7	- 3.3	+ 313.4	+ 23.2	+ 290.2	- 0.0	+ 8.2	+ 221.6	+ 273.7	- 32.7	- 14.5	- 4.9	+ 1.9	2020
-	+ 2.3	+ 1.0	+ 105.2	- 7.4	+ 112.6	+ 0.0	+ 3.3	+ 95.3	+ 144.3	- 46.2	+ 0.7	- 3.5	- 0.2	2021
-	- 0.1	+ 1.7	- 104.6	+ 8.8	- 113.4	- 0.0	- 0.6	+ 191.8	+ 65.8	+ 143.4	- 27.5	+ 10.1	+ 1.7	2022
-	+ 0.3	- 0.1	+ 9.4	+ 2.2	+ 7.2	- 0.0	+ 0.3	+ 10.1	+ 18.8	- 7.3	- 1.3	+ 0.0	- 0.2	2022 May
-	- 0.1	+ 0.2	- 9.0	+ 4.4	- 13.4	- 0.0	- 0.2	- 5.0	- 9.9	+ 6.7	- 1.8	- 0.0	- 0.1	June
-	- 0.2	+ 1.5	- 1.1	- 12.4	+ 11.2	-	- 0.3	+ 33.5	+ 14.3	+ 20.7	- 1.8	+ 0.3	- 0.5	July
-	- 0.0	+ 0.1	+ 23.3	+ 1.8	+ 21.6	- 0.0	- 0.1	+ 48.1	+ 37.8	+ 11.8	- 2.4	+ 0.9	+ 0.0	Aug.
-	- 0.0	+ 0.4	+ 12.2	+ 13.2	- 0.9	+ 0.0	+ 0.1	+ 15.6	- 11.4	+ 31.3	- 5.3	+ 0.9	+ 0.2	Sep.
-	- 0.0	+ 0.1	+ 3.5	- 10.9	+ 14.4	+ 0.0	- 0.5	+ 17.4	- 8.0	+ 26.2	- 3.1	+ 2.2	+ 0.4	Oct.
-	+ 0.1	- 0.1	- 73.9	- 2.6	- 71.3	- 0.0	- 0.1	+ 45.3	+ 20.9	+ 26.3	- 5.3	+ 3.4	+ 1.3	Nov.
-	- 0.3	+ 0.1	- 113.2	- 8.5	- 104.7	- 0.0	- 0.4	- 43.4	- 47.1	+ 4.2	- 3.7	+ 3.2	+ 1.1	Dec.
-	- 0.0	- 0.4	- 0.3	+ 5.8	- 6.1	+ 0.0	- 0.1	+ 37.6	- 2.9	+ 40.0	- 5.5	+ 6.0	+ 1.0	2023 Jan.
-	- 0.0	+ 0.2	- 5.2	- 1.9	- 3.4	-	- 0.0	- 2.5	- 35.0	+ 34.4	- 6.7	+ 4.8	+ 0.4	Feb.
-	- 0.3	+ 0.1	- 15.2	- 3.7	- 11.5	-	- 0.4	- 29.6	- 47.3	+ 20.2	- 8.7	+ 6.2	- 0.1	Mar.
-	+ 0.0	+ 1.1	+ 17.3	+ 3.8	+ 13.5	- 0.0	- 0.0	- 0.1	- 7.9	+ 9.8	- 8.6	+ 6.6	+ 0.0	Apr.
-	+ 0.0	+ 0.2	+ 2.1	- 3.0	+ 5.0	- 0.0	- 0.1	+ 5.6	- 7.9	+ 14.5	- 8.0	+ 7.1	+ 0.1	May
-	- 0.4	+ 0.1	- 79.7	- 3.7	- 76.0	+ 0.0	- 0.5	+ 2.3	- 23.0	+ 26.0	- 7.3	+ 6.7	- 0.1	June
-	+ 0.0	- 0.1	+ 10.2	+ 0.8	+ 9.4	-	- 0.0	+ 3.8	- 18.7	+ 22.8	- 7.3	+ 7.0	+ 0.2	July
-	+ 0.1	- 0.8	+ 3.1	+ 3.9	- 0.8	+ 0.0	- 0.1	+ 8.2	- 13.2	+ 21.3	- 8.5	+ 8.5	+ 0.2	Aug.
-	- 0.2	+ 0.1	- 49.4	- 1.1	- 48.3	- 0.0	- 0.4	+ 0.9	- 10.5	+ 10.7	- 5.7	+ 6.3	+ 0.2	Sep.
-	- 0.1	- 0.1	+ 20.1	- 0.7	+ 20.8	- 0.0	- 0.1	+ 8.7	- 13.4	+ 14.0	- 6.4	+ 14.6	+ 0.3	Oct.

including subordinated liabilities. 4 Including liabilities arising from monetary policy operations with the Bundesbank. 5 Own acceptances and promissory notes outstanding. 6 Since the inclusion of building and loan associations in January 1999,

including deposits under savings and loan contracts (see Table IV.12). 7 Excluding deposits under savings and loan contracts (see also footnote 8). 8 Including liabilities arising from non-negotiable bearer debt securities.



#### IV. Banks

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

€ billion

Period	Cash in hand (non-euro area banknotes and coins)	Lending to foreign banks (MFIs)							Lending to foreign non-banks (non-MFIs)					
		Total	Credit balances and loans, bills			Negotiable money market paper issued by banks	Securities issued by banks	Memo item: Fiduciary loans	Total	Loans and bills			Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks
			Total	Short-term	Medium and long-term					Total	Short-term	Medium and long-term		
<b>End of year or month *</b>														
2013	0.2	1,019.7	782.4	546.6	235.8	7.2	230.1	2.5	701.0	404.9	100.3	304.6	8.2	287.8
2014	0.2	1,125.2	884.8	618.7	266.1	7.9	232.5	1.1	735.1	415.2	94.4	320.8	6.5	313.5
2015	0.3	1,066.9	830.7	555.9	274.7	1.2	235.0	1.0	751.5	424.3	83.8	340.5	7.5	319.7
2016	0.3	1,055.9	820.6	519.8	300.7	0.5	234.9	1.0	756.2	451.6	90.1	361.4	5.0	299.6
2017	0.3	963.8	738.2	441.0	297.2	0.7	225.0	2.3	723.9	442.2	93.3	348.9	4.2	277.5
2018	0.2	1,014.1	771.9	503.8	268.1	1.0	241.3	3.0	762.0	489.6	99.9	389.7	4.3	268.1
2019	0.2	1,064.2	814.0	532.7	281.3	1.8	248.5	3.7	795.3	513.1	111.0	402.1	7.7	274.5
2020	0.2	1,024.3	784.8	532.1	252.8	2.6	236.8	4.0	822.8	523.0	125.4	397.5	11.3	288.5
2021	0.3	1,100.7	877.5	614.7	262.7	0.4	222.8	3.5	871.2	572.2	151.5	420.7	8.0	290.9
2022	0.2	1,151.3	926.6	656.2	270.4	1.7	223.0	3.7	913.7	616.2	173.0	443.2	14.9	282.6
2022 May	0.6	1,222.8	996.5	730.7	265.8	1.7	224.7	3.6	914.3	609.9	182.1	427.9	13.5	290.9
June	0.6	1,232.7	1,007.2	742.2	265.0	2.2	223.3	3.6	929.1	612.4	181.1	431.2	13.7	303.0
July	0.6	1,248.0	1,021.1	748.0	273.1	2.7	224.2	3.5	929.4	615.7	177.0	438.7	12.7	301.0
Aug.	0.5	1,266.1	1,038.5	756.2	282.4	3.4	224.2	3.4	931.5	624.9	183.9	441.0	13.4	293.2
Sep.	0.3	1,287.8	1,057.9	771.9	286.0	4.2	225.8	3.8	935.5	629.4	185.2	444.2	12.4	293.7
Oct.	0.3	1,296.6	1,065.2	787.3	277.9	3.1	228.3	3.4	931.2	629.3	182.0	447.3	12.5	289.5
Nov.	0.2	1,273.7	1,043.2	766.3	276.9	2.9	227.6	3.5	938.8	631.7	187.5	444.2	12.5	294.6
Dec.	0.2	1,151.3	926.6	656.2	270.4	1.7	223.0	3.7	913.7	616.2	173.0	443.2	14.9	282.6
2023 Jan.	0.2	1,195.3	963.1	700.1	263.0	2.7	229.5	4.0	941.0	633.6	190.9	442.7	20.1	287.3
Feb.	0.2	1,201.5	965.7	701.9	263.8	2.9	232.9	4.2	946.4	635.5	190.5	444.9	15.8	295.1
Mar.	0.2	1,203.8	968.2	704.1	264.0	2.9	232.7	4.3	953.0	630.8	187.8	443.0	12.5	309.8
Apr.	0.2	1,184.1	946.5	681.7	264.8	3.6	234.0	4.2	959.3	633.6	191.7	441.9	13.9	311.8
May	0.2	1,211.3	972.8	706.0	266.8	3.4	235.1	4.2	965.1	638.1	193.4	444.7	14.6	312.4
June	0.2	1,177.3	939.1	681.7	257.4	3.6	234.6	4.3	961.8	628.4	181.4	447.0	15.8	317.6
July	0.2	1,194.1	955.3	694.8	260.5	4.1	234.7	4.3	962.7	637.4	190.4	447.0	16.4	308.9
Aug.	0.2	1,197.1	959.5	693.8	265.7	3.7	233.9	4.3	954.8	630.9	181.3	449.6	16.2	307.8
Sep.	0.2	1,203.3	966.5	687.9	278.6	3.5	233.3	4.2	958.8	633.0	183.8	449.2	16.1	309.7
Oct.	0.2	1,212.2	975.8	689.6	286.2	3.6	232.8	4.2	956.8	635.7	188.7	447.0	14.6	306.5
<b>Changes *</b>														
2014	- 0.0	+ 86.1	+ 80.1	+ 63.2	+ 16.8	+ 0.7	+ 5.3	- 0.6	+ 5.7	- 10.2	- 12.8	+ 2.7	- 1.8	+ 17.7
2015	+ 0.1	- 91.8	- 86.0	- 82.2	- 3.8	- 6.7	+ 0.8	- 0.1	- 6.1	- 9.2	- 6.5	- 2.7	+ 1.1	+ 2.0
2016	+ 0.0	- 25.5	- 14.5	- 38.2	+ 23.7	- 0.7	- 10.3	- 0.0	+ 17.4	+ 28.9	+ 10.1	+ 18.8	- 3.0	- 8.5
2017	+ 0.0	- 57.2	- 48.7	- 61.5	+ 12.8	+ 0.0	- 8.5	+ 0.6	- 4.7	+ 13.0	+ 8.6	+ 4.4	+ 0.7	- 18.4
2018	+ 0.0	+ 49.6	+ 34.0	+ 57.7	- 23.7	+ 0.2	+ 15.3	+ 0.7	+ 18.3	+ 28.3	+ 3.2	+ 25.2	- 0.4	- 9.7
2019	- 0.0	- 4.1	- 11.3	- 21.9	+ 10.7	+ 0.8	+ 6.3	+ 0.7	+ 26.8	+ 19.9	+ 12.7	+ 7.3	+ 3.0	+ 3.8
2020	- 0.0	- 32.0	- 22.4	- 6.6	- 15.8	+ 0.9	- 10.5	+ 0.3	+ 34.4	+ 14.7	+ 9.0	+ 5.7	+ 3.6	+ 16.1
2021	+ 0.0	+ 52.8	+ 71.1	+ 68.9	+ 2.2	- 2.5	- 15.8	- 0.5	+ 37.8	+ 39.7	+ 29.8	+ 9.9	- 3.2	+ 1.4
2022	- 0.1	+ 21.7	+ 20.4	+ 17.9	+ 2.6	+ 1.3	- 0.0	+ 0.2	+ 37.0	+ 37.0	+ 16.8	+ 20.2	+ 6.7	- 6.7
2022 May	+ 0.0	- 1.1	- 1.8	- 0.1	- 1.7	+ 0.1	+ 0.5	+ 0.0	+ 3.7	+ 1.1	+ 2.2	- 1.1	+ 0.4	+ 2.2
June	+ 0.0	- 15.4	- 14.4	- 10.3	- 4.1	+ 0.5	- 1.6	+ 0.0	+ 9.7	- 1.7	- 2.3	+ 0.6	+ 0.2	+ 11.2
July	- 0.0	+ 8.4	+ 7.3	+ 1.7	+ 5.6	+ 0.5	+ 0.7	- 0.1	- 4.7	- 0.7	- 5.3	+ 4.6	- 1.1	- 2.9
Aug.	- 0.1	+ 13.9	+ 13.2	+ 6.0	+ 7.2	+ 0.7	- 0.0	- 0.2	+ 0.1	+ 7.7	+ 6.3	+ 1.4	+ 0.7	- 8.4
Sep.	- 0.2	+ 15.0	+ 12.6	+ 11.8	+ 0.8	+ 0.8	+ 1.6	+ 0.4	+ 3.2	+ 1.4	- 0.2	+ 1.6	- 1.0	+ 2.9
Oct.	+ 0.0	+ 13.4	+ 11.9	+ 18.2	- 6.3	- 1.0	+ 2.5	- 0.3	- 2.2	+ 1.4	- 2.9	+ 4.3	+ 0.0	- 3.6
Nov.	- 0.1	- 9.4	- 8.7	- 13.4	+ 4.7	- 0.2	- 0.4	+ 0.1	+ 16.5	+ 9.7	+ 5.5	+ 4.2	- 0.0	+ 6.8
Dec.	- 0.0	- 112.4	- 106.8	- 104.0	- 2.8	- 1.2	- 4.4	+ 0.2	- 19.9	- 11.2	- 12.7	+ 1.5	+ 2.4	- 11.1
2023 Jan.	- 0.0	+ 48.2	+ 40.6	+ 46.3	- 5.7	+ 1.1	+ 6.5	+ 0.3	+ 30.0	+ 19.5	+ 18.6	+ 0.9	+ 5.3	+ 5.2
Feb.	+ 0.0	+ 0.6	- 2.8	- 1.2	- 1.6	+ 0.1	+ 3.3	+ 0.2	+ 1.6	- 1.2	- 1.3	+ 0.1	- 4.4	+ 7.2
Mar.	- 0.0	+ 9.2	+ 9.2	+ 6.2	+ 3.0	- 0.0	- 0.1	+ 0.1	+ 11.2	- 1.1	- 1.5	+ 0.4	- 3.3	+ 15.5
Apr.	+ 0.0	- 17.0	- 19.0	- 20.9	+ 1.9	+ 0.7	+ 1.3	- 0.1	+ 8.2	+ 4.4	+ 4.5	- 0.1	+ 1.5	+ 2.4
May	+ 0.0	+ 16.9	+ 16.2	+ 18.0	- 1.8	+ 0.2	+ 0.9	- 0.0	+ 1.5	+ 1.4	+ 1.3	+ 0.1	+ 0.6	- 0.5
June	+ 0.0	- 17.7	- 17.6	- 9.9	- 7.6	+ 0.2	- 0.3	+ 0.1	- 1.9	- 8.7	- 11.1	+ 2.4	+ 1.2	+ 5.6
July	- 0.0	+ 18.4	+ 17.7	+ 13.9	+ 3.9	+ 0.5	+ 0.2	+ 0.0	+ 3.0	+ 10.5	+ 9.6	+ 0.9	+ 0.7	- 8.2
Aug.	- 0.0	+ 0.0	+ 1.3	- 2.2	+ 3.5	- 0.4	- 0.9	- 0.0	- 10.2	- 8.3	- 9.8	+ 1.5	- 0.3	- 1.6
Sep.	+ 0.0	- 1.0	- 0.0	- 10.1	+ 10.1	- 0.2	- 0.7	- 0.0	- 0.1	- 1.2	+ 1.3	- 2.5	- 0.1	+ 1.1
Oct.	+ 0.0	+ 10.3	+ 10.6	+ 2.6	+ 8.0	+ 0.1	- 0.4	- 0.1	- 0.7	+ 3.8	+ 5.2	- 1.4	- 1.6	- 3.0

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

revisions, which appear in the following Monthly Report, are not specially marked.

IV. Banks

Memo item: Fiduciary loans	Participating interests in foreign banks and enter- prises	Deposits of foreign banks (MFIs)						Deposits of foreign non-banks (non-MFIs)						Memo item: Fiduciary loans	Period
		Total	Sight deposits	Time deposits (including bank savings bonds)			Total	Sight deposits	Time deposits (including savings deposits and bank savings bonds)			Memo item: Fiduciary loans			
				Total	Short- term	Medium and long- term			Total	Short- term	Medium and long- term				
<b>End of year or month *</b>															
30.8	39.0	515.7	222.6	293.2	196.0	97.2	0.1	257.8	118.1	139.7	76.8	62.9	1.0	2013	
14.0	35.6	609.2	277.1	332.1	242.7	89.4	0.1	221.0	113.0	107.9	47.8	60.1	0.7	2014	
13.1	30.5	611.9	323.4	288.5	203.8	84.7	0.1	201.1	102.6	98.5	49.3	49.2	0.7	2015	
13.1	28.7	696.1	374.4	321.6	234.2	87.5	0.0	206.2	100.3	105.9	55.2	50.8	0.7	2016	
12.1	24.3	659.0	389.6	269.4	182.4	87.0	0.0	241.2	109.4	131.8	68.1	63.8	0.3	2017	
11.8	22.1	643.1	370.6	272.5	185.6	86.8	0.0	231.5	110.2	121.3	63.7	57.6	0.1	2018	
11.5	21.3	680.6	339.3	341.2	243.2	98.0	–	229.8	112.3	117.4	60.5	57.0	0.1	2019	
11.3	17.2	761.2	428.8	332.5	205.1	127.3	–	258.5	133.3	125.2	65.6	59.7	0.1	2020	
11.1	16.6	914.6	456.0	458.6	301.5	157.2	0.0	288.2	141.9	146.2	68.7	77.6	0.1	2021	
10.4	15.7	998.4	480.0	518.4	376.4	141.9	–	370.3	196.0	174.3	84.4	89.8	0.1	2022	
11.1	15.7	1,127.5	640.4	487.1	351.4	135.7	0.0	382.0	217.1	164.9	85.0	79.9	0.2	2022 May	
11.0	15.9	1,100.2	625.5	474.7	340.6	134.1	0.0	387.6	222.7	164.9	82.5	82.4	0.3	June	
10.6	15.8	1,107.4	608.8	498.6	359.0	139.6	0.0	390.2	221.6	168.6	87.5	81.1	0.3	July	
10.6	15.8	1,120.4	610.9	509.5	360.5	149.0	0.0	400.4	231.3	169.2	87.4	81.8	0.2	Aug.	
10.6	15.9	1,169.6	639.0	530.6	373.0	157.6	0.0	409.1	231.4	177.7	95.7	82.0	0.2	Sep.	
10.6	15.9	1,188.9	657.6	531.3	372.1	159.2	0.0	401.8	220.0	181.8	100.0	81.8	0.2	Oct.	
10.6	15.8	1,150.7	612.1	538.7	385.9	152.7	–	414.1	235.1	179.0	91.2	87.7	0.1	Nov.	
10.4	15.7	998.4	480.0	518.4	376.4	141.9	–	370.3	196.0	174.3	84.4	89.8	0.1	Dec.	
10.4	15.6	1,089.4	601.2	488.3	344.5	143.8	–	405.1	213.5	191.5	101.9	89.6	0.2	2023 Jan.	
10.4	15.8	1,086.8	600.1	486.7	345.1	141.6	–	418.4	218.4	200.0	109.9	90.1	0.2	Feb.	
10.4	15.9	1,060.0	576.0	484.0	329.3	154.7	–	412.5	216.8	195.7	98.9	96.9	0.3	Mar.	
10.4	15.9	1,042.6	540.6	502.0	343.8	158.2	–	423.3	208.8	214.6	116.6	97.9	0.3	Apr.	
10.4	16.1	1,059.1	596.1	462.9	299.9	163.0	0.0	436.0	219.3	216.7	116.7	100.0	0.3	May	
10.2	16.0	1,025.8	565.0	460.8	302.6	158.2	0.0	411.5	205.6	205.9	107.3	98.6	0.4	June	
10.2	16.1	1,052.4	582.3	470.1	311.1	159.0	0.0	411.0	204.0	207.0	107.9	99.1	0.3	July	
10.2	16.1	1,021.8	566.5	455.3	294.3	161.1	–	407.7	198.5	209.2	112.0	97.2	0.3	Aug.	
10.2	16.1	1,006.0	536.9	469.1	293.9	175.2	–	403.9	206.3	197.6	100.2	97.4	0.4	Sep.	
10.2	16.6	1,020.7	558.1	462.6	287.8	174.8	–	423.0	206.7	216.3	117.6	98.6	0.3	Oct.	
<b>Changes *</b>															
+ 0.1	– 3.8	+ 76.3	+ 47.8	+ 28.5	+ 39.0	– 10.5	– 0.0	– 43.6	– 8.3	– 35.3	– 30.7	– 4.6	+ 0.2	2014	
– 0.6	– 6.1	– 15.4	+ 40.6	– 56.0	– 48.6	– 7.4	– 0.0	– 26.5	– 13.9	– 12.6	+ 0.3	– 13.0	– 0.0	2015	
– 0.1	– 1.5	+ 82.7	+ 51.0	+ 31.7	+ 27.0	+ 4.7	– 0.0	+ 3.5	– 3.1	+ 6.7	+ 5.9	+ 0.8	– 0.0	2016	
– 1.0	– 4.1	– 15.5	+ 25.2	– 40.8	– 43.2	+ 2.4	± 0.0	+ 31.8	+ 11.0	+ 20.8	+ 15.6	+ 5.2	– 0.4	2017	
– 0.2	– 2.2	– 23.9	– 23.4	– 0.4	+ 2.1	– 2.6	– 0.0	– 11.9	– 0.2	– 11.8	– 5.7	– 6.0	– 0.2	2018	
– 0.3	– 0.9	– 9.5	– 49.4	+ 39.8	+ 28.0	+ 11.8	– 0.0	– 0.8	+ 2.1	– 2.9	– 1.8	– 1.1	– 0.0	2019	
– 0.2	– 3.9	+ 83.8	+ 87.8	– 4.1	– 34.7	+ 30.6	–	+ 23.6	+ 13.8	+ 9.8	+ 7.1	+ 2.8	+ 0.0	2020	
– 0.2	– 0.8	+ 136.6	+ 19.8	+ 116.8	+ 89.2	+ 27.6	+ 0.0	+ 22.7	+ 6.4	+ 16.3	+ 0.0	+ 16.3	– 0.0	2021	
– 0.7	– 1.0	+ 85.8	+ 29.1	+ 56.7	+ 69.6	– 13.0	– 0.0	+ 68.2	+ 49.0	+ 19.2	+ 13.9	+ 5.3	+ 0.0	2022	
– 0.0	+ 0.0	+ 18.7	+ 42.5	– 23.8	– 28.6	+ 4.8	–	– 1.1	+ 16.4	– 17.5	– 16.9	– 0.5	+ 0.1	2022 May	
– 0.1	+ 0.1	– 21.2	– 5.8	– 15.4	– 13.0	– 2.4	–	+ 3.5	+ 4.7	– 1.2	– 3.4	+ 2.2	+ 0.0	June	
+ 0.5	– 0.1	– 0.3	– 20.0	+ 19.7	+ 16.2	+ 3.5	+ 0.0	+ 0.1	– 2.2	+ 2.3	+ 4.0	– 1.8	– 0.0	July	
+ 0.1	+ 0.0	+ 9.7	+ 0.3	+ 9.4	+ 0.3	+ 9.2	– 0.0	+ 8.9	+ 9.1	– 0.2	– 0.7	+ 0.5	– 0.0	Aug.	
+ 0.0	+ 0.0	+ 42.5	+ 25.4	+ 17.2	+ 9.4	+ 7.7	–	+ 6.9	– 0.7	+ 7.5	+ 7.5	– 0.0	+ 0.0	Sep.	
–	+ 0.0	+ 22.6	+ 20.5	+ 2.2	+ 0.2	+ 1.9	–	– 5.9	– 10.8	+ 5.0	+ 4.9	+ 0.1	– 0.1	Oct.	
– 0.0	– 0.0	– 24.1	– 41.3	+ 17.2	+ 17.4	– 0.2	– 0.0	+ 5.3	+ 13.1	– 7.9	– 7.4	– 0.5	– 0.0	Nov.	
– 0.2	– 0.0	– 145.0	– 128.3	– 16.7	– 6.9	– 9.8	–	– 40.7	– 37.2	– 3.5	– 6.2	+ 2.7	– 0.0	Dec.	
– 0.0	– 0.1	+ 93.8	+ 122.3	– 28.4	– 30.8	+ 2.4	–	+ 35.9	+ 18.1	+ 17.8	+ 17.9	– 0.1	+ 0.0	2023 Jan.	
+ 0.0	+ 0.2	– 7.0	– 3.5	– 3.5	– 0.9	– 2.6	–	+ 11.6	+ 4.1	+ 7.5	+ 7.2	+ 0.3	+ 0.1	Feb.	
+ 0.0	+ 0.2	– 21.8	– 21.5	– 0.3	– 13.9	+ 13.6	–	– 3.9	– 0.8	– 3.1	– 10.0	+ 7.0	+ 0.1	Mar.	
+ 0.0	+ 0.0	– 15.3	– 34.3	+ 19.0	+ 15.2	+ 3.8	–	+ 11.7	– 7.7	+ 19.3	+ 18.1	+ 1.2	– 0.0	Apr.	
+ 0.0	+ 0.2	+ 10.1	+ 52.6	– 42.5	– 46.3	+ 3.8	+ 0.0	+ 9.2	+ 9.5	– 0.3	– 1.2	+ 0.9	– 0.0	May	
– 0.2	– 0.0	– 26.4	– 26.1	– 0.3	+ 3.9	– 4.2	–	– 23.1	– 13.1	– 9.9	– 8.7	– 1.2	+ 0.1	June	
– 0.0	+ 0.1	+ 27.3	+ 17.2	+ 10.1	+ 9.0	+ 1.1	–	+ 0.4	– 1.3	+ 1.7	+ 1.1	+ 0.6	– 0.0	July	
+ 0.0	– 0.0	– 32.6	– 16.4	– 16.2	– 17.9	+ 1.7	– 0.0	– 4.3	– 5.9	+ 1.6	+ 3.6	– 2.0	– 0.0	Aug.	
– 0.0	– 0.0	– 21.0	– 32.3	+ 11.4	– 2.2	+ 13.5	–	– 5.7	+ 7.1	– 12.8	– 12.8	+ 0.0	+ 0.0	Sep.	
+ 0.0	+ 0.5	+ 15.9	+ 22.0	– 6.0	– 5.8	– 0.2	–	+ 19.4	+ 0.6	+ 18.8	+ 17.5	+ 1.3	– 0.1	Oct.	



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>													
2,136.9	248.0	1,888.9	191.7	28.9	534.0	288.4	38.8	249.7	245.6	–	2.7	2013	
2,172.7	251.7	1,921.0	204.2	24.4	532.9	283.1	33.5	249.6	249.8	–	2.1	2014	
2,232.4	256.0	1,976.3	219.0	18.3	527.0	277.0	27.9	249.0	250.0	–	2.1	2015	
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	2016	
2,399.5	273.5	2,125.9	240.6	17.4	450.9	254.0	22.5	231.5	196.9	–	1.7	2017	
2,499.4	282.6	2,216.8	233.4	16.5	412.1	241.7	19.7	222.0	170.4	–	1.4	2018	
2,626.4	301.3	2,325.1	240.5	15.7	394.2	235.9	17.2	218.8	158.2	–	1.5	2019	
2,771.8	310.5	2,461.4	241.1	22.4	390.8	234.3	15.7	218.6	156.6	–	1.1	2020	
2,915.7	314.5	2,601.2	258.9	24.7	373.8	229.9	14.3	215.6	143.9	–	1.0	2021	
3,085.9	348.7	2,737.1	274.0	24.6	359.3	233.7	14.1	219.6	125.6	–	1.0	2022	
2,983.1	319.7	2,663.4	259.5	25.1	364.0	229.1	13.7	215.4	134.9	–	1.0	2022 May	
2,998.2	322.2	2,675.9	257.6	25.0	360.0	228.2	13.6	214.6	131.7	–	1.0	June	
3,022.5	327.7	2,694.9	271.0	24.9	360.2	229.0	13.5	215.5	131.2	–	1.0	July	
3,044.6	335.4	2,709.1	269.8	24.9	356.6	228.7	13.5	215.2	127.9	–	1.0	Aug.	
3,058.8	339.5	2,719.3	270.2	24.8	353.5	229.3	13.8	215.4	124.3	–	1.0	Sep.	
3,077.4	344.8	2,732.7	270.1	24.8	357.8	229.9	13.8	216.1	127.9	–	1.0	Oct.	
3,086.6	344.9	2,741.7	272.4	24.8	356.0	231.7	13.9	217.8	124.3	–	1.0	Nov.	
3,085.9	348.7	2,737.1	274.0	24.6	359.3	233.7	14.1	219.6	125.6	–	1.0	Dec.	
3,090.3	349.9	2,740.4	269.9	24.6	352.9	233.4	13.8	219.5	119.5	–	1.0	2023 Jan.	
3,102.0	355.3	2,746.7	269.2	24.5	361.2	232.5	13.7	218.8	128.7	–	1.1	Feb.	
3,101.5	354.8	2,746.7	267.8	23.6	356.2	232.6	13.6	219.0	123.6	–	1.0	Mar.	
3,107.6	355.6	2,752.0	266.8	23.6	354.0	232.7	13.9	218.8	121.2	–	1.0	Apr.	
3,120.7	360.8	2,760.0	267.2	23.7	351.4	232.4	13.6	218.8	119.0	–	1.0	May	
3,117.4	360.0	2,757.5	271.3	23.3	353.1	230.9	13.4	217.6	122.2	–	1.0	June	
3,125.3	362.1	2,763.3	270.2	23.4	353.8	232.4	13.5	218.9	121.4	–	1.0	July	
3,130.4	362.8	2,767.6	268.2	23.4	358.6	232.6	13.8	218.8	126.0	–	1.0	Aug.	
3,126.8	359.5	2,767.3	269.0	23.2	355.1	233.0	13.7	219.4	122.1	–	1.0	Sep.	
3,131.1	360.6	2,770.5	269.8	23.1	357.3	234.8	13.8	221.0	122.4	–	1.0	Oct.	
<b>Changes *</b>													
+ 39.9	+ 5.6	+ 34.3	+ 12.5	– 1.8	– 4.1	– 8.5	– 5.1	– 3.4	+ 4.3	–	– 0.2	2014	
+ 59.0	+ 4.5	+ 54.6	+ 14.8	– 2.1	– 6.6	– 6.9	– 4.8	– 2.0	+ 0.2	–	+ 0.0	2015	
+ 75.1	+ 9.7	+ 65.4	+ 4.7	– 0.9	– 30.9	– 7.3	– 4.0	– 3.3	– 23.6	–	– 0.4	2016	
+ 87.6	+ 9.4	+ 78.2	+ 15.8	+ 0.1	– 39.9	– 10.6	– 1.3	– 9.3	– 29.4	–	– 0.1	2017	
+ 108.7	+ 19.3	+ 89.4	– 6.7	– 0.9	– 37.1	– 10.5	– 2.7	– 7.8	– 26.6	–	– 0.0	2018	
+ 126.0	+ 18.9	+ 107.2	+ 6.8	– 0.8	– 17.8	– 5.5	– 2.6	– 2.9	– 12.3	–	+ 0.1	2019	
+ 145.0	+ 9.4	+ 135.5	+ 0.6	+ 6.1	– 2.8	– 1.1	– 1.5	+ 0.4	– 1.7	–	– 0.4	2020	
+ 140.1	+ 5.6	+ 134.5	+ 17.8	+ 2.3	– 14.6	– 3.3	– 1.3	– 2.0	– 11.3	–	– 0.0	2021	
+ 169.9	+ 33.5	+ 136.4	+ 14.9	– 0.1	– 15.7	+ 2.5	– 0.7	+ 3.3	– 18.2	–	– 0.0	2022	
+ 16.4	+ 2.5	+ 13.9	+ 0.1	+ 0.3	+ 1.1	– 0.4	– 0.0	– 0.3	+ 1.4	–	– 0.0	2022 May	
+ 15.1	+ 2.5	+ 12.6	– 1.9	– 0.1	– 4.1	– 0.9	– 0.0	– 0.8	– 3.2	–	– 0.0	June	
+ 22.5	+ 4.4	+ 18.1	+ 13.1	– 0.2	+ 0.2	+ 0.7	– 0.1	+ 0.8	– 0.5	–	– 0.0	July	
+ 22.0	+ 7.7	+ 14.3	– 1.2	– 0.0	– 3.6	+ 0.2	– 0.0	– 0.2	– 3.3	–	+ 0.0	Aug.	
+ 14.3	+ 4.0	+ 10.4	+ 0.5	– 0.1	– 3.1	+ 0.5	– 0.2	+ 0.7	– 3.6	–	+ 0.0	Sep.	
+ 18.6	+ 5.3	+ 13.4	– 0.2	– 0.0	+ 4.2	+ 0.6	– 0.0	+ 0.6	+ 3.6	–	– 0.0	Oct.	
+ 9.4	+ 0.1	+ 9.3	+ 2.4	+ 0.0	– 2.1	+ 1.6	+ 0.1	+ 1.4	– 3.6	–	+ 0.0	Nov.	
+ 0.3	+ 4.0	– 3.7	+ 1.6	– 0.3	+ 2.4	+ 1.0	+ 0.2	+ 0.9	+ 1.4	–	– 0.0	Dec.	
+ 4.4	+ 1.2	+ 3.3	– 4.2	+ 0.0	– 6.4	– 0.3	– 0.3	– 0.0	– 6.1	–	– 0.0	2023 Jan.	
+ 11.7	+ 5.4	+ 6.4	– 0.7	– 0.1	+ 8.3	– 0.9	– 0.1	– 0.7	+ 9.2	–	+ 0.1	Feb.	
– 0.4	– 0.5	+ 0.0	– 1.4	– 0.3	– 4.8	+ 0.3	– 0.0	+ 0.3	– 5.1	–	– 0.0	Mar.	
+ 6.1	+ 0.8	+ 5.3	– 1.0	+ 0.0	– 2.1	+ 0.1	+ 0.3	– 0.2	– 2.3	–	+ 0.0	Apr.	
+ 13.2	+ 5.2	+ 8.0	+ 0.4	+ 0.1	– 2.7	– 0.4	– 0.3	– 0.0	– 2.3	–	– 0.0	May	
– 3.2	– 1.3	– 2.0	+ 4.1	– 0.3	+ 1.8	– 1.5	– 0.2	– 1.2	+ 3.2	–	– 0.0	June	
+ 8.0	+ 1.8	+ 6.2	– 1.1	+ 0.0	+ 0.7	+ 1.5	+ 0.2	+ 1.3	– 0.8	–	– 0.0	July	
+ 5.1	+ 0.8	+ 4.3	– 2.0	+ 0.1	+ 4.8	+ 0.2	+ 0.3	– 0.1	+ 4.6	–	– 0.0	Aug.	
– 3.6	– 3.3	– 0.2	+ 0.7	– 0.2	– 3.5	+ 0.4	– 0.2	+ 0.6	– 3.9	–	– 0.0	Sep.	
+ 4.4	+ 1.1	+ 3.2	+ 0.8	– 0.1	+ 2.1	+ 1.8	+ 0.2	+ 1.6	+ 0.3	–	– 0.0	Oct.	

#### IV. Banks

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

billion €

Lending to domestic enterprises and households (excluding holdings of negotiable money market paper and excluding securities portfolios) <sup>1</sup>

Period	of which:													
	Total	Housing loans			Lending to enterprises and self-employed persons									
		Mortgage loans, total	Total	Mortgage loans secured by residential real estate	Other housing loans	Total	of which: Housing loans	Manufacturing	Electricity, gas and water supply; refuse disposal, mining and quarrying	Construction	Wholesale and retail trade; repair of motor vehicles and motor-cycles	Agriculture, forestry, fishing and aquaculture	Transportation and storage; post and telecommunications	Financial intermediation (excluding MFIs) and insurance companies
<b>End of year or quarter *</b>														
<b>Lending, total</b>														
2021	3,147.5	1,591.4	1,678.2	1,373.0	305.2	1,701.5	477.2	146.1	128.3	98.0	140.4	55.9	55.6	186.3
2022 Q3	3,351.0	1,659.4	1,758.3	1,433.0	325.2	1,845.3	503.1	163.6	147.5	107.3	163.3	56.9	64.9	202.3
2022 Q4	3,365.3	1,676.5	1,773.9	1,448.0	325.8	1,852.2	509.1	160.0	137.7	108.8	155.1	56.3	65.2	211.9
2023 Q1	3,385.9	1,687.3	1,779.0	1,457.3	321.7	1,872.4	512.9	162.8	138.1	110.9	157.5	56.1	63.1	222.8
2023 Q2	3,397.0	1,701.4	1,787.6	1,471.4	316.3	1,879.4	517.7	162.6	137.7	112.5	159.2	56.3	61.9	221.5
2023 Q3	3,401.6	1,735.7	1,797.1	1,505.7	291.5	1,878.2	522.3	160.0	134.7	113.3	159.5	56.4	61.3	223.0
<b>Short-term lending</b>														
2021	231.8	-	6.9	-	6.9	202.7	4.4	31.6	9.1	18.0	36.4	3.3	3.9	35.0
2022 Q3	292.2	-	7.4	-	7.4	260.7	4.9	46.2	24.4	21.1	45.3	3.6	4.2	42.2
2022 Q4	279.4	-	7.4	-	7.4	248.9	5.0	41.6	12.1	20.8	44.7	3.3	3.8	49.8
2023 Q1	284.4	-	7.6	-	7.6	253.6	5.3	43.4	8.1	21.9	46.5	3.4	3.7	54.0
2023 Q2	279.6	-	7.6	-	7.6	248.9	5.4	42.3	7.7	22.6	46.8	3.8	3.6	50.4
2023 Q3	274.8	-	7.5	-	7.5	244.4	5.4	40.4	5.6	22.6	47.2	3.8	3.8	51.3
<b>Medium-term lending</b>														
2021	314.5	-	40.5	-	40.5	239.5	20.6	28.3	5.4	19.3	20.8	4.3	12.3	52.0
2022 Q3	339.5	-	43.2	-	43.2	265.9	23.1	30.5	6.0	21.6	23.4	4.3	22.2	54.4
2022 Q4	348.7	-	43.4	-	43.4	275.8	23.5	31.2	6.5	22.2	24.3	4.1	23.0	56.2
2023 Q1	354.8	-	42.8	-	42.8	283.5	23.7	32.5	9.2	22.4	24.8	4.1	21.0	59.3
2023 Q2	360.0	-	42.8	-	42.8	289.3	24.1	34.0	8.0	22.8	26.9	4.1	19.1	61.3
2023 Q3	359.5	-	42.8	-	42.8	289.2	24.5	34.7	5.8	23.0	26.9	4.1	18.2	62.5
<b>Long-term lending</b>														
2021	2,601.2	1,591.4	1,630.9	1,373.0	257.8	1,259.3	452.2	86.2	113.8	60.8	83.2	48.3	39.4	99.3
2022 Q3	2,719.3	1,659.4	1,707.6	1,433.0	274.6	1,318.6	475.1	86.8	117.1	64.7	94.6	49.0	38.6	105.6
2022 Q4	2,737.1	1,676.5	1,723.1	1,448.0	275.1	1,327.5	480.6	87.2	119.0	65.8	86.1	48.9	38.4	105.9
2023 Q1	2,746.7	1,687.3	1,728.6	1,457.3	271.3	1,335.3	483.9	86.9	120.8	66.6	86.1	48.6	38.4	109.5
2023 Q2	2,757.5	1,701.4	1,737.2	1,471.4	265.9	1,341.2	488.2	86.3	122.1	67.1	85.5	48.5	39.2	109.7
2023 Q3	2,767.3	1,735.7	1,746.8	1,505.7	241.2	1,344.7	492.4	85.0	123.3	67.7	85.3	48.5	39.2	109.1
<b>Lending, total</b>														
<b>Change during quarter *</b>														
2022 Q3	+ 79.0	+ 23.4	+ 26.9	+ 20.5	+ 6.4	+ 58.5	+ 8.6	+ 2.5	+ 14.9	+ 2.7	+ 9.6	- 0.1	+ 8.5	+ 2.0
2022 Q4	+ 16.5	+ 17.2	+ 15.4	+ 14.8	+ 0.6	+ 8.9	+ 5.9	- 3.2	- 9.9	+ 1.4	- 2.7	- 0.6	+ 0.3	+ 10.2
2023 Q1	+ 20.4	+ 11.3	+ 4.8	+ 8.6	- 3.8	+ 19.9	+ 3.5	+ 2.8	+ 0.4	+ 2.1	+ 2.1	- 0.2	- 2.1	+ 10.6
2023 Q2	+ 12.4	+ 11.5	+ 9.1	+ 11.5	- 2.4	+ 8.2	+ 5.3	- 0.1	+ 0.4	+ 1.6	+ 1.7	+ 0.2	- 0.9	- 0.2
2023 Q3	+ 4.7	+ 10.9	+ 9.2	+ 11.2	- 2.0	- 1.4	+ 4.2	- 2.5	- 2.9	+ 0.8	+ 0.3	+ 0.1	- 0.6	+ 1.3
<b>Short-term lending</b>														
2022 Q3	+ 20.2	-	+ 0.3	-	+ 0.3	+ 19.8	+ 0.3	+ 0.7	+ 12.8	+ 0.9	+ 2.8	- 0.3	- 0.2	+ 0.1
2022 Q4	- 11.8	-	0.0	-	0.0	- 10.8	+ 0.1	- 4.3	- 12.3	- 0.3	- 0.5	- 0.3	- 0.3	+ 7.8
2023 Q1	+ 4.7	-	+ 0.2	-	+ 0.2	+ 4.7	+ 0.3	+ 1.8	- 4.0	+ 1.1	+ 1.9	+ 0.2	- 0.1	+ 3.9
2023 Q2	- 3.7	-	0.0	-	0.0	- 3.6	+ 0.1	- 1.1	- 0.5	+ 0.8	+ 0.2	+ 0.3	- 0.0	- 2.4
2023 Q3	- 4.8	-	0.1	-	0.1	- 4.7	- 0.0	- 1.9	- 2.1	- 0.0	+ 0.4	+ 0.0	+ 0.2	+ 0.9
<b>Medium-term lending</b>														
2022 Q3	+ 16.1	-	+ 0.9	-	+ 0.9	+ 16.1	+ 0.9	+ 1.5	+ 0.2	+ 0.5	+ 1.1	- 0.0	+ 8.9	+ 0.8
2022 Q4	+ 9.3	-	+ 0.1	-	+ 0.1	+ 10.0	+ 0.5	+ 0.7	+ 0.5	+ 0.7	+ 0.9	- 0.1	+ 0.8	+ 1.9
2023 Q1	+ 6.1	-	0.5	-	0.5	+ 7.6	+ 0.3	+ 1.2	+ 2.7	+ 0.2	+ 0.5	- 0.1	- 2.0	+ 3.0
2023 Q2	+ 4.7	-	0.0	-	0.0	+ 5.4	+ 0.4	+ 1.6	- 1.3	+ 0.4	+ 2.0	- 0.0	- 1.6	+ 2.1
2023 Q3	- 0.8	-	0.2	-	0.2	- 0.5	+ 0.2	+ 0.7	- 2.1	+ 0.2	+ 0.1	+ 0.1	- 0.9	+ 1.1
<b>Long-term lending</b>														
2022 Q3	+ 42.7	+ 23.4	+ 25.7	+ 20.5	+ 5.2	+ 22.6	+ 7.4	+ 0.3	+ 1.9	+ 1.3	+ 5.7	+ 0.3	- 0.2	+ 1.2
2022 Q4	+ 19.0	+ 17.2	+ 15.3	+ 14.8	+ 0.5	+ 9.7	+ 5.3	+ 0.3	+ 1.9	+ 1.1	- 3.1	- 0.1	- 0.2	+ 0.5
2023 Q1	+ 9.6	+ 11.3	+ 5.1	+ 8.6	- 3.5	+ 7.6	+ 2.9	- 0.3	+ 1.7	+ 0.8	- 0.2	- 0.3	- 0.0	+ 3.7
2023 Q2	+ 11.3	+ 11.5	+ 9.1	+ 11.5	- 2.4	+ 6.4	+ 4.8	- 0.6	+ 1.3	+ 0.5	- 0.5	- 0.1	+ 0.8	+ 0.1
2023 Q3	+ 10.3	+ 10.9	+ 9.5	+ 11.2	- 1.7	+ 3.8	+ 4.0	- 1.3	+ 1.3	+ 0.6	- 0.2	+ 0.1	+ 0.0	- 0.6

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

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

IV. Banks

						Lending to employees and other individuals					Lending to non-profit institutions				
Services sector (including the professions)				Memo items:		Other lending									
Total	of which:			Lending to self-employed persons <sup>2</sup>	Lending to craft enterprises	Total	Housing loans	Total	of which:		Total	of which: Housing loans	Period		
	Housing enterprises	Holding companies	Other real estate activities						Instalment loans <sup>3</sup>	Debit balances on wage, salary and pension accounts					
<b>End of year or quarter *</b>													<b>Lending, total</b>		
890.8	308.6	63.8	207.9	483.8	48.3	1,429.3	1,196.6	232.7	184.1	6.9	16.7	4.4	2021		
939.6	329.1	71.2	215.5	500.0	54.1	1,488.6	1,250.6	238.0	187.3	7.5	17.1	4.6	2022 Q3		
957.4	334.0	79.9	218.2	501.7	54.1	1,495.8	1,260.1	235.7	185.9	7.1	17.3	4.6	2022 Q4		
961.2	336.3	78.6	220.4	503.4	54.2	1,496.2	1,261.4	234.7	185.5	7.3	17.4	4.7	2023 Q1		
967.7	340.4	78.1	220.8	504.3	55.0	1,500.1	1,265.2	234.9	186.0	7.3	17.5	4.7	2023 Q2		
970.0	344.0	76.3	222.5	505.0	54.6	1,505.9	1,270.1	235.7	186.9	7.3	17.5	4.7	2023 Q3		
													<b>Short-term lending</b>		
65.5	14.5	13.0	10.0	19.7	3.8	28.6	2.5	26.1	1.4	6.9	0.5	0.0	2021		
73.8	15.8	14.9	11.2	20.9	5.3	30.8	2.5	28.3	1.7	7.5	0.6	0.0	2022 Q3		
73.0	16.1	15.6	10.8	20.4	5.0	29.9	2.4	27.5	1.7	7.1	0.6	-	2022 Q4		
72.5	16.5	14.9	11.6	21.0	5.3	30.2	2.3	27.9	2.1	7.3	0.6	-	2023 Q1		
71.7	16.5	14.2	11.0	21.0	6.7	30.1	2.2	27.9	2.3	7.3	0.6	-	2023 Q2		
69.7	16.2	13.2	11.6	20.6	6.5	29.9	2.1	27.8	2.2	7.3	0.6	-	2023 Q3		
													<b>Medium-term lending</b>		
97.0	23.1	15.2	27.1	30.0	3.3	74.4	19.8	54.6	50.6	-	0.6	0.1	2021		
103.6	25.2	17.7	27.5	30.4	6.4	73.0	20.1	52.9	48.7	-	0.5	0.1	2022 Q3		
108.2	25.4	20.1	28.4	30.1	6.5	72.3	19.8	52.5	48.0	-	0.6	0.1	2022 Q4		
110.3	25.3	21.4	29.0	30.3	6.4	70.8	19.0	51.8	47.3	-	0.5	0.1	2023 Q1		
113.1	25.9	22.0	29.5	30.9	6.2	70.1	18.6	51.5	46.9	-	0.6	0.1	2023 Q2		
113.9	26.5	20.8	30.9	31.1	6.2	69.7	18.2	51.5	46.9	-	0.6	0.1	2023 Q3		
													<b>Long-term lending</b>		
728.4	271.1	35.6	170.8	434.1	41.3	1,326.3	1,174.3	152.0	132.1	-	15.6	4.3	2021		
762.2	288.0	38.5	176.7	448.7	42.5	1,384.8	1,228.0	156.7	137.0	-	15.9	4.5	2022 Q3		
776.2	292.6	44.2	179.0	451.1	42.6	1,393.5	1,237.9	155.6	136.2	-	16.1	4.6	2022 Q4		
778.4	294.6	42.4	179.7	452.1	42.5	1,395.1	1,240.1	155.1	136.1	-	16.3	4.6	2023 Q1		
782.8	298.0	41.9	180.3	452.3	42.1	1,399.9	1,244.4	155.5	136.8	-	16.3	4.6	2023 Q2		
786.5	301.3	42.3	180.0	453.3	41.9	1,406.3	1,249.8	156.4	137.8	-	16.4	4.6	2023 Q3		
<b>Change during quarter *</b>													<b>Lending, total</b>		
+ 18.3	+ 6.2	+ 3.1	+ 3.9	+ 4.3	+ 0.2	+ 20.4	+ 18.2	+ 2.1	+ 1.5	+ 0.1	+ 0.2	+ 0.1	2022 Q3		
+ 13.3	+ 4.9	+ 3.5	+ 2.4	+ 2.1	- 0.1	+ 7.5	+ 9.5	- 2.0	- 1.3	- 0.4	+ 0.2	+ 0.0	2022 Q4		
+ 4.1	+ 2.5	- 1.4	+ 2.2	+ 1.5	+ 0.2	+ 0.4	+ 1.3	- 0.8	- 0.8	+ 0.3	+ 0.1	+ 0.1	2023 Q1		
+ 6.2	+ 4.1	- 0.6	+ 0.4	+ 0.7	+ 0.1	+ 4.1	+ 3.8	+ 0.3	+ 0.5	- 0.0	+ 0.1	+ 0.0	2023 Q2		
+ 2.1	+ 3.5	- 1.8	+ 1.7	+ 0.5	- 0.4	+ 6.0	+ 5.0	+ 1.0	+ 0.8	+ 0.1	+ 0.0	- 0.0	2023 Q3		
													<b>Short-term lending</b>		
+ 3.1	- 0.0	+ 1.3	+ 0.1	- 0.1	- 0.1	+ 0.5	+ 0.0	+ 0.4	+ 0.0	+ 0.1	- 0.1	-	2022 Q3		
- 0.6	+ 0.2	+ 0.7	- 0.3	- 0.1	- 0.2	- 0.9	- 0.1	- 0.8	- 0.0	- 0.4	- 0.1	- 0.0	2022 Q4		
- 0.1	+ 0.4	- 0.7	+ 0.7	+ 0.5	+ 0.3	+ 0.1	- 0.0	+ 0.1	+ 0.0	+ 0.3	-	-	2023 Q1		
- 1.0	+ 0.0	- 0.8	- 0.6	- 0.1	+ 0.2	- 0.0	- 0.2	+ 0.1	+ 0.2	- 0.0	+ 0.0	-	2023 Q2		
- 2.3	- 0.3	- 1.0	+ 0.5	- 0.6	- 0.2	- 0.1	- 0.1	+ 0.0	- 0.1	+ 0.1	- 0.0	-	2023 Q3		
													<b>Medium-term lending</b>		
+ 3.2	+ 1.0	+ 0.6	+ 0.9	+ 0.1	+ 0.0	- 0.1	- 0.0	- 0.1	- 0.2	-	+ 0.0	+ 0.0	2022 Q3		
+ 4.6	+ 0.1	+ 2.4	+ 0.8	+ 0.1	+ 0.1	- 0.7	- 0.3	- 0.4	- 0.6	-	+ 0.0	- 0.0	2022 Q4		
+ 2.1	- 0.1	+ 1.3	+ 0.7	+ 0.2	- 0.1	- 1.6	- 0.8	- 0.7	- 0.7	-	- 0.0	-	2023 Q1		
+ 2.3	+ 0.7	+ 0.6	+ 0.4	+ 0.3	- 0.0	- 0.7	- 0.4	- 0.3	- 0.4	-	+ 0.0	- 0.0	2023 Q2		
+ 0.5	+ 0.6	- 1.2	+ 1.2	+ 0.2	+ 0.0	- 0.4	- 0.4	+ 0.1	- 0.1	-	+ 0.1	- 0.0	2023 Q3		
													<b>Long-term lending</b>		
+ 12.0	+ 5.2	+ 1.2	+ 2.9	+ 4.3	+ 0.3	+ 20.0	+ 18.2	+ 1.7	+ 1.7	-	+ 0.2	+ 0.1	2022 Q3		
+ 9.3	+ 4.6	+ 0.5	+ 1.9	+ 2.1	+ 0.1	+ 9.1	+ 9.9	- 0.9	- 0.7	-	+ 0.2	+ 0.1	2022 Q4		
+ 2.1	+ 2.2	- 2.0	+ 0.8	+ 0.9	- 0.1	+ 1.9	+ 2.1	- 0.2	- 0.1	-	+ 0.1	+ 0.1	2023 Q1		
+ 4.9	+ 3.4	- 0.5	+ 0.6	+ 0.6	- 0.1	+ 4.8	+ 4.3	+ 0.5	+ 0.7	-	+ 0.1	+ 0.0	2023 Q2		
+ 3.9	+ 3.2	+ 0.4	+ 0.1	+ 0.9	- 0.2	+ 6.4	+ 5.5	+ 0.9	+ 1.0	-	+ 0.0	+ 0.0	2023 Q3		

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

#### IV. Banks

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

€ billion

Period	Deposits, total	Sight deposits	Time deposits 1,2					Savings deposits 3	Bank savings bonds 4	Memo item:				
			Total	for up to and including 1 year	for more than 1 year 2					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos		
					Total	for up to and including 2 years	for more than 2 years							
<b>Domestic non-banks, total</b>													<b>End of year or month *</b>	
2020	3,885.2	2,513.0	783.3	188.9	594.4	47.9	546.5	560.6	28.3	34.4	14.4	0.1		
2021	3,976.3	2,654.6	736.0	161.0	574.9	49.7	525.2	561.2	24.5	34.2	17.1	1.3		
2022	4,162.0	2,720.6	873.5	314.8	558.7	50.5	508.2	533.2	34.6	35.9	18.5	3.9		
2022 Nov.	4,205.6	2,767.9	869.3	309.6	559.7	46.8	512.9	536.9	31.5	34.8	18.4	4.4		
Dec.	4,162.0	2,720.6	873.5	314.8	558.7	50.5	508.2	533.2	34.6	35.9	18.5	3.9		
2023 Jan.	4,199.7	2,722.8	913.5	351.2	562.3	52.1	510.2	522.7	40.6	36.9	18.6	2.1		
Feb.	4,197.1	2,687.7	947.9	381.5	566.4	54.2	512.3	516.0	45.5	37.2	18.7	2.9		
Mar.	4,167.4	2,639.8	968.6	402.4	566.3	55.7	510.6	507.2	51.7	36.4	18.7	3.3		
Apr.	4,167.3	2,632.0	978.5	408.7	569.7	59.4	510.3	498.6	58.3	36.5	18.9	3.0		
May	4,172.9	2,623.9	993.0	419.3	573.6	61.7	511.9	490.6	65.4	36.6	20.4	4.1		
June	4,176.3	2,600.9	1,020.0	445.4	574.6	64.4	510.2	483.3	72.1	36.5	20.3	2.8		
July	4,180.2	2,582.2	1,042.9	468.5	574.4	65.8	508.6	475.9	79.1	36.7	19.9	3.5		
Aug.	4,188.4	2,568.4	1,061.7	490.2	571.6	67.3	504.3	467.5	90.7	36.9	19.9	4.7		
Sep.	4,189.3	2,558.0	1,072.5	497.7	574.8	71.5	503.3	461.8	97.0	37.1	19.9	6.5		
Oct.	4,198.0	2,544.5	1,086.5	510.9	575.6	74.6	501.0	455.4	111.6	37.3	19.9	6.3		
<b>Changes *</b>													<b>End of year or month *</b>	
2021	+ 95.3	+ 144.3	- 46.2	- 27.3	- 18.9	+ 1.5	- 20.5	+ 0.7	- 3.5	- 0.2	+ 2.7	+ 1.2		
2022	+ 191.8	+ 65.8	+ 143.4	+ 152.5	- 9.1	+ 0.6	- 9.7	- 27.5	+ 10.1	+ 1.7	+ 1.2	+ 2.6		
2022 Nov.	+ 45.3	+ 20.9	+ 26.3	+ 18.7	+ 7.7	+ 1.3	+ 6.4	- 5.3	+ 3.4	+ 1.3	+ 0.1	+ 2.9		
Dec.	- 43.4	- 47.1	+ 4.2	+ 5.2	- 1.0	+ 3.7	- 4.7	- 3.7	+ 3.2	+ 1.1	+ 0.0	- 0.6		
2023 Jan.	+ 37.6	- 2.9	+ 40.0	+ 36.4	+ 3.6	+ 1.6	+ 2.0	- 5.5	+ 6.0	+ 1.0	+ 0.1	- 1.8		
Feb.	- 2.5	- 35.0	+ 34.4	+ 30.3	+ 4.1	+ 2.1	+ 2.0	- 6.7	+ 4.8	+ 0.4	+ 0.1	+ 0.8		
Mar.	- 29.6	- 47.3	+ 20.2	+ 20.3	- 0.1	+ 1.5	- 1.6	- 8.7	+ 6.2	- 0.1	- 0.0	+ 0.3		
Apr.	- 0.1	- 7.9	+ 9.8	+ 6.4	+ 3.4	+ 3.7	- 0.3	- 8.6	+ 6.6	+ 0.0	+ 0.1	- 0.2		
May	+ 5.6	- 7.9	+ 14.5	+ 10.5	+ 3.9	+ 2.3	+ 1.6	- 8.0	+ 7.1	+ 0.1	+ 1.6	+ 1.1		
June	+ 2.3	- 23.0	+ 26.0	+ 25.4	+ 0.7	+ 2.4	- 1.7	- 7.3	+ 6.7	- 0.1	- 0.1	- 1.3		
July	+ 3.8	- 18.7	+ 22.8	+ 23.1	- 0.3	+ 1.4	- 1.7	- 7.3	+ 7.0	+ 0.2	- 0.5	+ 0.7		
Aug.	+ 8.2	- 13.2	+ 21.3	+ 21.3	+ 0.0	+ 1.9	- 1.8	- 8.5	+ 8.5	+ 0.2	+ 0.0	+ 1.2		
Sep.	+ 0.9	- 10.5	+ 10.7	+ 8.0	+ 2.7	+ 3.9	- 1.2	- 5.7	+ 6.3	+ 0.2	+ 0.0	+ 1.8		
Oct.	+ 8.7	- 13.4	+ 14.0	+ 13.2	+ 0.8	+ 3.1	- 2.3	- 6.4	+ 14.6	+ 0.3	- 0.0	- 0.2		
<b>Domestic government</b>													<b>End of year or month *</b>	
2020	229.5	80.1	143.0	59.6	83.5	20.9	62.6	2.7	3.7	25.4	2.1	-		
2021	210.1	82.4	121.9	42.0	79.9	23.8	56.1	2.5	3.3	25.8	2.0	1.0		
2022	279.8	82.5	191.6	106.8	84.9	23.1	61.7	2.0	3.7	27.3	1.9	2.4		
2022 Nov.	304.5	106.0	192.8	109.6	83.2	20.8	62.4	2.1	3.7	26.6	1.9	2.4		
Dec.	279.8	82.5	191.6	106.8	84.9	23.1	61.7	2.0	3.7	27.3	1.9	2.4		
2023 Jan.	299.4	94.5	199.3	114.4	84.9	23.1	61.8	1.8	3.8	27.5	1.9	0.3		
Feb.	317.8	101.4	211.0	123.3	87.6	23.9	63.8	1.7	3.8	27.5	1.9	1.3		
Mar.	308.9	92.6	211.0	123.9	87.1	23.4	63.7	1.6	3.8	26.8	1.9	1.1		
Apr.	295.1	85.4	204.4	116.3	88.1	24.7	63.4	1.5	3.8	26.8	1.9	1.4		
May	300.1	92.2	202.7	115.0	87.7	24.3	63.4	1.3	3.9	26.8	1.9	1.7		
June	308.1	95.9	207.0	119.2	87.7	24.2	63.5	1.2	4.0	26.6	1.8	0.5		
July	298.3	85.7	207.5	121.1	86.4	23.0	63.4	1.1	4.0	26.7	1.8	0.8		
Aug.	305.6	95.1	205.4	119.3	86.1	22.8	63.3	1.0	4.1	26.6	1.9	2.2		
Sep.	304.9	94.2	205.6	119.5	86.2	23.9	62.2	0.9	4.2	26.4	1.8	3.8		
Oct.	291.0	92.3	193.5	108.0	85.6	23.5	62.0	0.9	4.2	26.2	1.8	2.9		
<b>Changes *</b>													<b>End of year or month *</b>	
2021	- 17.9	+ 3.4	- 20.8	- 17.7	- 3.0	+ 2.9	- 6.0	- 0.2	- 0.4	+ 0.4	- 0.0	+ 1.0		
2022	+ 69.1	+ 0.2	+ 69.2	+ 64.7	+ 4.5	- 0.9	+ 5.4	- 0.6	+ 0.3	+ 1.5	- 0.1	+ 1.4		
2022 Nov.	+ 33.0	+ 19.2	+ 13.9	+ 8.3	+ 5.6	+ 1.0	+ 4.6	- 0.2	+ 0.1	+ 0.8	- 0.0	+ 2.4		
Dec.	- 24.7	- 23.5	- 1.1	- 2.8	+ 1.7	+ 2.4	- 0.7	- 0.1	- 0.0	+ 0.7	- 0.0	-		
2023 Jan.	+ 19.7	+ 11.9	+ 7.7	+ 7.6	+ 0.1	- 0.1	+ 0.1	- 0.1	+ 0.2	+ 0.2	- 0.0	- 2.1		
Feb.	+ 18.3	+ 6.8	+ 11.6	+ 8.9	+ 2.7	+ 0.8	+ 1.9	- 0.1	- 0.1	+ 0.0	- 0.0	+ 1.1		
Mar.	- 8.9	- 8.8	- 0.1	+ 0.6	- 0.6	- 0.5	- 0.2	- 0.1	+ 0.0	- 0.0	- 0.0	- 0.2		
Apr.	- 14.1	- 7.1	- 6.9	- 7.9	+ 1.0	+ 1.3	- 0.3	- 0.1	- 0.0	+ 0.0	- 0.0	+ 0.2		
May	+ 5.0	+ 6.6	- 1.6	- 1.3	- 0.4	- 0.4	+ 0.0	- 0.1	+ 0.1	+ 0.0	- 0.0	+ 0.4		
June	+ 8.0	+ 3.8	+ 4.2	+ 4.2	- 0.0	- 0.1	+ 0.1	- 0.1	+ 0.1	- 0.2	- 0.0	- 1.3		
July	- 9.8	- 10.2	+ 0.5	+ 1.8	- 1.3	- 1.2	- 0.1	- 0.2	+ 0.0	+ 0.0	-	+ 0.4		
Aug.	+ 7.3	+ 9.3	- 2.1	- 1.8	- 0.4	- 0.3	- 0.1	- 0.1	+ 0.2	- 0.1	+ 0.0	+ 1.4		
Sep.	- 0.7	- 0.9	+ 0.3	+ 0.2	+ 0.1	+ 1.2	- 1.1	- 0.1	+ 0.0	- 0.2	- 0.0	+ 1.6		
Oct.	- 14.0	- 1.9	- 12.2	- 11.5	- 0.6	- 0.4	- 0.2	- 0.0	+ 0.0	- 0.2	- 0.0	- 0.9		

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

1 Including subordinated liabilities and liabilities arising from registered debt securities. 2 Including deposits under savings and loan contracts (see Table IV.12). 3 Excluding deposits under savings and loan contracts (see also footnote 2).



IV. Banks

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

€ billion

Period	Deposits, total	Sight deposits	Time deposits 1,2					Savings deposits 3	Bank savings bonds 4	Memo item:				
			Total	for up to and including 1 year	for more than 1 year 2					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos		
					Total	for up to and including 2 years	for more than 2 years							
<b>Domestic enterprises and households</b>													<b>End of year or month *</b>	
2020	3,655.7	2,432.9	640.3	129.3	511.0	27.0	483.9	557.9	24.6	9.0	12.3	0.1		
2021	3,766.2	2,572.2	614.1	119.0	495.0	25.9	469.2	558.7	21.2	8.4	15.1	0.3		
2022	3,882.2	2,638.1	681.9	208.0	473.9	27.4	446.5	531.2	31.0	8.6	16.6	1.5		
2022 Nov.	3,901.1	2,661.9	676.5	200.0	476.5	26.0	450.5	534.8	27.8	8.3	16.4	2.1		
2022 Dec.	3,882.2	2,638.1	681.9	208.0	473.9	27.4	446.5	531.2	31.0	8.6	16.6	1.5		
2023 Jan.	3,900.2	2,628.3	714.2	236.8	477.4	29.0	448.4	520.9	36.8	9.4	16.7	1.9		
2023 Feb.	3,879.3	2,586.4	737.0	258.2	478.8	30.3	448.5	514.3	41.7	9.7	16.8	1.6		
2023 Mar.	3,858.5	2,547.3	757.6	278.4	479.2	32.3	446.9	505.7	47.9	9.7	16.9	2.2		
2023 Apr.	3,872.2	2,546.5	774.1	292.5	481.6	34.7	446.9	497.1	54.5	9.7	17.0	1.7		
2023 May	3,872.8	2,531.8	790.2	304.3	485.9	37.4	448.5	489.2	61.5	9.8	18.5	2.4		
2023 June	3,868.2	2,505.0	813.1	326.1	486.9	40.2	446.7	482.0	68.1	9.9	18.5	2.3		
2023 July	3,881.9	2,496.5	835.4	347.4	488.0	42.8	445.2	474.9	75.1	10.0	18.0	2.7		
2023 Aug.	3,882.8	2,473.4	856.4	370.9	485.5	44.5	441.0	466.5	86.6	10.3	18.0	2.4		
2023 Sep.	3,884.4	2,463.8	866.9	378.3	488.6	47.5	441.1	460.9	92.9	10.7	18.1	2.7		
2023 Oct.	3,907.1	2,452.2	892.9	402.9	490.0	51.0	439.0	454.5	107.4	11.2	18.1	3.4		
<b>Changes *</b>														
2021	+ 113.2	+ 140.9	- 25.5	- 9.6	- 15.9	- 1.4	- 14.5	+ 0.9	- 3.1	- 0.6	+ 2.8	+ 0.2		
2022	+ 122.7	+ 65.6	+ 74.2	+ 87.8	- 13.6	+ 1.4	- 15.1	- 27.0	+ 9.8	+ 0.2	+ 1.3	+ 1.3		
2022 Nov.	+ 12.2	+ 1.7	+ 12.4	+ 10.3	+ 2.1	+ 0.3	+ 1.8	- 5.1	+ 3.3	+ 0.4	+ 0.1	+ 0.5		
2022 Dec.	- 18.7	- 23.7	+ 5.4	+ 8.0	- 2.7	+ 1.4	- 4.0	- 3.6	+ 3.2	+ 0.3	+ 0.0	- 0.6		
2023 Jan.	+ 17.9	- 14.9	+ 32.3	+ 28.7	+ 3.6	+ 1.7	+ 1.9	- 5.3	+ 5.8	+ 0.8	+ 0.1	+ 0.3		
2023 Feb.	- 20.8	- 41.9	+ 22.8	+ 21.4	+ 1.4	+ 1.3	+ 0.1	- 6.6	+ 4.9	+ 0.3	+ 0.2	- 0.3		
2023 Mar.	- 20.7	- 38.5	+ 20.3	+ 19.7	+ 0.6	+ 2.0	- 1.4	- 8.6	+ 6.2	- 0.1	+ 0.0	+ 0.5		
2023 Apr.	+ 14.0	- 0.7	+ 16.7	+ 14.3	+ 2.4	+ 2.4	- 0.0	- 8.5	+ 6.6	+ 0.0	+ 0.1	- 0.5		
2023 May	+ 0.6	- 14.6	+ 16.1	+ 11.8	+ 4.3	+ 2.7	+ 1.6	- 7.9	+ 7.1	+ 0.0	+ 1.6	+ 0.7		
2023 June	- 5.6	- 26.8	+ 21.8	+ 21.1	+ 0.7	+ 2.4	- 1.8	- 7.2	+ 6.6	+ 0.1	- 0.1	- 0.1		
2023 July	+ 13.7	- 8.5	+ 22.3	+ 21.3	+ 1.0	+ 2.6	- 1.6	- 7.2	+ 7.0	+ 0.1	- 0.5	+ 0.3		
2023 Aug.	+ 0.9	- 22.5	+ 23.4	+ 23.1	+ 0.4	+ 2.1	- 1.8	- 8.4	+ 8.4	+ 0.3	- 0.0	- 0.3		
2023 Sep.	+ 1.6	- 9.6	+ 10.5	+ 7.9	+ 2.6	+ 2.7	- 0.1	- 5.6	+ 6.3	+ 0.4	+ 0.1	+ 0.2		
2023 Oct.	+ 22.7	- 11.6	+ 26.1	+ 24.7	+ 1.5	+ 3.5	- 2.0	- 6.4	+ 14.5	+ 0.5	+ 0.0	+ 0.7		
<b>of which: Domestic enterprises</b>													<b>End of year or month *</b>	
2020	1,116.1	719.1	381.7	89.2	292.5	15.0	277.5	5.8	9.4	2.3	9.7	0.1		
2021	1,142.7	765.1	364.3	87.4	276.9	15.8	261.1	5.3	8.0	2.3	12.2	0.3		
2022	1,193.5	783.4	397.1	140.8	256.3	16.8	239.5	4.4	8.6	1.9	13.5	1.5		
2022 Nov.	1,223.9	805.3	405.5	144.1	261.4	16.2	245.1	4.7	8.4	1.9	13.3	2.1		
2022 Dec.	1,193.5	783.4	397.1	140.8	256.3	16.8	239.5	4.4	8.6	1.9	13.5	1.5		
2023 Jan.	1,220.2	792.5	414.7	156.8	257.9	17.1	240.8	4.3	8.7	2.0	13.5	1.9		
2023 Feb.	1,199.2	761.5	424.4	166.8	257.6	17.0	240.6	4.3	9.1	2.0	13.6	1.6		
2023 Mar.	1,192.4	749.3	429.7	174.1	255.5	16.8	238.8	4.1	9.3	1.9	13.6	2.2		
2023 Apr.	1,190.6	743.1	433.9	178.0	255.9	17.4	238.6	4.0	9.6	2.0	13.7	1.7		
2023 May	1,189.3	742.5	433.2	175.7	257.5	17.9	239.6	3.9	9.7	2.0	15.2	2.4		
2023 June	1,181.8	726.7	441.4	185.1	256.2	18.3	237.9	3.8	9.9	2.0	15.1	2.3		
2023 July	1,189.1	727.3	447.9	192.7	255.3	18.6	236.7	3.7	10.1	2.1	14.6	2.7		
2023 Aug.	1,189.2	719.9	452.0	202.1	249.9	18.0	231.9	3.7	13.6	2.2	14.6	2.4		
2023 Sep.	1,187.8	719.1	451.5	200.9	250.6	18.7	231.9	3.6	13.6	2.2	14.6	2.7		
2023 Oct.	1,209.6	727.6	464.5	215.8	248.7	19.2	229.5	3.5	14.0	2.3	14.6	3.4		
<b>Changes *</b>														
2021	+ 28.5	+ 47.1	- 16.8	- 1.2	- 15.7	+ 0.5	- 16.2	- 0.5	- 1.3	+ 0.0	+ 2.6	+ 0.2		
2022	+ 56.2	+ 17.7	+ 38.8	+ 52.1	- 13.3	+ 1.0	- 14.3	- 0.9	+ 0.6	- 0.5	+ 1.0	+ 1.3		
2022 Nov.	- 0.5	- 2.3	+ 1.7	+ 0.3	+ 1.4	- 0.3	+ 1.7	- 0.1	+ 0.2	+ 0.0	- 0.0	+ 0.5		
2022 Dec.	- 30.3	- 21.7	- 8.5	- 3.3	- 5.2	+ 0.6	- 5.7	- 0.3	+ 0.2	- 0.1	- 0.0	- 0.6		
2023 Jan.	+ 26.5	+ 9.0	+ 17.4	+ 15.9	+ 1.5	+ 0.3	+ 1.3	- 0.1	+ 0.1	+ 0.1	+ 0.0	+ 0.3		
2023 Feb.	- 21.0	- 31.0	+ 9.7	+ 10.0	- 0.4	- 0.1	- 0.3	- 0.0	+ 0.4	- 0.0	+ 0.1	- 0.3		
2023 Mar.	- 6.6	- 11.8	+ 5.1	+ 6.9	- 1.8	- 0.2	- 1.6	- 0.1	+ 0.2	- 0.0	- 0.0	+ 0.5		
2023 Apr.	- 1.6	- 6.2	+ 4.5	+ 4.1	+ 0.4	+ 0.6	- 0.2	- 0.1	+ 0.3	+ 0.0	+ 0.1	- 0.5		
2023 May	- 1.2	- 0.5	- 0.7	- 2.3	+ 1.6	+ 0.5	+ 1.1	- 0.1	+ 0.1	+ 0.1	+ 1.5	+ 0.7		
2023 June	- 8.5	- 15.9	+ 7.3	+ 8.9	- 1.6	+ 0.1	- 1.7	- 0.1	+ 0.2	+ 0.0	- 0.1	- 0.1		
2023 July	+ 7.2	+ 0.6	+ 6.5	+ 7.5	- 1.1	+ 0.3	- 1.4	- 0.1	+ 0.2	+ 0.0	- 0.5	+ 0.3		
2023 Aug.	+ 0.1	- 6.8	+ 6.6	+ 9.1	- 2.5	- 0.3	- 2.2	- 0.1	+ 0.4	+ 0.1	- 0.0	- 0.3		
2023 Sep.	- 1.3	- 0.7	- 0.5	- 0.7	+ 0.2	+ 0.5	- 0.3	- 0.1	- 0.0	+ 0.1	+ 0.0	+ 0.2		
2023 Oct.	+ 21.8	+ 8.5	+ 13.0	+ 14.9	- 1.9	+ 0.5	- 2.4	- 0.1	+ 0.4	+ 0.1	- 0.0	+ 0.7		

4 Including liabilities arising from non-negotiable bearer debt securities.



IV. Banks

					Savings deposits <sup>3</sup>			Memo item:					Period
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		
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>													
13.5	40.1	218.5	12.0	206.5	552.0	545.7	6.3	15.1	6.7	2.7	-	2020	
12.0	31.7	218.1	10.1	208.0	553.4	547.2	6.2	13.2	6.1	2.8	-	2021	
16.0	67.2	217.5	10.6	206.9	526.8	521.8	5.1	22.4	6.8	3.1	-	2022	
19.9	128.7	228.4	19.5	208.8	485.3	481.0	4.4	51.8	7.7	3.3	-	2023 May	
19.7	141.0	230.7	21.9	208.8	478.2	474.0	4.2	58.2	7.8	3.4	-	June	
20.3	154.8	232.7	24.1	208.6	471.1	467.1	4.0	65.0	7.9	3.4	-	July	
20.9	168.7	235.6	26.6	209.0	462.8	458.9	3.9	73.0	8.2	3.4	-	Aug.	
21.3	177.3	238.0	28.9	209.1	457.3	453.5	3.8	79.3	8.5	3.4	-	Sep.	
21.0	187.1	241.3	31.8	209.5	451.0	447.3	3.7	93.4	8.9	3.5	-	Oct.	
<b>Changes *</b>													
- 1.4	- 8.4	- 0.2	- 1.9	+ 1.6	+ 1.4	+ 1.5	- 0.1	- 1.9	- 0.6	+ 0.2	-	2021	
+ 4.0	+ 35.7	- 0.3	+ 0.5	- 0.8	- 26.1	- 25.0	- 1.1	+ 9.2	+ 0.7	+ 0.3	-	2022	
+ 1.3	+ 14.1	+ 2.7	+ 2.2	+ 0.5	- 7.8	- 7.6	- 0.2	+ 7.0	- 0.0	+ 0.0	-	2023 May	
- 0.1	+ 12.2	+ 2.3	+ 2.4	- 0.1	- 7.1	- 7.0	- 0.1	+ 6.3	+ 0.1	+ 0.0	-	June	
+ 0.6	+ 13.8	+ 2.1	+ 2.3	- 0.2	- 7.1	- 6.9	- 0.2	+ 6.8	+ 0.1	+ 0.0	-	July	
+ 0.6	+ 14.0	+ 2.9	+ 2.5	+ 0.4	- 8.3	- 8.2	- 0.1	+ 8.0	+ 0.3	+ 0.0	-	Aug.	
+ 0.4	+ 8.6	+ 2.4	+ 2.3	+ 0.2	- 5.5	- 5.4	- 0.1	+ 6.3	+ 0.3	+ 0.0	-	Sep.	
- 0.3	+ 9.8	+ 3.4	+ 3.0	+ 0.4	- 6.3	- 6.2	- 0.1	+ 14.1	+ 0.4	+ 0.0	-	Oct.	

registered debt 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

footnote 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						Period
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	
		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>												
68.5	43.2	8.0	12.4	4.9	0.0	66.0	10.9	32.9	21.4	0.8	-	2020
70.9	48.5	6.0	12.0	4.4	0.0	48.3	8.0	19.0	20.5	0.8	-	2021
80.0	49.2	12.5	13.8	4.4	0.0	79.2	8.3	44.9	25.5	0.6	-	2022
80.2	43.7	18.2	14.3	4.0	0.0	98.1	20.1	50.8	26.4	0.8	-	2023 May
75.1	38.3	18.6	14.1	4.0	0.0	99.0	19.9	51.9	26.4	0.7	-	June
70.8	34.3	18.5	14.2	3.9	0.0	97.4	18.2	53.2	25.3	0.7	-	July
78.9	40.8	20.1	14.2	3.8	0.0	100.0	20.4	53.7	25.1	0.9	-	Aug.
75.0	37.4	19.7	14.2	3.7	0.0	97.9	20.7	50.0	26.3	0.9	-	Sep.
72.8	35.9	19.2	14.0	3.8	0.0	95.9	21.0	48.2	25.8	0.9	-	Oct.
<b>Changes *</b>												
+ 2.8	+ 5.6	- 2.0	- 0.2	- 0.5	-	- 16.8	- 2.2	- 13.9	- 0.6	+ 0.1	-	2021
+ 10.2	+ 0.9	+ 7.9	+ 1.3	+ 0.1	-	+ 29.6	+ 0.3	+ 24.5	+ 4.9	- 0.2	-	2022
+ 6.5	+ 5.0	+ 1.4	+ 0.2	- 0.1	-	+ 4.1	+ 1.7	+ 2.6	- 0.3	+ 0.0	-	2023 May
- 5.1	- 5.4	+ 0.4	- 0.1	+ 0.0	-	+ 0.9	- 0.2	+ 1.1	- 0.0	- 0.0	-	June
- 4.3	- 4.0	- 0.2	+ 0.1	- 0.1	-	- 1.6	- 1.7	+ 1.3	- 1.2	- 0.0	-	July
+ 8.1	+ 6.5	+ 1.6	+ 0.0	- 0.0	-	+ 2.6	+ 2.1	+ 0.5	- 0.1	+ 0.1	-	Aug.
- 3.9	- 3.4	- 0.4	- 0.0	- 0.1	-	- 2.1	+ 0.3	- 3.6	+ 1.2	+ 0.0	-	Sep.
- 2.2	- 1.5	- 0.6	- 0.2	+ 0.0	-	- 2.0	+ 0.3	- 1.9	- 0.5	+ 0.0	-	Oct.

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 <sup>1</sup>								Memo item: Interest credited on savings deposits	Bank savings bonds, <sup>3</sup> sold to			
	of residents				of non-residents					non-banks, total	domestic non-banks		foreign non-banks
	Total	Total	at 3 months' notice		at more than 3 months' notice		Total	of which: At 3 months' notice			Total	of which: With maturities of more than 2 years	
			Total	of which: Special savings facilities <sup>2</sup>	Total	of which: Special savings facilities <sup>2</sup>							
<b>End of year or month *</b>													
2020	566.8	560.6	533.3	288.0	27.3	18.0	6.3	5.7	1.8	30.2	28.3	22.1	1.9
2021	567.1	561.2	537.1	269.0	24.1	14.8	5.9	5.4	1.5	24.7	24.5	19.5	0.2
2022	538.5	533.2	510.3	254.2	22.9	14.2	5.3	4.8	1.4	34.9	34.6	20.8	0.2
2023 June	488.1	483.3	450.2	206.0	33.0	25.1	4.8	4.2	0.1	72.6	72.1	25.4	0.5
July	480.7	475.9	439.9	202.7	36.0	28.2	4.8	4.2	0.1	79.7	79.1	26.1	0.6
Aug.	472.2	467.5	428.8	198.2	38.7	30.9	4.7	4.1	0.1	91.4	90.7	29.6	0.6
Sep.	466.5	461.8	420.2	195.2	41.6	33.9	4.7	4.0	0.1	97.8	97.0	30.3	0.7
Oct.	460.1	455.4	410.8	191.6	44.6	37.0	4.7	3.9	0.1	112.4	111.6	31.7	0.8
<b>Changes *</b>													
2021	+ 0.3	+ 0.7	+ 3.9	- 18.5	- 3.2	- 3.2	- 0.4	- 0.3	.	- 5.2	- 3.5	- 2.3	- 1.7
2022	- 28.1	- 27.5	- 26.4	- 14.6	- 1.2	- 0.6	- 0.6	- 0.6	.	+ 10.2	+ 10.1	+ 1.3	+ 0.1
2023 June	- 7.4	- 7.3	- 9.9	- 4.0	+ 2.6	+ 2.8	- 0.1	- 0.1	.	+ 6.7	+ 6.7	+ 0.8	+ 0.1
July	- 7.4	- 7.3	- 10.3	- 3.3	+ 3.0	+ 3.1	- 0.0	- 0.1	.	+ 7.1	+ 7.0	+ 0.8	+ 0.1
Aug.	- 8.5	- 8.5	- 11.2	- 4.5	+ 2.7	+ 2.8	- 0.0	- 0.1	.	+ 8.6	+ 8.5	+ 1.0	+ 0.1
Sep.	- 5.7	- 5.7	- 8.6	- 3.0	+ 2.9	+ 3.0	- 0.0	- 0.1	.	+ 6.4	+ 6.3	+ 0.6	+ 0.1
Oct.	- 6.4	- 6.4	- 9.4	- 3.7	+ 3.0	+ 3.1	- 0.0	- 0.1	.	+ 14.7	+ 14.6	+ 1.4	+ 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.  
<sup>1</sup> Excluding deposits under savings and loan contracts, which are classified as time

deposits. <sup>2</sup> Savings deposits bearing interest at a rate which exceeds the minimum or basic rate of interest. <sup>3</sup> 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 <sup>6</sup>		Subordinated	
	Total	of which:				with maturities of				Total	of which: with maturities of more than 2 years	negotiable debt securities	non-negotiable debt securities	
		Floating rate bonds <sup>1</sup>	Zero coupon bonds <sup>1,2</sup>	Foreign currency bonds <sup>3,4</sup>	Certificates of deposit	up to and including 1 year		more than 1 year up to and including 2 years						more than 2 years
						Total	of which: without a nominal guarantee <sup>5</sup>	Total	of which: without a nominal guarantee <sup>5</sup>					
<b>End of year or month *</b>														
2020	1,119.0	117.1	12.7	313.6	89.4	94.3	1.5	23.8	3.1	1,000.9	1.1	0.9	34.8	0.4
2021	1,173.6	106.8	13.5	331.4	98.7	106.8	1.9	18.0	4.5	1,048.8	0.9	0.7	34.6	0.1
2022	1,231.5	92.8	15.0	307.8	88.6	98.6	1.4	26.6	3.4	1,106.4	0.8	0.7	37.8	0.1
2023 June	1,294.5	84.0	14.7	299.6	98.4	118.1	1.4	35.9	3.3	1,140.5	0.5	0.5	37.7	0.1
July	1,297.0	84.0	15.9	298.6	91.1	112.8	1.5	36.7	3.4	1,147.5	0.5	0.5	38.2	0.1
Aug.	1,308.5	82.6	15.4	298.3	98.5	121.4	1.6	37.4	3.5	1,149.7	0.5	0.5	38.2	0.1
Sep.	1,314.3	82.7	14.4	310.5	90.8	114.0	1.5	39.5	3.5	1,160.9	0.5	0.5	37.2	0.1
Oct.	1,313.7	83.4	16.2	304.0	78.6	104.0	1.6	43.8	3.5	1,165.9	0.0	0.0	37.8	0.1
<b>Changes *</b>														
2021	+ 54.0	- 10.3	+ 0.8	+ 17.6	+ 9.4	+ 12.6	+ 0.4	- 5.9	+ 1.3	+ 47.3	+ 0.4	+ 0.3	- 0.2	- 0.3
2022	+ 59.1	- 12.7	+ 1.1	- 23.6	- 9.9	- 8.3	- 0.5	+ 8.5	- 1.1	+ 58.9	- 0.1	+ 0.1	+ 3.5	-
2023 June	- 9.5	- 1.2	+ 1.3	- 0.2	- 6.2	- 3.2	+ 0.0	+ 0.7	- 0.0	- 7.1	- 0.0	- 0.0	+ 1.0	-
July	+ 2.5	- 0.0	+ 1.2	- 1.0	- 7.3	- 5.3	+ 0.1	+ 0.8	+ 0.1	+ 7.0	- 0.0	- 0.0	+ 0.5	-
Aug.	+ 11.5	- 1.4	- 0.4	- 0.3	+ 7.4	+ 8.7	+ 0.1	+ 0.7	+ 0.1	+ 2.2	+ 0.0	+ 0.0	+ 0.0	-
Sep.	+ 5.9	+ 0.1	- 1.0	+ 12.2	- 7.6	- 7.5	- 0.0	+ 2.1	- 0.0	+ 11.2	+ 0.0	+ 0.0	- 1.0	-
Oct.	- 1.1	+ 0.7	+ 1.3	- 7.0	- 12.3	- 10.0	+ 0.0	+ 4.3	+ 0.1	+ 4.6	+ 0.0	- 0.0	+ 0.6	-

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

currencies. <sup>4</sup> Bonds denominated in non-euro area currencies. <sup>5</sup> Negotiable bearer debt securities and money market paper with a nominal guarantee of less than 100%. <sup>6</sup> 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 <sup>1</sup>	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)				Deposits of banks (MFIs) <sup>6</sup>		Deposits of non-banks (non-MFIs)		Bearer debt securities outstanding	Capital (including published reserves) <sup>8</sup>	Memo item: New contracts entered into in year or month <sup>9</sup>
			Credit balances and loans (excluding building loans) <sup>2</sup>	Building loans <sup>3</sup>	Bank debt securities <sup>4</sup>	Building loans			Securities (including Treasury bills and Treasury discount paper) <sup>5</sup>	Deposits under savings and loan contracts	Sight and time deposits	Deposits under savings and loan contracts	Sight and time deposits <sup>7</sup>			
						Loans under savings and loan contracts	Interim and bridging loans	Other building loans								
<b>All building and loan associations</b>																
2022	18	259.7	30.6	0.0	15.4	11.1	135.0	40.5	22.9	2.5	36.1	185.3	9.3	5.2	12.3	91.3
2023 Aug.	18	259.1	26.8	0.1	15.8	14.0	134.9	41.0	22.2	1.4	36.1	183.6	10.1	6.1	13.0	7.8
Sep.	17	258.8	25.9	0.1	15.8	14.5	135.0	41.1	22.2	1.4	35.7	183.3	10.3	6.1	13.0	7.3
Oct.	16	258.4	25.3	0.1	15.8	14.9	134.9	41.2	22.0	1.3	36.0	182.9	10.3	6.1	13.0	7.6
<b>Private building and loan associations</b>																
2023 Aug.	10	182.0	12.5	0.1	8.6	9.7	104.6	34.9	8.9	0.7	32.8	118.2	9.8	6.1	8.9	5.2
Sep.	10	181.7	11.7	0.1	8.6	9.9	104.7	35.0	8.9	0.6	32.3	117.9	10.0	6.1	8.9	4.8
Oct.	9	181.4	11.2	0.1	8.6	10.2	104.5	35.1	8.9	0.5	32.6	117.6	10.0	6.1	8.9	5.1
<b>Public building and loan associations</b>																
2023 Aug.	8	77.1	14.3	0.0	7.2	4.3	30.3	6.1	13.3	0.8	3.3	65.4	0.3	-	4.1	2.6
Sep.	7	77.1	14.2	0.0	7.2	4.5	30.3	6.1	13.2	0.8	3.4	65.3	0.3	-	4.1	2.5
Oct.	7	77.1	14.2	0.0	7.2	4.7	30.3	6.1	13.1	0.7	3.4	65.3	0.3	-	4.1	2.5

##### 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 <sup>11</sup>		Memo item: Housing bonuses received <sup>13</sup>
				Total	of which: Net allocations <sup>12</sup>	Total	Allocations				Newly granted interim and bridging loans and other building loans					
	Amounts paid into savings and loan accounts <sup>10</sup>	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 <sup>10</sup>							
							Total	of which: Applied to settlement of interim and bridging loans	Total	of which: Applied to settlement of interim and bridging loans						
<b>All building and loan associations</b>																
2022	27.5	2.0	8.7	51.5	30.7	48.5	20.2	4.1	5.3	3.8	23.0	16.4	6.7	5.4	4.1	0.2
2023 Aug.	2.2	0.1	0.5	4.6	3.4	4.2	2.2	0.4	0.8	0.4	1.3	13.8	7.2	0.4	0.0	0.0
Sep.	2.1	0.1	0.5	4.2	3.2	4.1	2.1	0.4	0.7	0.4	1.3	13.4	7.2	0.4	1.0	0.0
Oct.	2.1	0.1	0.5	4.5	3.5	4.3	2.2	0.4	0.9	0.4	1.2	13.1	7.2	0.4	.	0.0
<b>Private building and loan associations</b>																
2023 Aug.	1.4	0.1	0.3	3.2	2.3	3.0	1.5	0.3	0.5	0.3	1.0	9.2	3.9	0.3	0.0	0.0
Sep.	1.4	0.1	0.3	2.9	2.2	2.9	1.5	0.3	0.5	0.3	1.0	9.0	4.0	0.3	0.7	0.0
Oct.	1.4	0.1	0.3	3.2	2.4	3.1	1.6	0.3	0.6	0.3	0.9	8.7	3.9	0.3	.	0.0
<b>Public building and loan associations</b>																
2023 Aug.	0.8	0.0	0.2	1.3	1.1	1.2	0.6	0.1	0.3	0.1	0.3	4.6	3.3	0.1	0.0	0.0
Sep.	0.8	0.0	0.2	1.2	1.0	1.2	0.6	0.1	0.3	0.1	0.3	4.4	3.3	0.1	0.3	0.0
Oct.	0.8	0.0	0.2	1.3	1.1	1.2	0.6	0.1	0.3	0.1	0.3	4.4	3.3	0.1	.	0.0

\* Excluding assets and liabilities and/or transactions of foreign branches. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** See Table IV.2, footnote 1. **2** Including claims on building and loan associations, claims arising from registered debt securities and central bank credit balances. **3** Loans under savings and loan contracts and interim and bridging loans. **4** Including money market paper and small amounts of other securities issued by banks. **5** Including equalisation claims. **6** Including liabilities to building and loan associations. **7** Including small amounts of savings deposits. **8** Including participation rights capital and fund for general banking

risks. **9** 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. **10** For disbursements of deposits under savings and loan contracts arising from the allocation of contracts see "Capital disbursed". **11** Including housing bonuses credited. **12** Only allocations accepted by the beneficiaries; including allocations applied to settlement of interim and bridging loans. **13** 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".

#### IV. Banks

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

€ billion

Period	Number of		Balance sheet total 7	Lending to banks (MFIs)					Lending to non-banks (non-MFIs)					Other assets 7	
	German banks (MFIs) with foreign branches and/or foreign subsidiaries	foreign branches 1 and/or foreign subsidiaries		Total	Credit balances and loans			Money market paper, securities 2,3	Total	Loans			Money market paper, securities 2	Total	of which: Derivative financial instruments in the trading portfolio
					Total	German banks	Foreign banks			Total	Total	to German non-banks			
<b>Foreign branches</b>															
<b>End of year or month *</b>															
2020	50	206	1,552.2	376.7	364.0	213.2	150.8	12.7	504.8	409.6	14.3	395.3	95.2	670.7	523.6
2021	51	207	1,504.5	471.2	457.8	297.9	159.9	13.4	497.2	418.8	12.9	405.9	78.4	536.1	404.5
2022	47	202	1,625.5	461.8	447.4	315.6	131.8	14.4	516.7	447.7	9.7	437.9	69.0	647.0	513.3
2022 Dec.	47	202	1,625.5	461.8	447.4	315.6	131.8	14.4	516.7	447.7	9.7	437.9	69.0	647.0	513.3
2023 Jan.	47	201	1,638.4	503.3	488.3	346.1	142.2	14.9	510.1	439.4	9.5	429.9	70.7	625.0	462.3
Feb.	47	200	1,663.9	493.1	477.4	337.8	139.6	15.6	509.2	440.0	9.6	430.5	69.2	661.6	509.3
Mar.	47	199	1,565.2	471.2	454.2	313.9	140.3	17.0	500.4	432.5	9.3	423.2	67.9	593.7	437.7
Apr.	47	196	1,566.1	470.6	453.1	312.2	141.0	17.4	499.2	432.1	8.6	423.5	67.1	596.3	440.8
May	47	201	1,616.3	478.9	459.4	310.3	149.1	19.5	506.8	434.7	6.3	428.3	72.1	630.7	462.3
June	47	200	1,623.2	466.6	447.7	298.0	149.7	18.9	496.6	426.5	6.1	420.4	70.1	660.1	492.7
July	48	202	1,649.4	491.3	471.2	319.0	152.2	20.1	496.6	423.3	5.9	417.4	73.3	661.6	491.4
Aug.	48	202	1,663.5	483.7	463.8	312.6	151.2	19.9	499.1	424.2	6.1	418.1	74.9	680.8	502.7
Sep.	48	201	1,680.8	488.5	468.9	315.9	153.1	19.6	496.6	420.9	6.4	414.5	75.7	695.7	513.6
<b>Changes *</b>															
2021	+ 1	+ 1	- 48.4	+ 87.3	+ 87.1	+ 84.9	+ 2.2	+ 0.3	- 26.2	- 6.5	- 1.3	- 5.1	- 19.7	- 136.9	- 128.1
2022	- 4	- 5	+ 124.1	- 13.3	- 14.3	+ 17.8	- 32.1	+ 1.0	+ 6.7	+ 17.5	- 3.2	+ 20.6	- 10.8	+ 108.1	+ 103.0
2023 Jan.	± 0	- 1	+ 13.3	+ 42.5	+ 42.0	+ 30.5	+ 11.5	+ 0.5	- 2.7	- 4.8	- 0.3	- 4.6	+ 2.1	- 21.6	- 50.4
Feb.	± 0	- 1	+ 24.5	- 11.7	- 12.4	- 8.3	- 4.1	+ 0.7	- 5.7	- 3.7	+ 0.1	- 3.8	- 2.0	+ 35.6	+ 46.2
Mar.	± 0	- 1	- 97.4	- 20.0	- 21.3	- 24.0	+ 2.6	+ 1.3	- 2.9	- 2.3	- 0.3	- 2.0	- 0.7	- 66.6	- 70.4
Apr.	± 0	- 3	+ 1.3	+ 0.4	- 0.0	- 1.7	+ 1.6	+ 0.5	+ 1.6	+ 2.1	- 0.7	+ 2.8	- 0.5	+ 3.1	+ 3.5
May	± 0	+ 5	+ 48.9	+ 5.8	+ 3.8	- 1.9	+ 5.7	+ 2.1	+ 0.6	- 3.7	- 2.3	- 1.4	+ 4.3	+ 33.0	+ 20.1
June	± 0	- 1	+ 7.8	- 10.5	- 9.9	- 12.3	+ 2.4	- 0.6	- 6.1	- 4.5	- 0.3	- 4.2	- 1.6	+ 30.3	+ 31.2
July	+ 1	+ 2	+ 22.9	+ 24.1	+ 22.8	+ 19.5	+ 3.3	+ 1.2	+ 1.3	- 2.2	- 0.2	- 2.0	+ 3.5	+ 1.7	- 0.7
Aug.	± 0	-	+ 13.4	- 8.7	- 8.5	- 6.4	- 2.1	- 0.2	- 0.7	- 1.9	+ 0.2	- 2.1	+ 1.2	+ 18.5	+ 10.7
Sep.	± 0	- 1	+ 16.1	+ 2.8	+ 3.1	+ 3.3	- 0.1	- 0.3	- 8.4	- 8.7	+ 0.4	- 9.0	+ 0.3	+ 13.7	+ 9.7
<b>Foreign subsidiaries</b>															
<b>End of year or month *</b>															
2020	12	36	229.5	44.8	39.9	17.4	22.5	4.9	139.7	114.4	13.1	101.4	25.3	44.9	0.0
2021	12	35	246.0	50.8	44.4	20.7	23.7	6.3	139.5	116.3	12.6	103.7	23.2	55.7	0.0
2022	11	32	256.7	61.5	52.0	20.5	31.4	9.5	145.8	124.5	13.3	111.2	21.3	49.4	0.0
2022 Dec.	11	32	256.7	61.5	52.0	20.5	31.4	9.5	145.8	124.5	13.3	111.2	21.3	49.4	0.0
2023 Jan.	11	32	253.0	60.0	49.9	20.0	29.9	10.1	145.3	124.5	13.3	111.3	20.7	47.8	0.0
Feb.	11	32	254.8	60.7	50.6	22.4	28.2	10.1	146.1	125.4	13.4	111.9	20.7	47.9	0.0
Mar.	11	32	253.9	62.2	51.7	20.7	31.0	10.5	146.5	126.2	13.3	112.9	20.2	45.2	0.0
Apr.	11	31	250.9	64.4	53.3	22.4	30.9	11.1	145.3	125.6	13.0	112.6	19.8	41.2	0.0
May	11	31	250.9	59.3	48.8	21.5	27.2	10.5	146.2	126.3	12.8	113.5	19.9	45.5	0.0
June	12	32	253.3	64.2	52.8	22.4	30.4	11.5	146.6	126.7	12.7	113.9	19.9	42.5	0.0
July	12	31	253.4	63.6	52.2	23.0	29.3	11.4	147.4	126.9	12.9	114.1	20.5	42.4	0.0
Aug.	12	31	252.8	62.8	52.2	21.9	30.3	10.6	146.0	125.6	12.7	112.9	20.4	44.1	0.0
Sep.	12	31	256.2	66.4	56.0	25.0	31.0	10.5	146.7	125.8	12.3	113.5	20.9	43.0	0.0
<b>Changes *</b>															
2021	± 0	- 1	+ 12.0	+ 3.8	+ 2.8	+ 3.4	- 0.5	+ 1.0	- 2.5	- 0.5	- 0.5	- 0.0	- 2.1	+ 10.8	± 0.0
2022	- 1	- 3	+ 6.5	+ 8.2	+ 5.2	- 0.2	+ 5.6	+ 2.8	+ 5.0	+ 6.9	+ 0.7	+ 6.3	- 1.9	- 6.5	± 0.0
2023 Jan.	-	-	- 2.7	- 1.0	- 1.7	- 0.6	- 1.2	+ 0.7	- 0.0	+ 0.6	- 0.0	+ 0.6	- 0.6	- 1.6	± 0.0
Feb.	-	-	+ 0.6	+ 0.3	+ 0.4	+ 2.4	- 2.1	- 0.1	+ 0.2	+ 0.2	+ 0.2	+ 0.0	- 0.0	+ 0.1	± 0.0
Mar.	-	-	+ 0.4	+ 2.0	+ 1.5	- 1.7	+ 3.2	+ 0.6	+ 1.1	+ 1.6	- 0.1	+ 1.7	- 0.5	- 2.7	± 0.0
Apr.	-	- 1	- 2.7	+ 2.2	+ 1.6	+ 1.7	- 0.1	+ 0.6	- 0.8	- 0.4	- 0.3	- 0.1	- 0.5	- 4.1	± 0.0
May	-	-	- 1.5	- 5.7	- 4.9	- 0.8	- 4.1	- 0.7	- 0.1	- 0.3	- 0.2	- 0.0	+ 0.1	+ 4.3	± 0.0
June	+ 1	+ 1	+ 3.2	+ 5.3	+ 4.2	+ 0.9	+ 3.3	+ 1.0	+ 0.9	+ 0.9	- 0.0	+ 0.9	+ 0.0	- 3.0	± 0.0
July	-	- 1	+ 0.6	- 0.5	- 0.4	+ 0.6	- 1.0	- 0.1	+ 1.2	+ 0.7	+ 0.1	+ 0.5	+ 0.6	- 0.1	± 0.0
Aug.	-	-	- 1.2	- 1.0	- 0.2	- 1.0	+ 0.8	- 0.9	- 1.8	- 1.7	- 0.2	- 1.5	- 0.1	+ 1.7	± 0.0
Sep.	-	-	+ 2.2	+ 3.2	+ 3.5	+ 3.0	+ 0.5	- 0.2	- 0.0	- 0.5	- 0.4	- 0.1	+ 0.5	- 1.0	± 0.0

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

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

IV. Banks

Deposits												Other liabilities 6,7		Period	
of banks (MFIs)			of non-banks (non-MFIs)						Money market paper and debt securities outstanding 5	Working capital and own funds	Total	of which: Derivative financial instruments in the trading portfolio			
Total	German banks	Foreign banks	Total	German non-banks 4			Foreign non-banks								
				Total	Shortterm	Medium and longterm									
<b>End of year or month *</b>														<b>Foreign branches</b>	
872.2	588.5	431.8	156.7	283.7	11.7	10.2	1.5	272.0	61.5	49.9	568.6	523.1	2020		
950.2	638.5	461.2	177.3	311.7	8.1	6.3	1.8	303.6	65.2	51.3	437.9	403.4	2021		
943.4	573.6	435.2	138.5	369.8	10.4	8.9	1.5	359.4	61.7	63.1	557.4	512.9	2022		
943.4	573.6	435.2	138.5	369.8	10.4	8.9	1.5	359.4	61.7	63.1	557.4	512.9	2022 Dec.		
985.2	595.5	432.8	162.6	389.7	9.5	8.3	1.2	380.2	85.2	63.2	504.8	462.6	2023 Jan.		
960.9	578.2	420.7	157.5	382.7	9.0	7.8	1.2	373.7	87.3	63.5	552.1	509.9	Feb.		
950.4	574.0	425.9	148.1	376.3	7.8	6.6	1.2	368.6	71.7	63.4	479.7	439.4	Mar.		
940.7	561.4	407.2	154.2	379.3	7.5	6.3	1.2	371.8	79.9	62.9	482.6	442.1	Apr.		
958.9	576.0	416.7	159.4	382.9	7.8	6.5	1.2	375.1	81.4	63.4	512.7	462.9	May		
946.8	571.3	412.7	158.6	375.5	7.8	6.6	1.2	367.7	68.6	65.2	542.6	493.9	June		
966.6	577.8	416.3	161.5	388.8	7.7	6.5	1.2	381.0	76.1	65.1	541.7	492.8	July		
965.4	581.8	423.8	158.0	383.5	8.3	7.0	1.3	375.3	78.9	65.4	553.8	503.1	Aug.		
963.9	571.6	418.7	152.9	392.3	11.0	9.6	1.4	381.3	84.4	66.0	566.5	513.9	Sep.		
<b>Changes *</b>															
+ 71.1	+ 43.1	+ 31.0	+ 12.0	+ 28.1	- 3.6	- 3.9	+ 0.3	+ 31.7	+ 0.1	+ 1.4	- 130.8	- 119.7	2021		
- 6.2	- 64.2	- 22.2	- 42.0	+ 58.0	+ 2.3	+ 2.6	- 0.3	+ 55.7	- 6.3	+ 11.8	+ 119.0	+ 109.5	2022		
+ 43.3	+ 23.2	- 2.3	+ 25.5	+ 20.1	- 0.8	- 0.6	- 0.2	+ 20.9	+ 24.0	+ 0.1	- 52.5	- 50.3	2023 Jan.		
- 26.5	- 19.3	- 12.2	- 7.1	- 7.2	- 0.5	- 0.5	+ 0.0	- 6.7	+ 1.1	+ 0.4	+ 47.2	+ 47.3	Feb.		
- 7.8	- 1.8	+ 5.2	- 7.0	- 6.0	- 0.2	- 0.2	- 0.0	- 5.8	- 14.3	- 0.2	- 72.3	- 70.5	Mar.		
- 8.3	- 11.4	- 18.7	+ 7.3	+ 3.1	- 0.3	- 0.3	- 0.0	+ 3.4	+ 8.6	- 0.5	+ 2.9	+ 2.7	Apr.		
+ 15.1	+ 11.7	+ 9.4	+ 2.3	+ 3.4	+ 0.3	+ 0.2	+ 0.1	+ 3.1	+ 0.1	+ 0.5	+ 30.0	+ 20.8	May		
- 9.8	- 2.5	- 3.9	+ 1.4	- 7.3	+ 0.1	+ 0.1	- 0.0	- 7.3	- 11.9	+ 1.9	+ 29.9	+ 31.0	June		
+ 17.8	+ 5.9	+ 1.7	+ 4.3	+ 11.9	- 0.1	- 0.1	- 0.0	+ 12.0	+ 8.0	- 0.1	- 1.4	- 1.1	July		
- 2.6	+ 2.9	+ 7.6	- 4.8	- 5.4	+ 0.4	+ 0.3	+ 0.1	- 5.8	+ 2.2	+ 0.3	+ 12.1	+ 10.3	Aug.		
- 4.2	- 12.7	- 5.1	- 7.6	+ 8.4	+ 2.7	+ 2.7	+ 0.1	+ 5.7	+ 4.2	+ 0.6	+ 12.8	+ 10.8	Sep.		
<b>End of year or month *</b>														<b>Foreign subsidiaries</b>	
163.4	59.6	34.1	25.5	103.8	6.7	4.2	2.5	97.1	16.6	20.3	29.2	0.0	2020		
178.6	64.2	33.0	31.2	114.4	7.3	4.9	2.4	107.1	16.4	20.3	30.7	0.0	2021		
189.4	67.5	38.6	28.9	122.0	6.9	4.6	2.3	115.1	13.5	20.1	33.7	0.0	2022		
189.4	67.5	38.6	28.9	122.0	6.9	4.6	2.3	115.1	13.5	20.1	33.7	0.0	2022 Dec.		
186.2	66.7	38.5	28.2	119.6	7.0	4.5	2.5	112.6	12.8	20.1	33.9	0.0	2023 Jan.		
187.2	69.3	40.3	29.1	117.9	6.9	4.4	2.5	110.9	12.7	20.2	34.7	0.0	Feb.		
186.6	71.2	42.2	29.1	115.4	6.8	4.3	2.5	108.5	12.3	20.3	34.8	0.0	Mar.		
183.5	71.0	44.0	27.0	112.5	6.9	4.5	2.5	105.6	12.2	20.2	35.0	0.0	Apr.		
183.9	71.2	43.6	27.6	112.8	6.9	4.4	2.5	105.9	12.1	20.6	34.3	0.0	May		
185.6	71.9	45.4	26.5	113.7	6.6	4.2	2.4	107.1	10.6	20.5	36.6	0.0	June		
187.9	72.3	47.0	25.3	115.6	6.8	4.4	2.4	108.8	10.5	20.5	34.4	0.0	July		
185.5	70.6	46.0	24.7	114.8	6.6	4.2	2.4	108.2	10.3	20.6	36.4	0.0	Aug.		
188.2	74.1	49.1	25.1	114.1	6.7	4.3	2.4	107.4	11.3	20.5	36.0	0.0	Sep.		
<b>Changes *</b>															
+ 12.1	+ 3.2	- 1.1	+ 4.3	+ 8.9	+ 0.6	+ 0.6	- 0.1	+ 8.3	- 0.3	+ 0.1	+ 0.2	± 0.0	2021		
+ 7.7	+ 1.4	+ 5.6	- 4.2	+ 6.3	- 0.4	- 0.3	- 0.1	+ 6.7	- 2.9	- 0.2	+ 2.2	± 0.0	2022		
- 2.6	- 0.6	- 0.1	- 0.5	- 2.0	+ 0.1	- 0.1	+ 0.2	- 2.1	- 0.7	+ 0.0	+ 0.5	± 0.0	2023 Jan.		
+ 0.1	+ 2.4	+ 1.8	+ 0.6	- 2.2	- 0.1	- 0.1	+ 0.0	- 2.2	- 0.1	+ 0.1	+ 0.5	± 0.0	Feb.		
+ 0.3	+ 2.2	+ 1.9	+ 0.3	- 1.9	- 0.1	- 0.1	+ 0.0	- 1.8	- 0.4	+ 0.0	+ 0.4	± 0.0	Mar.		
- 2.7	- 0.1	+ 1.8	- 1.9	- 2.6	+ 0.1	+ 0.2	- 0.0	- 2.7	- 0.1	- 0.1	+ 0.2	± 0.0	Apr.		
- 0.6	- 0.3	- 0.4	+ 0.2	- 0.4	- 0.0	- 0.0	+ 0.0	- 0.4	- 0.0	+ 0.4	- 1.2	± 0.0	May		
+ 2.3	+ 1.0	+ 1.8	- 0.9	+ 1.3	- 0.3	- 0.3	- 0.0	+ 1.6	- 1.6	- 0.1	+ 2.5	± 0.0	June		
+ 2.7	+ 0.6	+ 1.6	- 1.1	+ 2.2	+ 0.2	+ 0.2	+ 0.0	+ 2.0	- 0.0	+ 0.0	- 2.1	± 0.0	July		
- 2.9	- 1.9	- 1.0	- 0.8	- 1.1	- 0.2	- 0.2	- 0.0	- 0.9	- 0.2	+ 0.1	+ 1.8	± 0.0	Aug.		
+ 1.9	+ 3.2	+ 3.1	+ 0.1	- 1.3	+ 0.1	+ 0.1	- 0.0	- 1.4	+ 1.0	- 0.1	- 0.7	± 0.0	Sep.		

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 (without deposit facility) <sup>6</sup>	Deficiencies <sup>7</sup>
2016	11,918.5	119.2	118.8	919.0	800.3	0.0
2017	12,415.8	124.2	123.8	1,275.2	1,151.4	0.0
2018	12,775.2	127.8	127.4	1,332.1	1,204.8	0.0
2019	13,485.4	134.9	134.5	1,623.7	1,489.3	0.0
2020	14,590.4	145.9	145.5	3,029.4	2,883.9	0.0
2021	15,576.6	155.8	155.4	3,812.3	3,656.9	0.1
2022	16,843.0	168.4	168.0	195.6	28.1	0.0
2023 Sep.	16,488.4	164.9	164.6	174.6	10.0	0.0
Oct.	.	.	.	.	.	.
Nov. <sup>p</sup>	16,421.9	164.2	163.9	...	...	...

### 2. Reserve maintenance in Germany

€ billion

Maintenance period beginning in <sup>1</sup>	Reserve base <sup>2</sup>	German share of euro area reserve base as a percentage	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 (without deposit facility) <sup>6</sup>	Deficiencies <sup>7</sup>
2016	3,371,095	28.3	33,711	33,546	301,989	268,443	0
2017	3,456,192	27.8	34,562	34,404	424,547	390,143	2
2018	3,563,306	27.9	35,633	35,479	453,686	418,206	1
2019	3,728,027	27.6	37,280	37,131	486,477	449,346	0
2020	4,020,792	27.6	40,208	40,062	878,013	837,951	1
2021	4,260,398	27.4	42,604	42,464	1,048,819	1,006,355	0
2022	4,664,630	27.7	46,646	46,512	54,848	8,337	5
2023 Sep.	4,502,706	27.3	45,027	44,896	47,933	3,037	0
Oct.	.	.	.	.	.	.	.
Nov. <sup>p</sup>	4,471,738	27.2	44,717	44,587	...	...	...

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

€ billion

Maintenance period beginning in <sup>1</sup>	Big banks	Regional banks and other commercial banks	Branches of foreign banks	Landesbanken and savings banks	Credit cooperatives	Mortgage banks	Banks with special, development and other central support tasks
2016	6,384	5,390	2,812	10,905	5,960	236	1,859
2017	6,366	5,678	3,110	11,163	6,256	132	1,699
2018	7,384	4,910	3,094	11,715	6,624	95	1,658
2019	7,684	5,494	2,765	12,273	7,028	109	1,778
2020	8,151	6,371	3,019	12,912	7,547	111	2,028
2021	9,113	6,713	2,943	13,682	8,028	109	1,876
2022	9,814	7,396	3,216	14,465	8,295	117	2,471
2023 Sep.	9,134	7,194	3,276	14,221	8,172	145	2,366
Oct.	.	.	.	.	.	.	.
Nov.	9,268	7,182	3,194	14,061	8,152	145	2,248

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

€ billion

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
2016	2,203,100	1,595	447,524	585,099	133,776
2017	2,338,161	628	415,084	581,416	120,894
2018	2,458,423	1,162	414,463	576,627	112,621
2019	2,627,478	1,272	410,338	577,760	111,183
2020	2,923,462	1,607	436,696	560,770	105,880
2021	3,079,722	9,030	508,139	561,608	101,907
2022	3,352,177	12,609	566,227	543,694	116,094
2023 Sep.	3,399,988	2,017	458,628	476,479	126,979
Oct.	.	.	.	.	.
Nov.	3,419,899	2,345	423,373	462,063	130,302

<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 5 of the Regulation (EU) 2021/378 of the European Central Bank on the application of minimum reserve requirements (excluding liabilities to which a reserve ratio of 0% applies, pursuant to Article 6(1)(a)). <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 was 2%

between 1 January 1999 and 17 January 2012. Since 18 January 2012, it has stood at 1%. <sup>4</sup> Article 6(2) of the Regulation (EU) 2021/378 of the European Central Bank on the application of minimum reserve requirements. <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.

## VI. Interest rates

### 1. ECB interest rates / basic rates of interest

% per annum

ECB interest rates										Basic rates of interest			
Applicable from	Deposit facility	Main refinancing operations			Applicable from	Deposit facility	Main refinancing operations			Applicable from	Basic rate of interest as per Civil Code 1	Applicable from	Basic rate of interest as per Civil Code 1
		Fixed rate	Minimum bid rate	Marginal lending facility			Fixed rate	Minimum bid rate	Marginal lending facility				
2012 July 11	0.00	0.75	–	1.50	2022 July 27	0.00	0.50	–	0.75	2006 Jan. 1	1.37	2012 Jan. 1	0.12
2013 May 8	0.00	0.50	–	1.00	Sep. 14	0.75	1.25	–	1.50	July 1	1.95	2013 Jan. 1	–0.13
Nov. 13	0.00	0.25	–	0.75	Nov. 2	1.50	2.00	–	2.25	2007 Jan. 1	2.70	July 1	–0.38
					Dec. 21	2.00	2.50	–	2.75	July 1	3.19	2014 Jan. 1	–0.63
2014 June 11	–0.10	0.15	–	2.00	2023 Feb. 8	2.50	3.00	–	3.25	2008 Jan. 1	3.32	July 1	–0.73
Sep. 10	–0.20	0.05	–	2.25	Mar. 22	3.00	3.50	–	3.75	July 1	3.19	2015 Jan. 1	–0.83
				2.00	May 10	3.25	3.75	–	4.00				
2015 Dec. 9	–0.30	0.05	–	2.00	June 21	3.50	4.00	–	4.25	2009 Jan. 1	1.62	2016 Jan. 1	–0.88
					Aug. 2	3.75	4.25	–	4.50	July 1	0.12	2016 July 1	–0.88
2016 Mar. 16	–0.40	0.00	–	0.25	Sep. 20	4.00	4.50	–	4.75	2011 July 1	0.37	2023 Jan. 1	1.62
2019 Sep. 18	–0.50	0.00	–	0.25								July 1	3.12

### 2. 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	% per annum	Minimum bid rate	Marginal rate 1	Weighted average rate	
<b>Main refinancing operations</b>								
2023 Nov. 1	1	8 127	8 127	4.50	–	–	–	7
Nov. 8	8	6 850	6 850	4.50	–	–	–	7
Nov. 15	15	7 105	7 105	4.50	–	–	–	7
Nov. 22	22	7 335	7 335	4.50	–	–	–	7
Nov. 29	29	8 472	8 472	4.50	–	–	–	7
Dec. 6	6	6 508	6 508	4.50	–	–	–	7
Dec. 13	13	6 478	6 478	4.50	–	–	–	7
<b>Long-term refinancing operations</b>								
Sept. 28	28	1 903	1 903	2 ...	–	–	–	84
Oct. 26	26	540	540	2 ...	–	–	–	97
Nov. 30	30	2 333	2 333	2 ...	–	–	–	90

\* 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: a) the average minimum bid rate of the main refinancing operations over the life of this

operation including a spread or b) the average deposit facility rate over the life of this operation.

### 3. Money market rates, by month

% per annum

Monthly average  
2023 Apr.  
May  
June  
July  
Aug.  
Sep.  
Oct.  
Nov.

€STR 1	EURIBOR @ 2								
	One-week funds		One-month funds		Three-month funds		Six-month funds		Twelve-month funds
2.900	2.880	2.880	2.960	3.180	3.520	3.760			
3.080	3.090	3.090	3.150	3.370	3.680	3.860			
3.238	3.250	3.250	3.340	3.540	3.830	4.010			
3.402	3.400	3.400	3.470	3.670	3.940	4.150			
3.642	3.630	3.630	3.630	3.780	3.940	4.070			
3.747	3.750	3.750	3.760	3.880	4.030	4.150			
3.901	3.880	3.880	3.860	3.970	4.120	4.160			
3.902	3.874	3.874	3.841	3.972	4.065	4.022			

\* Publication does not establish an entitlement to provision of the rates. The Deutsche Bundesbank reserves the right to cease publishing the information on its website in future. All data are supplied without liability. No explicit or implicit assurances or guarantees are made as to the up-to-dateness, accuracy, timeliness, completeness, marketability or suitability of the data as interest rates or reference interest rates. Neither the European Money Markets Institute (EMMI), nor Euribor EBF, nor Euribor ACI, nor the Euribor Panel Banks, nor the Euribor Steering Committee, nor the European Central Bank, nor Reuters, nor the Deutsche Bundesbank can be held liable for any irregularity or inaccuracy, incompleteness or late provision of the money market rates. With regard to the €STR please consider the European Central Bank's disclaimer, which also applies for the Deutsche Bundesbank's publication:

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1 Euro Short-Term Rate: On the basis of individual euro-denominated transactions conducted and settled on the previous business day, the European Central Bank

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<https://www.emmi-benchmarks.eu/benchmarks/euribor/>

## VI. Interest rates

### 4. Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) \*

#### a) Outstanding amounts <sup>o</sup>

End of month	Households' deposits				Non-financial corporations' deposits			
	with an agreed maturity of							
	up to 2 years		over 2 years		up to 2 years		over 2 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2022 Oct.	0.67	56,389	0.85	217,771	0.76	116,977	1.00	24,179
Nov.	0.94	69,368	0.85	218,426	1.13	121,576	1.00	23,542
Dec.	1.16	84,147	0.86	220,466	1.39	123,678	1.02	22,605
2023 Jan.	1.37	103,036	0.87	221,773	1.67	131,363	1.05	23,299
Feb.	1.57	119,894	0.87	222,671	1.98	140,254	1.07	23,409
Mar.	1.77	140,046	0.88	223,661	2.29	148,756	1.09	22,527
Apr.	1.91	157,796	0.89	224,586	2.44	155,233	1.12	22,140
May	2.07	180,323	0.90	225,884	2.65	153,693	1.17	22,199
June	2.23	200,501	0.91	226,645	2.86	162,035	1.20	22,133
July	2.37	222,529	0.92	227,182	3.01	168,874	1.24	21,619
Aug.	2.52	246,001	0.94	228,521	3.15	180,132	1.27	21,610
Sep.	2.61	267,587	0.95	229,488	3.27	202,909	1.28	24,804
Oct.	2.76	293,225	0.97	231,163	3.39	220,118	1.32	24,244

End of month	Housing loans to households <sup>3</sup>						Loans to households for consumption and other purposes <sup>4,5</sup>					
	with a maturity of											
	up to 1 year <sup>6</sup>		over 1 year and up to 5 years		over 5 years		up to 1 year <sup>6</sup>		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2022 Oct.	3.06	3,689	2.06	27,325	1.72	1,528,186	7.39	47,749	3.53	76,686	3.42	333,308
Nov.	3.35	3,604	2.21	27,320	1.73	1,533,123	7.51	47,012	3.60	75,908	3.46	333,366
Dec.	3.66	3,497	2.37	26,984	1.74	1,535,823	7.73	47,250	3.68	76,467	3.49	331,711
2023 Jan.	4.10	3,550	2.52	26,527	1.76	1,534,684	8.20	46,598	3.78	75,973	3.55	332,207
Feb.	4.32	3,429	2.64	26,317	1.77	1,536,492	8.44	47,291	3.84	75,755	3.59	332,184
Mar.	4.45	3,493	2.77	26,266	1.78	1,540,365	8.67	48,137	3.94	75,854	3.64	330,164
Apr.	4.72	3,490	2.94	26,102	1.79	1,542,767	8.86	47,023	4.05	75,742	3.72	330,568
May	4.93	3,423	3.03	25,960	1.81	1,544,206	9.12	47,513	4.14	75,472	3.77	330,677
June	5.10	3,298	3.13	25,865	1.82	1,546,102	9.25	48,284	4.24	76,260	3.83	329,576
July	5.34	3,413	3.26	25,712	1.83	1,548,159	9.45	47,192	4.35	76,468	3.90	330,500
Aug.	5.41	3,391	3.33	25,573	1.85	1,550,499	9.55	47,277	4.45	76,654	3.95	330,602
Sep.	5.49	3,260	3.38	25,354	1.86	1,554,712	9.72	47,875	4.54	76,776	3.99	330,153
Oct.	5.57	3,340	3.50	25,251	1.87	1,555,440	9.95	47,512	4.65	76,914	4.06	329,768

End of month	Loans to non-financial corporations with a maturity of					
	up to 1 year <sup>6</sup>		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2022 Oct.	3.05	209,961	2.26	237,078	1.92	874,758
Nov.	3.49	213,334	2.49	236,253	1.96	879,122
Dec.	3.70	192,635	2.83	240,161	2.01	872,949
2023 Jan.	4.04	199,612	3.07	241,498	2.05	876,315
Feb.	4.28	194,396	3.22	246,124	2.07	878,910
Mar.	4.66	193,205	3.45	245,152	2.13	876,723
Apr.	4.98	194,154	3.65	247,337	2.19	879,353
May	5.19	194,261	3.76	252,289	2.22	885,481
June	5.42	193,968	3.95	250,107	2.29	883,229
July	5.62	194,789	4.09	251,312	2.35	887,112
Aug.	5.72	188,564	4.17	251,445	2.37	889,482
Sep.	5.89	195,980	4.29	257,398	2.41	898,933
Oct.	6.05	193,541	4.42	259,976	2.45	901,285

\* The interest rate statistics gathered on a harmonised basis in the euro area from January 2003 are collected in Germany on a sample basis. The MFI interest rate statistics are based on the interest rates applied by MFIs and the related volumes of euro-denominated deposits and loans to households and non-financial corporations domiciled in the euro area. The household sector comprises individuals (including sole proprietors) and non-profit institutions serving households. Non-financial corporations include all enterprises other than insurance corporations, banks and other financial institutions. The most recent figures are in all cases to be regarded as provisional. Subsequent revisions appearing in the following Monthly Report are not specially marked. Further information on the MFI interest rate statistics can be found on the Bundesbank's website (Statistics/Money and capital markets/Interest rates and yields/Interest rates on deposits and loans). <sup>o</sup> The statistics on outstanding amounts are collected at the end of the month. <sup>1</sup> 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. <sup>2</sup> Data based on monthly balance sheet statistics. <sup>3</sup> 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. <sup>4</sup> Loans for consumption are defined as loans granted for the purpose of personal use in the consumption of goods and services. <sup>5</sup> For the purpose of these statistics, other loans are loans granted for other purposes such as business, debt consolidation, education, etc. <sup>6</sup> Including overdrafts (see also footnotes 12 to 14 on p. 47).

## VI. Interest rates

### 4. Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) \* (cont'd)

#### b) New business +

Households' deposits												
		with an agreed maturity of						redeemable at notice <sup>8</sup> of				
Overnight		up to 1 year		over 1 year and up to 2 years		over 2 years		up to 3 months		over 3 months		
Reporting period	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million
2022 Oct.	0.01	1,853,933	1.06	10,188	1.89	1,332	1.49	1,549	0.11	519,453	0.27	22,383
Nov.	0.02	1,858,811	1.34	17,255	1.99	1,783	1.70	1,958	0.13	514,161	0.33	22,556
Dec.	0.07	1,857,241	1.53	20,197	2.01	1,738	1.52	2,138	0.16	510,188	0.40	22,970
2023 Jan.	0.09	1,839,201	1.68	26,082	2.14	2,941	1.97	2,504	0.20	498,875	0.53	23,945
Feb.	0.12	1,828,243	1.95	25,533	2.24	2,346	2.09	1,853	0.26	490,990	0.67	25,179
Mar.	0.17	1,801,473	2.19	29,674	2.36	3,672	2.07	2,194	0.30	480,790	0.84	26,746
Apr.	0.22	1,807,037	2.33	28,088	2.47	3,409	2.35	2,055	0.35	470,731	0.96	28,261
May	0.30	1,792,902	2.58	35,359	2.67	4,281	2.39	2,371	0.39	460,587	1.13	30,499
June	0.34	1,782,329	2.78	34,870	2.91	4,260	2.53	1,999	0.43	450,713	1.28	33,163
July	0.41	1,773,505	2.94	38,938	2.98	3,412	2.59	2,044	0.50	440,519	1.48	36,162
Aug.	0.51	1,757,994	3.12	46,037	3.15	4,422	2.81	2,374	0.55	429,372	1.62	38,895
Sep.	0.55	1,757,426	3.22	40,232	3.30	3,611	2.92	1,787	0.59	420,953	1.76	41,832
Oct.	0.56	1,737,109	3.40	51,187	3.46	5,558	2.99	2,743	0.64	411,582	1.94	44,844

Non-financial corporations' deposits										
		with an agreed maturity of								
Overnight		up to 1 year		over 1 year and up to 2 years		over 2 years				
Reporting period	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million
2022 Oct.	0.04	617,742	0.81	99,703	1.34	707	1.89	146		
Nov.	0.10	612,760	1.43	90,346	2.66	631	1.94	189		
Dec.	0.11	601,728	1.66	65,813	2.94	734	2.42	252		
2023 Jan.	0.19	595,205	1.96	89,287	2.92	671	2.41	89		
Feb.	0.28	580,954	2.31	100,034	3.09	539	2.17	238		
Mar.	0.44	568,777	2.58	89,971	2.95	723	2.62	292		
Apr.	0.48	558,564	2.82	79,535	3.14	655	2.83	210		
May	0.55	558,743	3.01	81,462	2.86	625	2.64	225		
June	0.63	548,727	3.20	88,967	3.48	703	2.90	206		
July	0.72	551,199	3.34	79,832	3.53	614	3.26	252		
Aug.	0.81	548,242	3.50	89,027	3.46	570	2.93	210		
Sep.	0.92	575,600	3.64	95,610	3.63	807	2.96	287		
Oct.	0.97	578,728	3.74	95,412	3.78	752	2.97	266		

Loans to households											
Loans for consumption <sup>4</sup> with an initial rate fixation of											
Total (including charges)	Total		of which: Renegotiated loans <sup>9</sup>		floating rate or up to 1 year <sup>9</sup>		over 1 year and up to 5 years		over 5 years		
Reporting period	Annual percentage rate of charge <sup>10</sup> % p.a.	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million
2022 Oct.	6.74	6.75	7,362	7.57	1,339	8.79	366	5.28	2,546	7.43	4,450
Nov.	6.81	6.87	7,913	7.92	1,330	7.51	385	5.37	2,868	7.74	4,659
Dec.	6.62	6.71	7,270	7.69	1,091	7.64	465	5.26	3,083	7.79	3,722
2023 Jan.	7.49	7.54	8,159	8.43	1,607	7.95	406	6.01	2,728	8.34	5,025
Feb.	7.56	7.52	7,505	8.42	1,364	8.96	307	6.13	2,664	8.24	4,534
Mar.	7.74	7.70	8,778	8.62	1,592	8.71	322	6.39	3,150	8.42	5,306
Apr.	8.10	7.99	7,348	8.87	1,351	9.77	278	6.69	2,551	8.62	4,519
May	8.13	8.07	8,269	9.00	1,505	9.98	296	6.79	2,819	8.66	5,154
June	8.05	7.99	9,277	9.15	1,568	10.32	316	6.62	3,493	8.72	5,468
July	8.40	8.35	8,628	9.32	1,609	10.92	295	7.04	2,974	8.94	5,359
Aug.	8.46	8.43	8,818	9.46	1,689	10.65	288	7.13	3,011	9.02	5,518
Sep.	8.57	8.47	8,036	9.53	1,530	10.21	274	7.18	2,798	9.11	4,964
Oct.	8.66	8.54	8,346	9.62	1,655	9.34	301	7.21	2,883	9.25	5,161

For footnotes \* and 1 to 6, see p. 44\*. For footnote x see p. 47\*. + For deposits with an agreed maturity and all loans excluding revolving loans and overdrafts, credit card debt: new business covers all new agreements between households or non-financial corporations and the bank. The interest rates are calculated as volume-weighted average rates of all new agreements concluded during the reporting month. For overnight deposits, deposits redeemable at notice, revolving loans and overdrafts, credit card debt: new business is collected in the same way as outstanding amounts for the sake of simplicity. This means that all outstanding deposit and lending business at

the end of the month has to be incorporated in the calculation of average rates of interest. <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 premiums. <sup>9</sup> Excluding overdrafts. <sup>10</sup> 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

### 4. Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) \* (cont'd)

#### b) New business +

Loans to households (cont'd)											
Loans to households for other purposes <sup>5</sup> with an initial rate fixation of											
Reporting period	Total		of which: Renegotiated loans <sup>9</sup>		floating rate or up to 1 year <sup>9</sup>		over 1 year and up to 5 years		over 5 years		
	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	
<b>Loans to households</b>											
2022 Oct.	3.40	3,728	2.68	1,190	3.06	1,805	4.00	541	3.61	1,382	
Nov.	3.78	3,938	3.28	947	3.52	1,808	4.18	746	3.90	1,384	
Dec.	3.90	5,403	3.43	1,210	3.86	3,026	4.24	762	3.80	1,615	
2023 Jan.	4.10	3,906	3.74	1,286	3.98	2,082	4.55	621	4.07	1,203	
Feb.	4.35	3,065	4.03	814	4.36	1,467	4.83	508	4.10	1,090	
Mar.	4.56	4,852	4.29	1,293	4.66	2,388	4.87	761	4.28	1,703	
Apr.	4.64	3,803	4.45	1,210	4.76	1,767	4.92	744	4.31	1,292	
May	4.83	3,400	4.62	997	5.08	1,511	5.10	710	4.37	1,179	
June	4.93	4,341	4.68	1,388	5.26	1,974	5.19	892	4.33	1,475	
July	4.96	4,086	4.54	1,161	5.39	1,766	5.12	933	4.31	1,387	
Aug.	5.16	3,430	5.02	882	5.72	1,290	5.24	910	4.50	1,230	
Sep.	5.24	3,526	5.08	814	5.76	1,489	5.29	848	4.54	1,189	
Oct.	5.44	3,356	5.34	1,093	5.92	1,479	5.58	737	4.73	1,140	
<b>of which: Loans to sole proprietors</b>											
2022 Oct.	3.44	2,570	.	.	3.05	1,244	4.19	405	3.63	921	
Nov.	3.91	2,684	.	.	3.69	1,175	4.32	563	3.94	946	
Dec.	4.11	3,777	.	.	4.10	2,187	4.51	554	3.89	1,036	
2023 Jan.	4.18	2,830	.	.	4.06	1,489	4.75	465	4.07	876	
Feb.	4.44	2,297	.	.	4.47	1,105	4.94	411	4.15	781	
Mar.	4.69	3,544	.	.	4.75	1,822	5.13	567	4.37	1,155	
Apr.	4.77	2,657	.	.	4.90	1,207	5.01	575	4.44	875	
May	4.98	2,473	.	.	5.28	1,072	5.24	547	4.44	854	
June	5.04	3,178	.	.	5.36	1,535	5.36	633	4.35	1,010	
July	5.09	2,963	.	.	5.48	1,337	5.48	592	4.37	1,034	
Aug.	5.30	2,381	.	.	5.91	934	5.55	551	4.53	896	
Sep.	5.32	2,459	.	.	5.80	1,094	5.57	523	4.55	842	
Oct.	5.50	2,482	.	.	6.00	1,090	5.68	561	4.74	831	

Loans to households (cont'd)													
Housing loans <sup>3</sup> with an initial rate fixation of													
Erhebungszeitraum	Total (including charges)		of which: Renegotiated loans <sup>9</sup>		floating rate or up to 1 year <sup>9</sup>		over 1 year and up to 5 years		over 5 year and up to 10 years		over 10 years		
	Annual percentage rate of charge <sup>10</sup> % p.a.	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million
<b>Total loans</b>													
2022 Oct.	3.31	3.25	14,926	2.79	3,204	2.90	2,522	3.23	1,363	3.19	5,433	3.48	5,607
Nov.	3.67	3.60	13,557	3.32	2,689	3.40	2,330	3.75	1,209	3.51	4,846	3.75	5,172
Dec.	3.60	3.52	13,514	3.17	2,756	3.57	2,620	3.74	1,267	3.41	4,837	3.55	4,790
2023 Jan.	3.73	3.66	12,735	3.47	3,076	3.95	2,244	3.80	1,196	3.45	4,531	3.70	4,764
Feb.	3.85	3.79	12,055	3.73	2,724	4.16	2,097	3.99	1,207	3.60	4,229	3.74	4,522
Mar.	3.95	3.88	15,260	3.76	3,248	4.44	2,459	4.10	1,524	3.64	5,388	3.80	5,889
Apr.	3.98	3.93	12,999	4.06	2,870	4.63	2,109	4.23	1,276	3.70	4,471	3.77	5,144
May	3.99	3.94	13,657	3.92	2,945	4.82	2,148	4.27	1,359	3.66	5,038	3.76	5,112
June	4.12	4.06	13,983	4.28	2,565	5.05	2,301	4.38	1,450	3.73	4,986	3.84	5,246
July	4.08	4.02	14,335	4.03	2,845	5.20	1,949	4.37	1,469	3.71	5,352	3.82	5,564
Aug.	4.19	4.14	14,386	4.43	2,611	5.29	2,198	4.53	1,388	3.81	5,275	3.89	5,525
Sep.	4.17	4.12	12,286	4.32	2,017	5.40	1,523	4.48	1,171	3.89	4,534	3.85	5,058
Oct.	4.22	4.18	13,828	4.39	2,853	5.53	1,988	4.53	1,402	3.85	5,303	3.90	5,135
<b>of which: Collateralised loans <sup>11</sup></b>													
2022 Oct.	.	3.15	6,622	.	.	2.78	916	3.20	661	3.10	2,482	3.31	2,563
Nov.	.	3.47	6,083	.	.	3.22	806	3.62	563	3.42	2,402	3.57	2,312
Dec.	.	3.43	5,975	.	.	3.46	923	3.64	554	3.36	2,213	3.42	2,285
2023 Jan.	.	3.51	5,615	.	.	3.85	813	3.66	584	3.38	2,136	3.47	2,082
Feb.	.	3.64	5,134	.	.	4.04	763	3.84	556	3.49	1,928	3.58	1,887
Mar.	.	3.74	6,734	.	.	4.30	841	4.05	752	3.56	2,520	3.65	2,621
Apr.	.	3.79	5,967	.	.	4.61	824	4.02	601	3.59	2,141	3.62	2,401
May	.	3.82	5,821	.	.	4.68	789	4.14	629	3.59	2,225	3.66	2,178
June	.	3.85	6,185	.	.	4.81	836	4.13	648	3.61	2,314	3.67	2,387
July	.	3.88	6,592	.	.	5.08	729	4.20	661	3.63	2,384	3.72	2,818
Aug.	.	3.96	6,467	.	.	5.10	767	4.29	637	3.73	2,399	3.75	2,664
Sep.	.	3.93	5,704	.	.	5.36	540	4.32	551	3.78	2,092	3.65	2,521
Oct.	.	4.01	6,207	.	.	5.44	769	4.38	587	3.73	2,335	3.76	2,516

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

## VI. Interest rates

### 4. 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 <sup>12</sup> and overdrafts <sup>13</sup> Credit card debt <sup>14</sup>		of which:				Revolving loans <sup>12</sup> and overdrafts <sup>13</sup> Credit card debt <sup>14</sup>		of which:			
			Revolving loans <sup>12</sup> and overdrafts <sup>13</sup>		Extended credit card debt				Revolving loans <sup>12</sup> and overdrafts <sup>13</sup>			
	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>2</sup> € million
2022 Oct.	7.78	38,898	7.74	30,031	15.66	4,479	3.39	97,186	3.40	96,732	3.76	97,371
Nov.	8.44	38,580	8.20	27,368	15.61	6,475	3.74	97,850	3.76	97,371	4.01	94,205
Dec.	8.70	38,597	8.53	27,493	15.55	6,515	3.99	94,611	4.01	94,205		
2023 Jan.	9.16	38,116	8.95	27,199	16.34	6,480	4.31	98,205	4.32	97,791	4.65	97,859
Feb.	9.40	38,538	9.32	27,356	16.60	6,475	4.63	98,285	4.65	97,859	5.11	97,659
Mar.	9.56	39,280	9.54	28,281	16.58	6,390	5.08	98,123	5.11	97,659		
Apr.	9.78	38,352	9.76	27,177	17.13	6,407	5.44	99,534	5.47	99,094	5.63	98,709
May	9.98	38,906	10.10	27,431	17.19	6,478	5.61	99,175	5.63	98,709	5.86	98,897
June	10.11	39,692	10.30	28,067	17.23	6,528	5.83	99,351	5.86	98,897		
July	10.32	38,818	10.48	27,182	17.58	6,580	6.00	98,185	6.03	97,770	6.14	94,514
Aug.	10.39	39,026	10.60	27,146	17.79	6,611	6.11	94,939	6.14	94,514	6.28	95,002
Sep.	10.59	39,549	10.75	27,959	17.86	6,633	.	.	6.28	95,002		
Oct.	10.82	39,185	11.02	27,560	18.09	6,656	.	.	6.45	93,909		

Reporting period	Loans to non-financial corporations (cont'd)																	
	Total		of which:				Loans up to €1 million <sup>15</sup> with an initial rate fixation of						Loans over €1 million <sup>15</sup> with an initial rate fixation of					
			Renegotiated loans <sup>9</sup>		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 <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million	Effective interest rate <sup>1</sup> % p.a.	Volume <sup>7</sup> € million		
<b>Total loans</b>																		
2022 Oct.	2.86	88,486	2.60	25,332	3.12	10,741	4.26	1,591	3.55	989	2.67	64,795	3.83	3,917	3.34	6,453		
Nov.	3.14	76,430	3.14	20,220	3.53	10,542	4.71	1,587	3.80	1,046	2.94	51,493	3.51	3,923	3.33	7,839		
Dec.	3.45	107,068	3.42	32,607	3.91	11,995	4.98	1,854	3.81	1,138	3.35	75,616	3.55	6,334	3.25	10,131		
2023 Jan.	3.59	81,688	3.66	23,420	4.41	10,450	5.10	1,586	3.88	1,021	3.42	60,491	3.85	2,968	3.24	5,172		
Feb.	3.88	85,530	3.83	19,830	4.84	10,275	5.58	1,480	4.06	863	3.70	64,785	4.07	2,789	3.66	5,338		
Mar.	4.36	102,182	4.20	29,585	5.18	12,826	5.70	2,212	4.13	1,223	4.24	70,035	4.41	5,308	3.91	10,578		
Apr.	4.45	73,584	4.46	23,051	5.24	9,722	5.84	1,572	4.32	999	4.36	51,380	4.18	3,476	3.77	6,435		
May	4.65	79,772	4.62	21,546	5.37	11,322	6.13	1,607	4.22	1,060	4.59	55,568	4.00	3,590	4.00	6,625		
June	4.88	100,910	4.89	33,256	5.58	12,583	6.39	1,760	4.31	1,219	4.85	72,375	4.70	4,371	3.95	8,602		
July	5.06	85,629	4.88	28,176	6.39	10,764	6.54	1,838	4.35	1,167	4.91	61,061	5.32	3,989	3.94	6,810		
Aug.	5.11	73,312	5.15	21,335	6.01	10,015	6.63	1,698	4.46	999	5.06	51,942	4.47	3,017	3.95	5,641		
Sep.	5.16	83,317	5.30	25,702	6.04	10,804	6.76	1,689	4.35	959	5.09	60,497	5.03	3,077	4.10	6,291		
Oct.	5.39	76,684	5.27	24,750	6.35	10,944	6.93	1,750	4.61	912	5.30	54,862	5.02	3,674	4.11	4,542		
<b>of which: Collateralised loans <sup>11</sup></b>																		
2022 Oct.	2.82	10,559	.	.	3.01	572	3.48	95	3.32	261	2.71	7,209	3.43	750	2.82	1,672		
Nov.	3.50	9,542	.	.	3.45	462	3.93	93	3.49	269	3.56	6,290	3.81	739	3.12	1,689		
Dec.	3.41	17,202	.	.	3.72	588	4.08	126	3.41	291	3.41	10,703	4.20	1,417	3.08	4,077		
2023 Jan.	.	.	.	.	4.00	553	3.72	123	.	.	3.92	6,635	4.01	652	3.07	1,196		
Feb.	3.93	8,371	.	.	4.34	400	4.37	96	3.61	208	4.03	6,148	3.87	514	3.20	1,005		
Mar.	4.15	14,364	.	.	4.60	641	4.73	117	3.62	331	4.22	10,350	4.11	1,117	3.64	1,808		
Apr.	4.48	10,295	.	.	4.88	452	4.52	120	3.81	269	4.71	6,760	4.81	541	3.69	2,153		
May	.	.	.	.	5.06	456	4.80	108	3.80	268	.	.	4.37	876	3.77	1,623		
June	.	.	.	.	5.14	573	4.75	99	3.87	340	.	.	5.16	1,293	3.75	1,183		
July	4.86	11,078	.	.	5.44	489	4.91	126	3.98	325	4.87	6,823	5.86	1,544	3.94	1,771		
Aug.	5.08	9,797	.	.	5.58	425	5.01	122	3.85	279	5.45	6,747	4.32	890	3.79	1,334		
Sep.	.	.	.	.	5.63	450	5.28	109	3.88	253	.	.	5.19	1,187	3.76	1,487		
Oct.	5.05	12,099	.	.	5.66	508	5.09	136	3.95	213	5.21	8,840	5.38	1,005	3.73	1,397		

For footnotes \* and 1 to 6, see p. 44•. For footnotes + and 7 to 10, see p. 45•;  
**11** For the purposes of the interest rate statistics, a loan is considered to be secured if collateral (amongst others financial collateral, real estate collateral, debt securities) in at least the same value as the loan amount has been posted, pledged or assigned.  
**12** Including revolving loans which have all the following features: (a) the borrower may use or withdraw the funds to a pre-approved credit limit without giving prior notice to the lender; (b) the amount of available credit can increase and decrease as funds are borrowed and repaid; (c) the loan may be used repeatedly; (d) there is no obligation of regular repayment of funds. **13** Overdrafts are defined as debit balances

on current accounts. They include all bank overdrafts regardless of whether they are within or beyond the limits agreed between customers and the bank. **14** Including convenience and extended credit card debt. Convenience credit is defined as the credit granted at an interest rate of 0% in the period between payment transactions effected with the card during one billing cycle and the date at which the debt balances from this specific billing cycle become due. **15** The amount category refers to the single loan transaction considered as new business. **x** Dominated by the business of one or two banks. Therefore, the value cannot be published due to confidentiality.

## VII. Insurance corporations and pension funds

### 1. Assets

€ billion

End of year/quarter	Total	Currency and deposits <sup>1</sup>	Debt securities	Loans <sup>2</sup>	Shares and other equity	Investment fund shares/units	Financial derivatives	Technical reserves <sup>3</sup>	Non-financial assets	Remaining assets
<b>Insurance corporations</b>										
2020 Q4	2,605.6	301.7	485.5	370.6	425.0	853.2	4.7	68.1	38.2	58.7
2021 Q1	2,592.3	292.4	470.7	361.7	437.4	858.1	3.9	71.9	38.9	57.2
Q2	2,609.9	280.5	470.3	361.2	449.2	879.6	3.4	72.5	38.9	54.2
Q3	2,653.1	271.7	474.2	358.2	463.4	899.8	3.3	87.8	38.3	56.3
Q4	2,667.2	261.3	468.6	355.1	472.4	921.6	3.2	85.0	40.8	59.3
2022 Q1	2,547.3	243.7	440.2	333.2	468.7	870.5	2.7	87.5	41.0	59.8
Q2	2,369.7	215.6	390.3	305.5	462.5	803.5	3.0	85.5	41.3	62.5
Q3	2,296.2	202.0	369.9	289.1	461.2	776.7	4.0	84.2	41.4	67.6
Q4	2,274.7	189.5	373.7	279.7	465.8	772.2	3.4	79.5	38.7	72.2
2023 Q1	2,326.9	201.7	380.8	280.2	472.3	790.3	3.6	85.2	38.5	74.4
Q2	2,330.1	194.7	383.3	280.0	474.3	799.0	3.6	84.1	38.1	73.0
<b>Life insurance</b>										
2020 Q4	1,406.7	183.5	246.4	229.9	70.2	623.8	3.3	14.3	20.8	14.5
2021 Q1	1,372.8	170.4	234.3	219.6	74.3	623.1	2.1	14.2	21.5	13.2
Q2	1,384.9	164.4	234.1	219.4	78.0	637.6	2.0	14.1	21.5	13.8
Q3	1,400.1	159.2	233.8	214.8	87.7	654.6	1.9	13.4	20.8	13.8
Q4	1,411.1	152.4	231.9	211.8	93.4	669.1	1.7	14.6	21.9	14.3
2022 Q1	1,317.7	136.8	211.5	193.1	99.7	626.1	0.9	13.9	22.0	13.8
Q2	1,202.1	120.5	180.3	173.1	104.2	569.4	0.9	13.6	22.1	17.9
Q3	1,149.6	110.2	166.6	162.1	107.0	546.4	1.1	12.3	22.3	21.7
Q4	1,130.1	103.6	170.5	155.6	111.4	540.0	1.1	11.5	19.5	16.8
2023 Q1	1,147.9	105.1	170.4	155.6	113.3	553.4	1.0	12.1	19.4	17.5
Q2	1,153.6	102.8	171.7	154.9	114.3	559.4	1.0	12.1	19.3	18.1
<b>Non-life insurance</b>										
2020 Q4	709.4	105.9	141.9	84.5	85.1	214.2	0.5	37.5	12.7	27.3
2021 Q1	721.2	108.1	140.2	83.6	88.7	218.9	0.4	40.0	12.8	28.6
Q2	724.6	103.3	141.0	83.4	90.5	225.7	0.4	40.3	12.7	27.2
Q3	733.1	98.7	141.0	83.8	93.7	228.4	0.4	46.4	12.8	27.7
Q4	738.4	94.6	140.1	84.7	97.5	234.3	0.3	44.6	14.0	28.4
2022 Q1	722.4	91.4	133.4	80.8	98.5	227.7	0.2	45.7	13.9	30.7
Q2	681.6	81.9	122.0	74.8	98.6	216.5	0.1	44.0	14.1	29.5
Q3	661.1	76.2	116.0	70.3	99.2	212.2	0.1	43.1	14.1	29.7
Q4	659.0	72.7	115.2	69.1	99.8	215.5	0.2	42.4	14.2	30.1
2023 Q1	687.2	81.3	121.2	69.5	102.7	219.8	0.1	45.2	14.2	33.2
Q2	687.1	77.2	123.9	70.3	103.1	222.4	0.1	45.1	14.1	30.9
<b>Reinsurance <sup>4</sup></b>										
2020 Q4	489.5	12.3	97.2	56.3	269.7	15.2	1.0	16.3	4.7	16.9
2021 Q1	498.4	13.9	96.3	58.5	274.4	16.2	1.4	17.7	4.7	15.3
Q2	500.4	12.8	95.2	58.4	280.7	16.4	1.0	18.1	4.6	13.2
Q3	519.9	13.9	99.3	59.6	282.0	16.7	1.0	28.0	4.7	14.8
Q4	517.7	14.3	96.6	58.6	281.4	18.2	1.1	25.9	4.9	16.7
2022 Q1	507.1	15.5	95.3	59.3	270.4	16.7	1.6	27.9	5.0	15.3
Q2	486.0	13.2	88.0	57.5	259.6	17.6	1.9	27.9	5.1	15.1
Q3	485.5	15.6	87.3	56.7	255.1	18.1	2.7	28.8	5.1	16.2
Q4	485.6	13.2	88.0	55.0	254.6	16.7	2.1	25.7	5.0	25.3
2023 Q1	491.8	15.3	89.2	55.0	256.3	17.1	2.4	27.8	4.8	23.7
Q2	489.5	14.7	87.6	54.8	256.9	17.2	2.5	26.9	4.8	24.0
<b>Pension funds <sup>5</sup></b>										
2020 Q4	662.9	88.9	60.6	49.5	10.3	419.5	0.2	11.9	18.8	3.1
2021 Q1	664.3	86.1	58.7	48.6	10.8	427.9	0.2	12.1	17.6	2.3
Q2	683.2	85.0	60.2	49.3	11.2	445.2	0.1	12.1	17.8	2.3
Q3	689.8	82.9	60.4	48.9	11.8	453.6	0.1	12.2	17.8	2.2
Q4	709.9	82.1	60.0	48.7	11.2	473.5	0.1	12.4	18.5	3.3
2022 Q1	689.0	75.7	56.6	46.2	11.9	465.3	0.0	12.5	18.5	2.2
Q2	664.2	70.2	52.8	43.2	12.3	452.2	0.0	12.4	18.6	2.5
Q3	654.6	67.6	51.8	42.0	12.7	446.0	0.0	13.2	18.7	2.6
Q4	660.9	67.3	53.0	41.8	12.8	450.2	0.0	13.6	18.8	3.4
2023 Q1	666.3	65.8	56.6	42.0	13.6	453.5	0.0	13.5	18.8	2.6
Q2	673.3	67.9	59.1	42.5	13.7	455.2	0.0	13.5	18.9	2.5

Sources: The calculations for the insurance sectors are based on supervisory data according to Solvency I and II and for pension funds on IORP supervisory data and own data collections. <sup>1</sup> Accounts receivable to monetary financial institutions, including registered bonds, borrower's note loans and registered Pfandbriefe. <sup>2</sup> Including deposits retained on assumed reinsurance as well as registered bonds, borrower's note loans and registered Pfandbriefe. <sup>3</sup> Including reinsurance recoverables and claims of

pension funds on pension managers. <sup>4</sup> Not including the reinsurance business conducted by primary insurers, which is included there. <sup>5</sup> The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes and occupational pension schemes for the self-employed. Social security funds are not included.

## VII. Insurance corporations and pension funds

### 2. Liabilities

€ billion

End of year/quarter	Total	Debt securities issued	Loans <sup>1</sup>	Shares and other equity	Technical reserves			Financial derivatives	Remaining liabilities	Net worth <sup>6</sup>
					Total <sup>2</sup>	Life/pension entitlements <sup>3</sup>	Non-life			
<b>Insurance corporations</b>										
2020 Q4	2,605.6	36.6	79.7	540.4	1,798.9	1,579.2	219.8	1.6	148.5	–
2021 Q1	2,592.3	34.8	81.4	551.7	1,778.6	1,541.3	237.3	2.5	143.4	–
Q2	2,609.9	33.0	81.3	558.7	1,793.5	1,556.3	237.1	2.2	141.1	–
Q3	2,653.1	35.4	82.8	567.0	1,817.7	1,569.1	248.7	2.5	147.6	–
Q4	2,667.2	36.0	81.9	579.3	1,820.7	1,578.3	242.3	2.5	146.8	–
2022 Q1	2,547.3	34.4	82.1	563.1	1,725.9	1,472.6	253.3	4.0	137.7	–
Q2	2,369.7	33.6	78.7	541.6	1,574.4	1,326.8	247.5	6.0	135.3	–
Q3	2,296.2	33.8	73.6	537.4	1,506.0	1,262.3	243.7	7.4	138.0	–
Q4	2,274.7	32.3	70.1	543.7	1,486.5	1,248.7	237.8	5.6	136.5	–
2023 Q1	2,326.9	33.1	71.2	544.7	1,539.1	1,277.1	261.9	4.4	134.4	–
Q2	2,330.1	33.2	68.4	546.7	1,543.8	1,283.7	260.1	4.5	133.6	–
<b>Life insurance</b>										
2020 Q4	1,406.7	3.9	20.7	142.8	1,185.6	1,185.6	–	0.5	53.2	–
2021 Q1	1,372.8	3.3	19.9	143.1	1,154.3	1,154.3	–	1.0	51.2	–
Q2	1,384.9	3.3	20.4	144.2	1,164.9	1,164.9	–	1.0	51.1	–
Q3	1,400.1	3.3	19.3	148.1	1,176.4	1,176.4	–	1.1	51.9	–
Q4	1,411.1	3.3	20.7	148.2	1,185.5	1,185.5	–	0.9	52.5	–
2022 Q1	1,317.7	3.2	19.9	142.9	1,101.6	1,101.6	–	1.4	48.8	–
Q2	1,202.1	3.1	19.0	141.4	984.5	984.5	–	2.7	51.3	–
Q3	1,149.6	3.0	17.0	138.0	936.9	936.9	–	3.1	51.8	–
Q4	1,130.1	2.7	16.6	136.0	924.9	924.9	–	2.3	47.7	–
2023 Q1	1,147.9	2.8	17.8	133.0	945.8	945.8	–	1.9	46.6	–
Q2	1,153.6	2.7	17.5	133.8	950.9	950.9	–	1.8	46.9	–
<b>Non-life insurance</b>										
2020 Q4	709.4	1.3	9.7	158.0	482.9	368.7	114.2	0.0	57.6	–
2021 Q1	721.2	1.2	10.6	162.7	491.5	362.6	128.9	0.1	55.1	–
Q2	724.6	1.2	10.5	166.2	493.4	366.2	127.1	0.1	53.1	–
Q3	733.1	1.2	10.5	168.9	498.7	367.8	130.9	0.2	53.7	–
Q4	738.4	1.4	10.7	175.8	492.6	367.6	125.0	0.2	57.8	–
2022 Q1	722.4	1.3	11.7	173.1	483.0	347.1	135.9	0.3	53.0	–
Q2	681.6	1.2	11.1	167.6	451.9	322.7	129.2	0.5	49.2	–
Q3	661.1	1.2	10.5	167.9	430.4	307.4	123.0	0.5	50.5	–
Q4	659.0	1.2	10.4	170.2	425.1	306.7	118.4	0.4	51.7	–
2023 Q1	687.2	1.2	10.7	173.0	451.0	314.4	136.7	0.4	51.0	–
Q2	687.1	1.2	10.6	174.6	451.2	317.0	134.2	0.3	49.1	–
<b>Reinsurance <sup>4</sup></b>										
2020 Q4	489.5	31.4	49.3	239.6	130.4	24.8	105.6	1.0	37.7	–
2021 Q1	498.4	30.2	50.9	245.8	132.8	24.4	108.4	1.4	37.2	–
Q2	500.4	28.5	50.4	248.3	135.2	25.2	110.0	1.1	36.9	–
Q3	519.9	30.9	53.0	250.1	142.7	24.9	117.8	1.3	42.0	–
Q4	517.7	31.4	50.5	255.3	142.6	25.3	117.3	1.4	36.5	–
2022 Q1	507.1	30.0	50.4	247.2	141.3	23.9	117.4	2.3	35.9	–
Q2	486.0	29.3	48.6	232.6	138.0	19.6	118.4	2.8	34.7	–
Q3	485.5	29.7	46.2	231.5	138.7	18.0	120.7	3.8	35.7	–
Q4	485.6	28.4	43.1	237.5	136.5	17.1	119.4	2.9	37.1	–
2023 Q1	491.8	29.2	42.8	238.7	142.2	17.0	125.3	2.1	36.8	–
Q2	489.5	29.3	40.2	238.3	141.7	15.8	125.9	2.4	37.6	–
<b>Pension funds <sup>5</sup></b>										
2020 Q4	662.9	–	1.6	28.4	528.5	527.9	–	0.3	9.0	95.1
2021 Q1	664.3	–	1.7	29.1	530.3	529.2	–	0.3	9.0	94.0
Q2	683.2	–	1.8	31.3	536.7	535.0	–	0.2	9.2	104.0
Q3	689.8	–	1.9	31.9	539.8	537.6	–	0.2	9.3	106.8
Q4	709.9	–	1.9	32.0	560.2	557.3	–	0.1	8.9	106.8
2022 Q1	689.0	–	2.0	26.8	559.0	556.8	–	0.1	11.2	89.9
Q2	664.2	–	1.8	23.4	559.7	558.1	–	0.1	11.6	67.7
Q3	654.6	–	1.9	21.2	561.1	560.2	–	0.1	13.0	57.2
Q4	660.9	–	1.8	24.3	580.8	580.5	–	0.1	11.5	42.5
2023 Q1	666.3	–	1.8	24.8	580.2	579.9	–	0.1	11.5	47.9
Q2	673.3	–	1.8	24.7	585.3	584.9	–	0.1	11.6	49.9

Sources: The calculations for the insurance sectors are based on supervisory data according to Solvency I and II and for pension funds on IORP supervisory data and own data collections. **1** Including deposits retained on ceded business as well as registered bonds, borrower's note loans and registered Pfandbriefe. **2** Including claims of pension funds on pension managers and entitlements to non-pension benefits. **3** Technical reserves "life" taking account of transitional measures. Health insurance is also included

in the "non-life insurance" sector. **4** Not including the reinsurance business conducted by primary insurers, which is included there. **5** Valuation at book values. The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes and occupational pension schemes for the self-employed. Social security funds are not included. **6** Own funds correspond to the sum of "Net worth" and "Shares and other equity".



## 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 <sup>1</sup>					Residents					
		Total	Bank debt securities	Corporate bonds (non-MFIs) <sup>2</sup>	Public debt secur- ities	Foreign debt secur- ities <sup>3</sup>	Total <sup>4</sup>	Credit in- stitutions including building and loan associations <sup>5</sup>	Deutsche Bundesbank	Other sectors <sup>6</sup>	Non- residents <sup>7</sup>	
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	55,581	
2013	- 15,971	- 101,616	- 117,187	153	15,415	85,645	16,409	- 25,778	- 12,708	54,895	- 32,379	
2014	58,735	- 31,962	- 47,404	- 1,330	16,776	90,697	44,384	- 12,124	- 11,951	68,459	14,351	
2015	15,219	- 36,010	- 65,778	26,762	3,006	51,229	99,225	- 66,330	121,164	44,391	- 84,006	
2016	68,998	27,429	19,177	18,265	- 10,012	41,569	161,776	- 58,012	187,500	32,288	- 92,778	
2017	51,034	11,563	1,096	7,112	3,356	39,471	134,192	- 71,454	161,012	44,634	- 83,158	
2018	78,657	16,630	33,251	12,433	- 29,055	62,027	107,155	- 24,417	67,328	64,244	- 28,499	
2019	139,611	68,536	29,254	32,505	6,778	71,075	60,195	8,059	2,408	49,728	79,416	
2020	451,409	374,034	14,462	88,703	270,870	77,374	285,318	18,955	226,887	39,476	166,091	
2021	233,453	221,648	31,941	19,754	169,953	11,805	255,702	- 41,852	245,198	52,356	- 22,249	
2022	155,940	156,190	59,322	35,221	61,648	- 219	155,609	2,915	49,774	102,920	331	
2022 Nov.	45,419	36,891	2,672	5,087	29,133	8,528	13,173	193	4,041	8,940	32,246	
Dec.	- 27,425	- 31,394	- 15,450	- 6,091	- 9,853	4,001	11,231	- 18,577	- 6,015	35,823	- 38,656	
2023 Jan.	58,333	26,856	19,250	4,335	3,270	31,477	41,346	10,522	7,783	23,041	16,987	
Feb.	24,581	11,680	5,466	- 1,673	7,886	12,901	25,280	13,504	- 4,961	16,736	- 699	
Mar.	59,563	39,989	22,802	- 1,704	18,892	19,573	18,732	8,063	- 1,710	12,379	40,831	
Apr.	8,074	- 4,404	- 1,130	- 3,176	- 97	12,477	12,253	- 747	- 13,293	26,292	- 4,179	
May	49,437	34,077	28,468	3,010	2,599	15,359	12,041	1,206	- 1,655	12,490	37,395	
June	44,247	22,910	- 6,490	5,312	24,089	21,337	38,527	16,773	- 8,853	30,607	5,720	
July	25,644	27,889	981	- 79	26,987	- 2,245	- 629	- 8,514	324	7,561	26,273	
Aug.	14,632	10,967	10,278	- 1,708	2,397	3,665	975	503	- 9,067	9,539	13,657	
Sep.	16,575	16,310	- 7,089	6,461	16,938	265	- 5,420	- 8,020	- 11,311	13,912	21,995	
Oct.	- 23,501	- 20,344	1,044	- 11,275	- 10,113	- 3,158	- 15,198	- 4,855	- 6,759	- 3,584	- 8,303	

€ million

Period	Shares							
	Sales = total purchases	Sales			Purchases			
		Domestic shares <sup>8</sup>	Foreign shares <sup>9</sup>		Residents			
					Total <sup>10</sup>	Credit insti- tutions <sup>5</sup>	Other sectors <sup>11</sup>	Non- residents <sup>12</sup>
2011	25,833	21,713	4,120	40,804	670	40,134	-	14,971
2012	15,061	5,120	9,941	14,405	10,259	4,146	-	656
2013	20,187	10,106	10,081	17,337	11,991	5,346	-	2,851
2014	43,488	18,778	24,710	43,930	17,203	26,727	-	443
2015	56,979	7,668	49,311	46,721	- 5,421	52,142	-	10,258
2016	39,133	4,409	34,724	39,265	- 5,143	44,408	-	132
2017	52,932	15,570	37,362	51,270	7,031	44,239	-	1,662
2018	61,400	16,188	45,212	89,624	- 11,184	100,808	-	28,224
2019	54,830	9,076	45,754	43,070	- 1,119	44,189	-	11,759
2020	72,321	17,771	54,550	105,483	27	105,456	-	33,162
2021	115,746	49,066	66,681	102,927	10,869	92,058	-	12,819
2022	- 14,234	27,792	- 34,858	- 7,006	- 8,262	1,256	-	7,228
2022 Nov.	- 5,647	247	- 5,894	- 8,903	- 1,414	10,317	-	3,256
Dec.	14,926	20,925	1,169	16,366	- 3,089	19,455	-	1,440
2023 Jan.	6,525	133	6,393	8,105	2,935	5,170	-	1,580
Feb.	4,863	2,371	2,492	6,098	4,494	1,604	-	1,235
Mar.	- 1,346	1,696	- 3,042	650	1,985	1,335	-	1,996
Apr.	5,001	2,576	2,426	6,321	3,235	3,086	-	1,320
May	- 708	592	- 1,299	377	- 2,497	2,874	-	1,084
June	- 4,220	1,067	- 5,287	- 278	- 3,322	3,044	-	3,942
July	4,330	478	3,852	1,499	- 136	1,635	-	2,831
Aug.	440	1,474	- 1,034	3,509	- 893	4,402	-	3,069
Sep.	- 4,807	687	- 5,495	3,719	- 1,962	5,681	-	1,088
Oct.	0	583	- 582	2,357	- 88	2,445	-	2,357

**1** Net sales at market values plus/minus changes in issuers' portfolios of their own debt securities. **2** Including cross-border financing within groups from January 2011. **3** Net purchases or net sales (-) of foreign debt securities by residents; transaction values. **4** Domestic and foreign debt securities. **5** Book values; statistically adjusted. **6** Residual; also including purchases of domestic and foreign securities by domestic mutual funds. Up to end-2008 including Deutsche Bundesbank. **7** Net purchases or net sales (-) of domestic debt securities by non-residents; transaction values. **8** Excluding shares of public

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

## VIII. Capital market

### 2. Sales of debt securities issued by residents \*

€ million, nominal value

Period	Bank debt securities <sup>1</sup>						Corporate bonds (non-MFIs) <sup>2</sup>	Public debt securities
	Total	Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special-purpose credit institutions	Other bank debt securities		
<b>Gross sales</b>								
2012	1,340,568	702,781	36,593	11,413	446,153	208,623	63,258	574,530
2013	1,433,628	908,107	25,775	12,963	692,611	176,758	66,630	458,892
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	106,675	400,701
2016 <sup>3</sup>	1,206,483	717,002	29,059	7,621	511,222	169,103	73,371	416,108
2017 <sup>3</sup>	1,047,822	619,199	30,339	8,933	438,463	141,466	66,290	362,332
2018	1,148,091	703,416	38,658	5,673	534,552	124,530	91,179	353,496
2019	1,285,541	783,977	38,984	9,587	607,900	127,504	94,367	407,197
2020 <sup>6</sup>	1,870,084	778,411	39,548	18,327	643,380	77,156	184,206	907,466
2021	1,658,004	795,271	41,866	17,293	648,996	87,116	139,775	722,958
2022	1,683,265	861,989	66,811	11,929	700,062	83,188	169,680	651,596
2023 Jan.	132,817	74,019	10,797	929	52,888	9,405	14,710	44,088
Feb.	155,676	81,678	2,245	1,729	63,385	14,319	12,146	61,853
Mar.	190,528	99,938	1,252	60	89,786	8,840	11,158	79,431
Apr.	129,401	69,020	2,954	543	60,740	4,783	10,608	49,772
May	169,866	97,645	4,531	760	83,511	8,844	16,336	55,885
June	171,957	84,953	3,264	1,556	70,601	9,532	21,526	65,478
July	121,578	53,812	2,876	130	43,776	7,031	14,133	53,632
Aug.	142,211	82,749	3,085	1,013	71,729	6,922	10,064	49,397
Sep.	152,408	82,679	3,337	550	71,155	7,637	18,722	51,007
Oct.	131,319	82,456	1,697	2,557	71,292	6,910	9,961	38,901
<b>of which: Debt securities with maturities of more than four years <sup>4</sup></b>								
2012	421,018	177,086	23,374	6,482	74,386	72,845	44,042	199,888
2013	372,805	151,797	16,482	10,007	60,662	64,646	45,244	175,765
2014	420,006	157,720	17,678	8,904	61,674	69,462	56,249	206,037
2015	414,593	179,150	25,337	9,199	62,237	82,379	68,704	166,742
2016 <sup>3</sup>	375,859	173,900	24,741	5,841	78,859	64,460	47,818	154,144
2017 <sup>3</sup>	357,506	170,357	22,395	6,447	94,852	46,663	44,891	142,257
2018	375,906	173,995	30,934	4,460	100,539	38,061	69,150	132,760
2019	396,617	174,390	26,832	6,541	96,673	44,346	69,682	152,544
2020 <sup>6</sup>	658,521	165,097	28,500	7,427	90,839	38,330	77,439	415,985
2021	486,335	171,799	30,767	6,336	97,816	36,880	64,234	250,303
2022	485,287	164,864	41,052	7,139	91,143	25,530	56,491	263,932
2023 Jan.	47,131	21,923	4,927	529	14,197	2,271	3,408	21,800
Feb.	51,443	14,927	820	310	10,272	3,525	3,065	33,450
Mar.	46,975	14,091	1,147	-	11,809	1,136	1,658	31,225
Apr.	33,709	10,326	2,769	500	6,367	690	2,683	20,700
May	49,315	14,703	2,898	-	9,458	2,347	4,527	30,085
June	53,960	12,885	2,664	498	9,123	600	10,475	30,600
July	34,145	10,133	430	2	7,964	1,736	2,298	21,715
Aug.	36,582	12,501	2,383	1,000	8,182	936	1,656	22,425
Sep.	40,995	8,847	2,250	-	5,127	1,470	8,741	23,407
Oct.	36,902	14,861	262	20	11,840	2,739	2,266	19,775
<b>Net sales <sup>5</sup></b>								
2012	- 85,298	- 100,198	- 4,177	- 41,660	- 3,259	- 51,099	- 6,401	- 21,298
2013	- 140,017	- 125,932	- 17,364	- 37,778	- 4,027	- 66,760	- 1,394	- 15,479
2014	- 34,020	- 56,899	- 6,313	- 23,856	- 862	- 25,869	- 10,497	- 12,383
2015	- 65,147	- 77,273	- 9,271	- 9,754	- 2,758	- 74,028	- 25,300	- 13,174
2016 <sup>3</sup>	- 21,951	- 10,792	- 2,176	- 12,979	- 16,266	- 5,327	- 18,177	- 7,020
2017 <sup>3</sup>	- 2,669	- 5,954	- 6,389	- 4,697	- 18,788	- 14,525	- 6,828	- 10,114
2018	- 2,758	- 26,648	- 19,814	- 6,564	- 18,850	- 5,453	- 9,738	- 33,630
2019	- 59,719	- 28,750	- 13,098	- 3,728	- 26,263	- 6,885	- 30,449	- 519
2020 <sup>6</sup>	- 473,795	- 28,147	- 8,661	- 8,816	- 22,067	- 11,398	- 49,536	- 396,113
2021	- 210,231	- 52,578	- 17,821	- 7,471	- 22,973	- 4,314	- 35,531	- 122,123
2022	- 135,853	- 36,883	- 23,894	- 9,399	- 15,944	- 6,444	- 30,671	- 68,299
2023 Jan.	- 24,590	- 14,006	- 6,314	- 1,551	- 4,428	- 4,815	- 3,554	- 7,030
Feb.	- 9,644	- 2,700	- 2,433	- 1,512	- 2,861	- 6,482	- 2,541	- 9,486
Mar.	- 46,022	- 19,989	- 2,032	- 1,517	- 18,332	- 5,206	- 1,614	- 27,647
Apr.	- 26,464	- 2,812	- 1,244	- 5	- 3,074	- 976	- 3,714	- 19,938
May	- 40,674	- 26,575	- 1,932	- 254	- 20,562	- 3,826	- 2,259	- 11,840
June	- 25,517	- 7,752	- 509	- 11	- 9,065	- 1,811	- 7,559	- 25,710
July	- 30,229	- 700	- 53	- 110	- 502	- 1,146	- 734	- 30,263
Aug.	- 15,869	- 9,610	- 2,930	- 541	- 7,387	- 1,249	- 1,791	- 8,050
Sep.	- 12,991	- 6,384	- 28	- 809	- 4,706	- 897	- 8,074	- 11,300
Oct.	- 7,725	- 1,263	- 2,527	- 579	- 930	- 2,774	- 2,327	- 4,135

\* For definitions, see the explanatory notes in Statistical Series - Securities Issues Statistics on pages 43 f. <sup>1</sup> Excluding registered bank debt securities. <sup>2</sup> Including cross-border financing within groups from January 2011. <sup>3</sup> Sectoral reclassification of debt securities. <sup>4</sup> Maximum maturity according to the terms of issue. <sup>5</sup> Gross sales less

redemptions. <sup>6</sup> Methodological changes since January 2020. — The figures for the year 2020 have been revised. The figures for the most recent date are provisional. Revisions are not specially marked.

## VIII. Capital market

### 3. Amounts outstanding of debt securities issued by residents \*

€ million, nominal value

End of year or month/ Maturity in years	Bank debt securities						Corporate bonds (non-MFIs)	Public debt securities		
	Total	Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special-purpose credit institutions	Other bank debt securities				
2012	3,285,422	1	1,414,349	145,007	147,070	574,163	1	220,456	1	1,650,617
2013	3,145,329		1,288,340	127,641	109,290	570,136		221,851		1,635,138
2014	3,111,308		1,231,445	121,328	85,434	569,409		232,342		1,647,520
2015	3,046,162		1,154,173	130,598	75,679	566,811		257,612		1,634,377
2016 <sup>1</sup>	3,068,111		1,164,965	132,775	62,701	633,578		275,789		1,627,358
2017 <sup>1</sup>	3,090,708		1,170,920	141,273	58,004	651,211		302,543		1,617,244
2018	3,091,303		1,194,160	161,088	51,439	670,062	1	311,572	1 2	1,583,616
2019	3,149,373	2	1,222,911	174,188	47,712	696,325		304,686	2	1,584,136
2020 <sup>4</sup>	3,545,200	2	1,174,817	183,980	55,959	687,710	2	247,169	2	1,991,040
2021	3,781,975		1,250,777	202,385	63,496	731,068		253,828		2,116,406
2022	3,930,390		1,302,028	225,854	54,199	761,047		260,928		2,187,127
2023 Jan.	3,948,426		1,313,581	232,105	52,647	763,260		265,568		2,190,316
Feb.	3,963,852		1,320,844	229,851	54,180	764,148		272,666		2,200,618
Mar.	4,005,403		1,335,447	227,451	52,890	777,696		277,410		2,229,557
Apr.	3,977,194		1,330,812	228,764	52,910	772,714		276,424		2,209,790
May	4,027,974		1,364,889	230,966	53,237	799,875		280,811		2,223,786
June	4,052,214		1,354,415	230,474	53,223	788,438		282,281		2,251,019
July	4,077,718		1,354,010	231,454	53,389	786,384		282,783		2,277,644
Aug.	4,095,643		1,365,614	234,566	53,961	795,808		281,279		2,285,319
Sep.	4,117,795		1,365,365	234,599	53,128	796,782		280,856		2,299,393
Oct.	4,110,266		1,363,209	231,537	53,038	794,697		283,936		2,296,591

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

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500
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#### Position at end-October 2023

\* Including debt securities temporarily held in the issuers' portfolios. **1** Sectoral reclassification of debt securities. **2** Adjustments due to the change in the country of residence of the issuers or debt securities. **3** Calculated from month under review until final maturity for debt securities falling due en bloc and until mean maturity of the

residual amount outstanding for debt securities not falling due en bloc. **4** Methodological changes since January 2020. — The figures for the year 2020 have been revised. The figures for the most recent date are provisional. Revisions are not specially marked.

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

€ million, nominal value

Period	Share capital = circulation at end of period under review	Net increase or net decrease (-) during period under review	Change in domestic public limited companies' capital due to						Memo item: Share circulation at market values (market capitalisation) level at end of period under review <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	merger and transfer of assets	change of legal form	reduction of capital and liquidation				
2012	178,617	1,449	3,046	129	570	—	478	—	594	—	2,411	1,150,188
2013	171,741	6,879	2,971	718	476	—	1,432	—	619	—	8,992	1,432,658
2014	177,097	5,356	5,332	1,265	1,714	—	465	—	1,044	—	1,446	1,478,063
2015	177,416	319	4,634	397	599	—	1,394	—	1,385	—	2,535	1,614,442
2016	176,355	1,062	3,272	319	337	—	953	—	2,165	—	1,865	1,676,397
2017	178,828	2,471	3,894	776	533	—	457	—	661	—	1,615	1,933,733
2018	180,187	1,357	3,670	716	82	—	1,055	—	1,111	—	946	1,634,155
2019	183,461	1,673	2,411	2,419	542	—	858	—	65	—	2,775	1,950,224
2020	181,881	2,872	1,877	219	178	—	2,051	—	460	—	2,635	1,963,588
2021	186,580	4,152	9,561	672	35	—	326	—	212	—	5,578	2,301,942
2022	199,789	12,272	14,950	224	371	—	29	—	293	—	2,952	1,858,963
2023 Jan.	199,778	11	16	—	—	—	—	—	0	—	—	2,027,004
Feb.	198,334	162	149	—	—	—	—	—	0	—	—	2,064,749
Mar.	198,157	185	178	—	—	—	—	—	—	—	—	2,080,189
Apr.	198,426	267	431	—	—	—	—	—	6	—	—	2,086,578
May	198,497	71	153	—	—	—	—	—	—	—	—	2,048,166
June	198,505	8	422	—	—	—	—	—	17	—	—	2,061,065
July	198,406	99	52	—	—	—	—	—	89	—	—	2,113,570
Aug.	198,654	210	452	—	—	—	—	—	24	—	—	2,038,560
Sep.	198,328	325	280	3	—	—	—	—	10	—	—	1,966,858
Oct.	198,522	194	504	—	—	—	—	—	2	—	—	1,852,180

\* Excluding shares of public limited investment companies. **1** Including shares issued out of company profits. **2** All marketplaces. Source: Bundesbank calculations based on data of the Herausgebergemeinschaft Wertpapier-Mitteilungen and Deutsche Börse

AG. **3** Methodological changes since October 2019. **4** Changes due to statistical adjustments.

## VIII. Capital market

### 5. Yields on German securities

Period	Issue yields				Yields on debt securities outstanding issued by residents 1							
	Total	Public debt securities		Bank debt securities	Total	Public debt securities			Bank debt securities		Corporate bonds (non-MFIs)	
		Total	of which: Listed Federal debt securities			Total	Listed Federal securities	With a residual maturity of 9 to 10 years 2	Total	With a residual maturity of more than 9 years and up to 10 years		
												Total
% per annum												
2011	2.7	2.5	2.3	3.0	2.6	2.4	2.4	2.6	2.9	3.5	4.3	
2012	1.6	1.3	1.2	1.8	1.4	1.3	1.3	1.5	1.6	2.1	3.7	
2013	1.6	1.3	1.2	1.8	1.4	1.3	1.3	1.6	1.3	2.1	3.4	
2014	1.2	1.1	0.9	1.3	1.0	1.0	1.0	1.2	0.9	1.7	3.0	
2015	0.7	0.4	0.4	0.7	0.5	0.4	0.4	0.5	0.5	1.2	2.4	
2016	0.4	0.1	–	0.1	0.6	0.1	0.0	0.1	0.3	1.0	2.1	
2017	0.6	0.4	0.2	0.6	0.3	0.2	0.2	0.3	0.4	0.9	1.7	
2018	0.7	0.6	0.4	0.6	0.4	0.3	0.3	0.4	0.6	1.0	2.5	
2019	0.2	–	0.1	–	0.3	0.4	–	0.3	0.1	0.3	2.5	
2020	0.1	–	0.3	–	0.5	0.1	–	0.5	–	0.1	1.7	
2021	0.0	–	0.2	–	0.3	0.1	–	0.4	–	0.1	0.9	
2022	1.6	1.3	1.2	1.9	1.5	1.2	1.1	1.1	1.9	1.9	3.3	
2023 Mar.	2.78	2.53	2.53	3.13	2.89	2.55	2.43	2.38	3.33	3.15	4.39	
Apr.	2.89	2.47	2.47	3.06	2.84	2.53	2.40	2.36	3.29	3.11	4.19	
May	2.80	2.41	2.41	3.16	2.82	2.50	2.37	2.34	3.26	3.11	4.17	
June	2.89	2.55	2.55	3.31	2.88	2.58	2.46	2.38	3.32	3.12	4.24	
July	2.98	2.61	2.61	3.64	2.97	2.67	2.55	2.46	3.43	3.24	4.25	
Aug.	2.92	2.58	2.58	3.42	3.01	2.71	2.60	2.55	3.44	3.31	4.27	
Sep.	3.18	2.75	2.75	3.57	3.11	2.82	2.71	2.66	3.51	3.42	4.39	
Oct.	3.18	2.86	2.86	3.66	3.25	2.96	2.84	2.82	3.66	3.63	4.56	

1 Bearer debt securities with maximum maturities according to the terms of issue of over 4 years. Structured debt securities, debt securities with unscheduled redemption, zero coupon bonds, floating rate notes and bonds not denominated in Euro are not included. Group yields for the various categories of securities are weighted by the amounts outstanding of the debt securities included in the calculation. Monthly figures

are calculated on the basis of the yields on all the business days in a month. The annual figures are the unweighted means of the monthly figures. Adjustment of the scope of securities included on 1 May 2020. 2 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 = total purchases	Sales							Purchases											
		Total	Open-end domestic mutual funds 1 (sales receipts)					Foreign funds 4	Total	Residents			Non-residents 5							
			Total	Mutual funds open to the general public						Total	Credit institutions including building and loan associations 2			Other sectors 3						
		Money market funds	Securities-based funds	Real estate funds	Specialised funds		Total	Total	of which: Foreign mutual fund shares	Total	of which: Foreign mutual fund shares									
2010	106,190	84,906	13,381	–	148	8,683	1,897	71,345	21,284	102,591	–	3,873	–	6,290	98,718	14,994	3,598			
2011	46,512	45,221	–	1,340	–	379	–	2,037	1,562	46,561	1,290	39,474	–	7,576	–	694	47,050	1,984	7,035	
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	–	3,437		
2013	123,736	91,337	9,184	–	574	5,596	3,376	82,153	32,400	117,028	771	100	116,257	32,300	6,710	–	–	6,710		
2014	137,294	97,711	3,998	–	473	862	1,000	93,713	39,583	141,134	819	–	1,745	140,315	41,328	–	–	3,841		
2015	189,802	146,136	30,420	–	318	22,345	3,636	115,716	43,665	181,932	7,362	–	494	174,570	43,171	–	–	7,870		
2016	149,288	119,369	21,301	–	342	11,131	7,384	98,068	29,919	156,236	2,877	–	3,172	153,359	33,091	–	–	6,948		
2017	148,214	94,921	29,560	–	235	21,970	4,406	65,361	53,292	150,740	4,938	–	1,048	145,802	52,244	–	–	2,526		
2018	108,293	103,694	15,279	–	377	4,166	6,168	88,415	4,599	114,973	2,979	–	2,306	111,994	6,905	–	–	6,680		
2019	171,666	122,546	17,032	–	447	5,097	10,580	105,514	49,120	176,210	2,719	–	812	173,491	49,932	–	–	4,544		
2020	151,960	116,028	19,193	–	42	11,343	8,795	96,835	35,932	150,998	336	–	1,656	150,662	37,588	–	–	962		
2021	274,261	157,861	41,016	–	482	31,023	7,841	116,845	116,401	282,694	13,154	–	254	269,540	116,147	–	–	8,433		
2022	112,637	79,022	6,057	–	482	444	5,071	72,991	33,614	115,872	3,170	–	1,459	112,702	35,073	–	–	3,235		
2023 Mar.	3,720	2,204	1,226	–	300	814	164	984	1,516	3,966	–	1,018	–	416	4,984	1,932	–	–	246	
Apr.	3,367	1,130	297	–	146	–	61	235	833	2,237	–	247	–	96	3,587	2,141	–	–	28	
May	8,348	6,261	1,228	–	144	–	1,301	21	5,035	8,074	–	49	–	42	8,123	2,045	–	–	274	
June	–	1,800	–	2,213	–	312	–	628	271	–	1,901	–	413	–	85	–	522	–	–	1,363
July	11,189	6,405	433	–	280	–	69	90	5,972	4,784	–	437	–	167	12,573	4,951	–	–	947	
Aug.	5,374	4,731	13	–	115	–	107	–	40	4,720	–	132	–	129	5,093	772	–	–	149	
Sep.	5,670	2,115	702	–	61	–	785	–	115	1,411	–	355	–	106	6,102	3,449	–	–	793	
Oct.	–	1,694	–	2,394	–	1,269	–	130	–	843	–	139	–	1,186	700	–	–	–	–	90

1 Including public limited investment companies. 2 Book values. 3 Residual. 4 Net purchases or net sales (-) of foreign fund shares by residents; transaction values. 5 Net purchases or net sales (-) of domestic fund shares by non-residents; transaction values.

— The figures for the most recent date are provisional; revisions are not specially marked.

## IX. Financial accounts

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

€ billion

Item	2020	2021	2022	2022				2023	
				Q1	Q2	Q3	Q4	Q1	Q2
<b>Acquisition of financial assets</b>									
Currency and deposits	96.82	46.19	67.90	13.90	- 26.90	51.95	28.96	- 25.80	- 13.01
Debt securities	2.99	2.81	4.10	0.63	- 0.10	3.52	0.05	4.44	1.80
Short-term debt securities	1.27	2.29	1.23	0.39	- 1.94	3.00	- 0.22	1.92	1.13
Long-term debt securities	1.72	0.52	2.87	0.24	1.84	0.52	0.26	2.52	0.67
Memo item:									
Debt securities of domestic sectors	1.38	1.31	3.40	0.34	0.98	1.65	0.43	3.82	2.76
Non-financial corporations	- 0.17	0.72	0.87	0.17	- 0.17	0.74	0.14	0.76	- 0.33
Financial corporations	0.12	1.08	1.78	0.44	0.73	0.66	- 0.05	1.44	1.44
General government	1.44	- 0.48	0.74	- 0.27	0.43	0.25	0.34	1.63	1.66
Debt securities of the rest of the world	1.61	1.50	0.70	0.29	- 1.08	1.88	- 0.38	0.61	- 0.97
Loans	- 7.34	63.05	44.18	4.29	16.30	31.37	- 7.78	28.55	13.87
Short-term loans	- 4.27	44.68	27.96	2.69	12.28	27.97	- 14.97	20.00	11.12
Long-term loans	- 3.07	18.37	16.22	1.60	4.02	3.40	7.19	8.55	2.75
Memo item:									
Loans to domestic sectors	- 0.10	10.13	23.00	8.25	2.92	14.54	- 2.72	37.02	9.58
Non-financial corporations	- 12.27	7.11	23.94	2.44	5.52	8.47	7.51	29.88	7.51
Financial corporations	11.58	2.38	- 1.29	5.73	- 2.68	5.98	- 10.31	7.13	2.07
General government	0.58	0.64	0.34	0.09	0.09	0.09	0.09	0.00	0.00
Loans to the rest of the world	- 7.24	52.92	21.18	- 3.97	13.39	16.83	- 5.07	- 8.46	4.29
Equity and investment fund shares	101.16	166.47	116.57	40.14	47.22	2.48	26.73	0.02	32.05
Equity	88.39	144.71	116.52	38.03	49.03	4.72	24.74	- 1.29	29.74
Listed shares of domestic sectors	- 77.97	15.33	44.06	6.03	7.40	34.33	- 3.70	- 10.48	- 0.27
Non-financial corporations	- 78.06	16.89	43.77	5.58	7.12	34.91	- 3.84	- 10.41	- 0.31
Financial corporations	0.09	- 1.56	0.29	0.46	0.28	- 0.58	0.13	- 0.07	0.05
Listed shares of the rest of the world	5.01	8.32	4.99	- 2.02	3.61	0.30	3.10	- 7.55	0.63
Other equity <sup>1</sup>	161.34	121.06	67.47	34.02	38.02	- 29.91	25.34	16.74	29.38
Investment fund shares	12.78	21.77	0.05	2.11	- 1.82	- 2.24	1.99	1.32	2.31
Money market fund shares	3.79	0.66	- 0.38	- 1.22	- 0.42	- 1.12	2.37	- 0.80	- 0.41
Non-MMF investment fund shares	8.99	21.11	0.43	3.33	- 1.40	- 1.12	- 0.38	2.12	2.72
Insurance technical reserves	0.37	18.01	1.61	4.99	- 1.20	- 1.00	- 1.18	6.37	- 1.08
Financial derivatives	- 27.54	15.54	28.86	21.27	28.28	10.09	- 30.78	- 0.57	- 4.39
Other accounts receivable	55.69	62.27	25.76	- 14.66	- 33.90	- 56.98	131.30	89.19	- 11.00
<b>Total</b>	<b>222.16</b>	<b>374.33</b>	<b>288.98</b>	<b>70.56</b>	<b>29.70</b>	<b>41.42</b>	<b>147.30</b>	<b>102.20</b>	<b>18.25</b>
<b>External financing</b>									
Debt securities	36.89	20.86	14.16	10.95	3.77	1.37	- 1.93	1.38	2.44
Short-term securities	- 4.40	2.51	- 0.36	3.85	1.21	- 2.73	- 2.69	- 0.16	- 0.70
Long-term securities	41.29	18.35	14.52	7.10	2.56	4.10	0.76	1.54	3.14
Memo item:									
Debt securities of domestic sectors	18.06	9.11	5.88	5.65	1.62	0.19	- 1.58	1.74	0.57
Non-financial corporations	- 0.17	0.72	0.87	0.17	- 0.17	0.74	0.14	0.76	- 0.33
Financial corporations	19.80	9.09	4.48	5.34	1.86	- 0.75	- 1.97	0.41	- 0.22
General government	- 0.22	0.09	- 0.07	- 0.01	- 0.08	0.01	0.01	- 0.00	- 0.07
Households	- 1.35	- 0.79	0.59	0.15	0.01	0.19	0.24	0.57	1.19
Debt securities of the rest of the world	18.83	11.75	8.28	5.30	2.15	1.18	- 0.35	- 0.36	1.88
Loans	96.70	135.14	187.95	34.17	40.97	79.93	32.89	15.44	34.24
Short-term loans	- 2.81	81.64	85.32	28.24	21.69	47.79	- 12.40	4.26	16.89
Long-term loans	99.51	53.50	102.63	5.92	19.28	32.14	45.28	11.19	17.35
Memo item:									
Loans from domestic sectors	38.35	76.93	164.39	37.30	36.10	72.19	18.80	49.05	20.59
Non-financial corporations	- 12.27	7.11	23.94	2.44	5.52	8.47	7.51	29.88	7.51
Financial corporations	14.97	56.66	119.56	33.11	27.62	37.13	21.70	27.24	17.88
General government	35.65	13.16	20.89	1.75	2.96	26.59	- 10.41	- 8.07	- 4.81
Loans from the rest of the world	58.34	58.21	23.55	- 3.14	4.87	7.73	14.08	- 33.61	13.65
Equity	60.37	61.44	14.81	3.11	8.99	3.48	- 0.77	- 6.03	3.51
Listed shares of domestic sectors	- 62.25	26.44	57.12	12.97	10.14	33.32	0.70	- 13.04	- 4.93
Non-financial corporations	- 78.06	16.89	43.77	5.58	7.12	34.91	- 3.84	- 10.41	- 0.31
Financial corporations	3.46	- 2.39	2.29	5.17	- 1.43	- 4.47	3.01	- 0.63	- 4.60
General government	0.26	- 0.09	0.76	0.18	0.24	0.25	0.10	- 1.18	- 0.21
Households	12.08	12.04	10.30	2.04	4.21	2.63	1.43	- 0.82	0.20
Listed shares of the rest of the world	10.09	18.88	- 9.58	- 12.81	- 2.09	8.05	- 2.73	1.29	7.17
Other equity <sup>1</sup>	112.54	16.11	- 32.73	2.95	0.95	- 37.89	1.26	5.72	1.26
Insurance technical reserves	5.83	4.26	3.53	0.88	0.88	0.88	0.89	0.88	0.88
Financial derivatives and employee stock options	0.54	14.32	- 14.10	- 2.28	- 0.27	1.80	- 13.34	- 3.57	- 2.86
Other accounts payable	23.46	138.61	65.83	14.23	12.43	20.81	18.36	10.94	4.56
<b>Total</b>	<b>223.80</b>	<b>374.63</b>	<b>272.18</b>	<b>61.06</b>	<b>66.77</b>	<b>108.26</b>	<b>36.10</b>	<b>19.03</b>	<b>42.77</b>

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

## IX. Financial accounts

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

End of year/quarter; € billion

Item	2020	2021	2022	2022				2023	
				Q1	Q2	Q3	Q4	Q1	Q2
<b>Financial assets</b>									
Currency and deposits	717.4	727.5	795.3	731.7	698.7	767.4	795.3	744.3	652.6
Debt securities	51.5	54.3	53.8	53.4	51.3	53.7	53.8	58.8	60.4
Short-term debt securities	4.8	7.1	8.4	7.5	5.6	8.6	8.4	10.3	11.3
Long-term debt securities	46.7	47.2	45.5	45.9	45.7	45.0	45.5	48.5	49.1
Memo item:									
Debt securities of domestic sectors	22.1	23.3	24.7	23.0	23.0	24.1	24.7	28.7	31.4
Non-financial corporations	4.7	5.3	5.8	5.2	4.9	5.5	5.8	6.5	6.2
Financial corporations	13.4	14.5	15.0	14.6	14.7	14.9	15.0	16.6	18.0
General government	4.0	3.5	3.9	3.2	3.5	3.6	3.9	5.6	7.2
Debt securities of the rest of the world	29.4	31.0	29.2	30.4	28.2	29.6	29.2	30.1	29.0
Loans	725.1	780.5	827.2	785.9	806.5	840.9	827.2	855.2	869.0
Short-term loans	571.1	611.2	640.8	614.9	629.8	660.0	640.8	660.1	670.7
Long-term loans	154.1	169.3	186.4	171.0	176.7	180.9	186.4	195.1	198.3
Memo item:									
Loans to domestic sectors	412.5	422.6	445.6	430.9	433.8	448.3	445.6	482.6	492.2
Non-financial corporations	327.6	334.7	358.7	337.2	342.7	351.1	358.7	388.5	396.0
Financial corporations	76.9	79.3	78.0	85.0	82.4	88.3	78.0	85.2	87.2
General government	7.9	8.6	8.9	8.7	8.8	8.8	8.9	8.9	8.9
Loans to the rest of the world	312.7	357.9	381.6	355.1	372.7	392.6	381.6	372.6	376.8
Equity and investment fund shares	2,567.8	2,860.0	2,611.9	2,774.6	2,700.9	2,670.7	2,611.9	2,691.8	2,713.8
Equity	2,363.1	2,619.8	2,399.3	2,542.4	2,483.4	2,458.8	2,399.3	2,472.6	2,488.3
Listed shares of domestic sectors	307.0	393.0	331.2	350.1	305.0	307.5	331.2	361.1	354.8
Non-financial corporations	298.9	384.9	324.4	342.4	298.2	301.7	324.4	353.7	347.0
Financial corporations	8.1	8.0	6.7	7.7	6.8	5.7	6.7	7.4	7.8
Listed shares of the rest of the world	66.6	74.7	72.3	68.5	68.7	67.5	72.3	66.9	67.1
Other equity <sup>1</sup>	1,989.5	2,152.2	1,995.8	2,123.8	2,109.7	2,083.8	1,995.8	2,044.6	2,066.4
Investment fund shares	204.7	240.2	212.6	232.3	217.5	211.9	212.6	219.2	225.4
Money market fund shares	7.0	7.6	7.2	6.4	6.0	4.9	7.2	6.5	6.1
Non-MMF investment fund shares	197.8	232.6	205.4	225.9	211.5	207.0	205.4	212.7	219.3
Insurance technical reserves	62.1	64.8	41.0	47.8	45.2	42.8	41.0	47.3	46.3
Financial derivatives	30.9	106.0	92.2	147.8	164.4	199.0	92.2	65.6	57.6
Other accounts receivable	1,242.9	1,452.5	1,525.7	1,491.2	1,519.3	1,533.8	1,525.7	1,581.3	1,578.2
<b>Total</b>	<b>5,397.9</b>	<b>6,045.6</b>	<b>5,947.1</b>	<b>6,032.4</b>	<b>5,986.3</b>	<b>6,108.2</b>	<b>5,947.1</b>	<b>6,044.3</b>	<b>5,978.0</b>
<b>Liabilities</b>									
Debt securities	238.3	252.3	228.7	245.3	229.7	226.7	228.7	231.2	234.8
Short-term securities	7.1	9.6	9.3	13.4	14.7	12.0	9.3	9.1	8.4
Long-term securities	231.2	242.7	219.4	231.8	215.1	214.7	219.4	222.1	226.4
Memo item:									
Debt securities of domestic sectors	96.1	100.6	90.7	98.6	92.5	90.3	90.7	93.2	94.0
Non-financial corporations	4.7	5.3	5.8	5.2	4.9	5.5	5.8	6.5	6.2
Financial corporations	78.2	83.2	73.4	81.7	76.7	73.8	73.4	74.4	74.3
General government	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3
Households	12.8	11.8	11.3	11.2	10.6	10.7	11.3	11.9	13.3
Debt securities of the rest of the world	142.3	151.7	137.9	146.7	137.2	136.4	137.9	138.0	140.8
Loans	2,269.5	2,401.7	2,593.9	2,437.9	2,483.5	2,570.7	2,593.9	2,607.7	2,634.6
Short-term loans	830.0	903.3	992.0	932.9	958.5	1,010.9	992.0	994.3	1,011.4
Long-term loans	1,439.5	1,498.4	1,601.9	1,505.1	1,525.0	1,559.7	1,601.9	1,613.4	1,623.2
Memo item:									
Loans from domestic sectors	1,390.7	1,468.8	1,633.7	1,506.8	1,540.6	1,614.2	1,633.7	1,680.0	1,699.3
Non-financial corporations	327.6	334.7	358.7	337.2	342.7	351.1	358.7	388.5	396.0
Financial corporations	961.3	1,019.4	1,139.8	1,053.4	1,078.8	1,117.4	1,139.8	1,164.0	1,180.7
General government	101.9	114.7	135.3	116.2	119.1	145.7	135.3	127.4	122.5
Loans from the rest of the world	878.8	932.9	960.2	931.1	942.9	956.4	960.2	927.7	935.3
Equity	3,260.9	3,689.0	2,981.1	3,391.9	2,994.2	2,843.1	2,981.1	3,264.2	3,259.2
Listed shares of domestic sectors	739.9	924.8	760.4	840.0	733.9	691.4	760.4	854.7	821.7
Non-financial corporations	298.9	384.9	324.4	342.4	298.2	301.7	324.4	353.7	347.0
Financial corporations	171.9	210.3	151.1	194.3	161.8	138.1	151.1	182.0	165.2
General government	56.3	69.9	69.2	70.0	70.7	61.4	69.2	78.9	75.3
Households	212.8	259.7	215.7	233.3	203.2	190.2	215.7	240.1	234.2
Listed shares of the rest of the world	995.6	1,126.3	824.1	984.0	795.3	732.0	824.1	942.3	976.1
Other equity <sup>1</sup>	1,525.5	1,637.9	1,396.6	1,567.9	1,465.0	1,419.7	1,396.6	1,467.2	1,461.4
Insurance technical reserves	283.1	287.4	290.9	288.3	289.2	290.0	290.9	291.8	292.7
Financial derivatives and employee stock options	83.4	137.9	73.3	146.2	142.4	169.0	73.3	44.7	39.5
Other accounts payable	1,276.0	1,524.8	1,603.9	1,547.4	1,565.3	1,654.8	1,603.9	1,600.9	1,620.8
<b>Total</b>	<b>7,411.2</b>	<b>8,293.2</b>	<b>7,771.7</b>	<b>8,057.0</b>	<b>7,704.3</b>	<b>7,754.3</b>	<b>7,771.7</b>	<b>8,040.5</b>	<b>8,081.6</b>

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

## IX. Financial accounts

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

€ billion

Item	2020	2021	2022	2022				2023	
				Q1	Q2	Q3	Q4	Q1	Q2
<b>Acquisition of financial assets</b>									
Currency and deposits	213.31	146.18	111.83	10.74	27.31	33.06	40.72	- 15.43	26.07
Currency	61.94	60.57	44.97	13.64	11.50	13.69	6.15	2.80	3.94
Deposits	151.36	85.61	66.86	- 2.90	15.81	19.37	34.57	- 18.23	22.13
Transferable deposits	165.34	90.84	47.63	- 0.99	23.73	20.48	4.41	- 60.51	- 18.16
Time deposits	1.29	- 5.09	35.17	0.16	- 4.31	6.22	33.10	45.80	43.27
Savings deposits (including savings certificates)	- 15.26	- 0.13	- 15.94	- 2.07	- 3.61	- 7.32	- 2.95	- 3.52	- 2.99
Debt securities	- 5.94	- 5.89	25.03	2.86	4.85	5.36	11.96	29.77	20.93
Short-term debt securities	0.08	0.31	2.01	- 0.01	0.06	0.17	1.79	7.86	6.18
Long-term debt securities	- 6.02	- 6.20	23.02	2.87	4.80	5.18	10.17	21.91	14.75
Memo item:									
Debt securities of domestic sectors	- 2.55	- 3.70	20.31	2.27	3.77	3.76	10.52	25.63	17.09
Non-financial corporations	- 1.32	- 0.83	0.50	0.08	- 0.02	0.21	0.23	0.53	1.12
Financial corporations	- 1.25	- 2.57	17.47	2.34	3.18	2.94	9.01	21.58	13.07
General government	0.02	- 0.30	2.35	- 0.16	0.61	0.61	1.29	3.53	2.90
Debt securities of the rest of the world	- 3.38	- 2.19	4.72	0.60	1.08	1.60	1.44	4.14	3.84
Equity and investment fund shares	90.20	136.69	78.32	31.08	22.22	9.21	15.82	13.49	11.26
Equity	48.53	31.80	27.12	8.07	9.88	3.98	5.19	1.32	0.78
Listed shares of domestic sectors	16.06	14.29	12.38	2.78	5.54	3.36	0.70	0.04	0.25
Non-financial corporations	11.92	12.71	9.97	2.02	3.90	2.68	1.36	- 1.10	0.29
Financial corporations	4.14	1.58	2.42	0.76	1.64	0.67	- 0.66	1.14	- 0.04
Listed shares of the rest of the world	23.29	10.83	8.73	3.61	2.35	- 0.45	3.22	0.53	- 0.08
Other equity <sup>1</sup>	9.19	6.69	6.00	1.68	1.99	1.07	1.26	0.75	0.62
Investment fund shares	41.67	104.88	51.20	23.01	12.33	5.23	10.63	12.17	10.48
Money market fund shares	0.09	0.19	0.82	- 0.01	0.28	0.12	0.44	0.44	1.47
Non-MMF investment fund shares	41.58	104.70	50.38	23.03	12.05	5.11	10.19	11.74	9.00
Non-life insurance technical reserves and provision for calls under standardised guarantees	18.34	20.31	- 0.49	4.49	- 1.86	- 1.31	- 1.81	6.44	- 0.79
Life insurance and annuity entitlements	47.71	51.63	31.70	6.57	5.62	12.12	7.39	1.45	0.66
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	33.69	27.32	48.64	15.46	12.58	8.64	11.97	13.86	5.43
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>	- 10.46	- 0.23	- 2.13	16.03	0.41	0.85	- 19.43	22.68	- 4.62
<b>Total</b>	<b>386.85</b>	<b>376.00</b>	<b>292.89</b>	<b>87.24</b>	<b>71.14</b>	<b>67.91</b>	<b>66.60</b>	<b>72.26</b>	<b>58.94</b>
<b>External financing</b>									
Loans	83.95	98.17	83.67	20.37	27.92	25.87	9.50	2.65	5.85
Short-term loans	- 5.61	0.86	2.59	0.66	1.09	0.74	0.10	0.74	- 0.28
Long-term loans	89.55	97.31	81.08	19.71	26.83	25.14	9.40	1.91	6.13
Memo item:									
Mortgage loans	85.72	99.89	79.69	19.24	26.63	23.30	10.53	2.89	6.08
Consumer loans	- 4.29	- 0.89	4.60	0.23	0.91	2.59	0.87	0.54	1.26
Entrepreneurial loans	2.51	- 0.83	- 0.61	0.91	0.39	- 0.01	- 1.90	- 0.78	- 1.49
Memo item:									
Loans from monetary financial institutions	83.17	94.32	82.56	20.70	27.94	24.46	9.45	1.80	4.69
Loans from financial corporations other than MFIs	0.78	3.85	1.11	- 0.33	- 0.02	1.41	0.05	0.85	1.16
Loans from general government and rest of the world	0.00	- 0.00	- 0.00	- 0.00	0.00	0.00	0.00	0.00	0.00
Financial derivatives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts payable	0.01	0.90	2.97	- 0.94	0.80	1.18	1.93	- 0.55	- 0.40
<b>Total</b>	<b>83.96</b>	<b>99.07</b>	<b>86.65</b>	<b>19.43</b>	<b>28.73</b>	<b>27.06</b>	<b>11.43</b>	<b>2.10</b>	<b>5.45</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/quarter; € billion

Item	2020	2021	2022	2022				2023	
				Q1	Q2	Q3	Q4	Q1	Q2
<b>Financial assets</b>									
Currency and deposits	2,860.4	3,005.6	3,119.4	3,017.4	3,047.4	3,084.0	3,119.4	3,102.9	3,129.0
Currency	324.5	385.1	430.1	398.7	410.2	423.9	430.1	432.9	436.8
Deposits	2,535.8	2,620.5	2,689.4	2,618.6	2,637.2	2,660.1	2,689.4	2,670.0	2,692.2
Transferable deposits	1,674.1	1,764.4	1,811.7	1,763.5	1,786.7	1,807.3	1,811.7	1,756.0	1,737.7
Time deposits	302.8	297.3	335.4	298.5	297.9	307.6	335.4	380.2	423.7
Savings deposits (including savings certificates)	558.9	558.8	542.3	556.7	552.6	545.3	542.3	533.8	530.8
Debt securities	113.3	109.6	125.1	109.5	107.8	110.4	125.1	156.9	177.8
Short-term debt securities	1.6	1.8	3.9	1.7	1.8	1.9	3.9	11.7	18.1
Long-term debt securities	111.7	107.8	121.2	107.8	106.1	108.4	121.2	145.2	159.7
Memo item:									
Debt securities of domestic sectors	76.7	75.3	88.4	75.2	74.7	76.1	88.4	116.1	133.1
Non-financial corporations	10.9	9.8	9.5	9.4	8.9	8.9	9.5	10.1	11.4
Financial corporations	63.3	63.2	74.6	63.8	63.3	64.1	74.6	98.2	111.0
General government	2.6	2.2	4.2	2.0	2.5	3.0	4.2	7.8	10.7
Debt securities of the rest of the world	36.6	34.3	36.7	34.3	33.1	34.3	36.7	40.8	44.7
Equity and investment fund shares	1,536.6	1,900.6	1,730.9	1,841.6	1,699.9	1,661.2	1,730.9	1,824.7	1,866.3
Equity	801.9	967.8	874.9	927.9	850.5	828.2	874.9	931.6	943.4
Listed shares of domestic sectors	243.3	296.0	255.8	271.0	236.8	223.2	255.8	282.1	277.3
Non-financial corporations	204.0	250.4	207.9	224.7	195.7	183.3	207.9	231.5	225.7
Financial corporations	39.2	45.6	47.9	46.3	41.1	39.9	47.9	50.6	51.5
Listed shares of the rest of the world	180.6	249.2	213.7	241.1	214.1	210.2	213.7	227.3	239.6
Other equity <sup>1</sup>	378.0	422.6	405.3	415.7	399.7	394.8	405.3	422.2	426.6
Investment fund shares	734.8	932.7	856.0	913.8	849.3	833.0	856.0	893.1	922.9
Money market fund shares	2.3	2.5	3.3	2.5	2.8	2.9	3.3	3.7	5.2
Non-MMF investment fund shares	732.4	930.2	852.7	911.3	846.5	830.1	852.7	889.4	917.7
Non-life insurance technical reserves and provision for calls under standardised guarantees	412.2	432.5	41.3	50.2	46.8	44.0	41.3	47.5	46.6
Life insurance and annuity entitlements	1,112.1	1,162.2	1,087.1	1,276.4	1,152.8	1,096.9	1,087.1	1,112.5	1,119.5
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	956.8	986.1	1,117.7	1,123.7	1,114.3	1,109.9	1,117.7	1,126.6	1,124.8
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>	27.9	27.5	26.5	26.0	27.8	27.5	26.5	27.0	27.7
<b>Total</b>	<b>7,019.3</b>	<b>7,623.9</b>	<b>7,248.0</b>	<b>7,444.8</b>	<b>7,196.8</b>	<b>7,133.9</b>	<b>7,248.0</b>	<b>7,398.1</b>	<b>7,491.7</b>
<b>Liabilities</b>									
Loans	1,923.8	2,024.3	2,111.8	2,045.4	2,074.6	2,102.7	2,111.8	2,114.5	2,120.2
Short-term loans	53.2	53.0	55.5	53.7	54.8	55.8	55.5	56.6	56.4
Long-term loans	1,870.6	1,971.3	2,056.3	1,991.7	2,019.8	2,047.0	2,056.3	2,057.9	2,063.8
Memo item:									
Mortgage loans	1,447.5	1,549.3	1,632.3	1,569.5	1,597.8	1,621.3	1,632.3	1,636.2	1,642.1
Consumer loans	226.1	224.5	228.9	224.9	225.5	228.1	228.9	229.7	230.8
Entrepreneurial loans	250.2	250.5	250.6	251.1	251.3	253.4	250.6	248.6	247.3
Memo item:									
Loans from monetary financial institutions	1,824.6	1,920.3	2,004.0	1,941.0	1,968.8	1,995.3	2,004.0	2,005.8	2,010.5
Loans from financial corporations other than MFIs	99.1	104.0	107.8	104.4	105.8	107.4	107.8	108.8	109.7
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	19.5	20.3	23.4	19.4	20.3	21.5	23.4	22.9	22.5
<b>Total</b>	<b>1,943.3</b>	<b>2,044.6</b>	<b>2,135.2</b>	<b>2,064.8</b>	<b>2,094.9</b>	<b>2,124.2</b>	<b>2,135.2</b>	<b>2,137.4</b>	<b>2,142.6</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/surplus and debt level as defined in the Maastricht Treaty

Period	General government	Central government	State government	Local government	Social security funds	General government	Central government	State government	Local government	Social security funds	End of year or quarter
	€ billion					As a percentage of GDP					
<b>Deficit/surplus <sup>1</sup></b>											
2017	+ 43.7	+ 7.9	+ 13.9	+ 10.7	+ 11.1	+ 1.3	+ 0.2	+ 0.4	+ 0.3	+ 0.3	+ 0.3
2018	+ 65.6	+ 21.0	+ 12.0	+ 16.7	+ 16.0	+ 1.9	+ 0.6	+ 0.4	+ 0.5	+ 0.5	+ 0.5
2019	+ 53.0	+ 21.5	+ 14.0	+ 8.4	+ 9.1	+ 1.5	+ 0.6	+ 0.4	+ 0.2	+ 0.3	+ 0.3
2020 <b>p</b>	- 147.7	- 87.1	- 32.6	+ 6.9	- 34.8	- 4.3	- 2.6	- 1.0	+ 0.2	- 1.0	- 1.0
2021 <b>p</b>	- 129.7	- 144.2	+ 5.6	+ 6.2	+ 2.6	- 3.6	- 4.0	+ 0.2	+ 0.2	+ 0.1	+ 0.1
2022 <b>p</b>	- 96.9	- 124.3	+ 14.4	+ 4.7	+ 8.3	- 2.5	- 3.2	+ 0.4	+ 0.1	+ 0.2	+ 0.2
2021 H1 <b>p</b>	- 75.9	- 61.0	- 3.0	+ 1.3	- 13.2	- 4.3	- 3.5	- 0.2	+ 0.1	- 0.8	- 0.8
H2 <b>p</b>	- 53.8	- 83.2	+ 8.7	+ 4.9	+ 15.8	- 2.9	- 4.4	+ 0.5	+ 0.3	+ 0.8	+ 0.8
2022 H1 <b>p</b>	- 4.6	- 36.2	+ 18.2	+ 5.8	+ 7.7	- 0.2	- 1.9	+ 1.0	+ 0.3	+ 0.4	+ 0.4
H2 <b>p</b>	- 92.3	- 88.0	- 3.8	- 1.1	+ 0.6	- 4.7	- 4.4	- 0.2	- 0.1	+ 0.0	+ 0.0
2023 H1 <b>pe</b>	- 32.9	- 38.3	- 0.1	- 4.9	+ 10.4	- 1.6	- 1.9	- 0.0	- 0.2	+ 0.5	+ 0.5
<b>Debt level <sup>2</sup></b>											
2017	2,130.3	1,361.5	616.8	168.3	0.8	65.2	41.7	18.9	5.2	0.0	0.0
2018	2,083.7	1,334.5	603.2	162.2	0.7	61.9	39.7	17.9	4.8	0.0	0.0
2019	2,069.9	1,312.3	612.7	161.4	0.9	59.6	37.8	17.6	4.6	0.0	0.0
2020 <b>p</b>	2,340.8	1,526.5	664.4	163.2	7.6	68.8	44.8	19.5	4.8	0.2	0.2
2021 <b>p</b>	2,495.5	1,679.3	665.3	165.3	0.6	69.0	46.4	18.4	4.6	0.0	0.0
2022 <b>p</b>	2,561.7	1,776.0	634.2	172.2	2.8	66.1	45.8	16.4	4.4	0.1	0.1
2021 Q1 <b>p</b>	2,369.9	1,552.1	667.7	163.2	16.4	69.6	45.6	19.6	4.8	0.5	0.5
Q2 <b>p</b>	2,419.8	1,602.1	667.9	164.3	21.4	69.1	45.8	19.1	4.7	0.6	0.6
Q3 <b>p</b>	2,453.5	1,630.1	673.4	163.8	24.4	68.9	45.8	18.9	4.6	0.7	0.7
Q4 <b>p</b>	2,495.5	1,679.3	665.3	165.3	0.6	69.0	46.4	18.4	4.6	0.0	0.0
2022 Q1 <b>p</b>	2,499.1	1,684.3	663.4	164.9	3.4	67.6	45.6	17.9	4.5	0.1	0.1
Q2 <b>p</b>	2,537.4	1,723.4	660.2	166.8	3.7	67.4	45.8	17.5	4.4	0.1	0.1
Q3 <b>p</b>	2,551.3	1,757.0	643.8	166.6	4.2	66.8	46.0	16.9	4.4	0.1	0.1
Q4 <b>p</b>	2,561.7	1,776.0	634.2	172.2	2.8	66.1	45.8	16.4	4.4	0.1	0.1
2023 Q1 <b>p</b>	2,586.7	1,798.4	631.8	173.1	3.5	65.7	45.6	16.0	4.4	0.1	0.1
Q2 <b>p</b>	2,585.2	1,805.7	623.3	172.9	2.7	64.6	45.1	15.6	4.3	0.1	0.1

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

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

Period	Revenue				Expenditure							Deficit/surplus	Memo item: Total tax burden <sup>1</sup>
	Total	of which:			Total	of which:							
	Taxes	Social contributions	Other	Social benefits	Compensation of employees	Intermediate consumption	Gross capital formation	Interest	Other				
<b>€ billion</b>													
2017	1,486.9	773.3	549.5	164.2	1,443.3	784.8	250.6	169.5	71.6	33.8	132.9	+ 43.7	1,329.5
2018	1,557.2	808.1	572.6	176.6	1,491.6	805.6	260.3	176.4	78.5	31.2	139.7	+ 65.6	1,387.7
2019	1,616.5	834.7	598.2	183.6	1,563.4	846.2	273.6	187.4	84.2	27.4	144.5	+ 53.0	1,440.0
2020 <b>p</b>	1,569.9	781.7	608.1	180.1	1,717.6	904.5	285.2	211.3	92.9	21.7	201.9	- 147.7	1,396.7
2021 <b>p</b>	1,712.9	889.0	632.1	191.8	1,842.6	941.1	295.4	226.6	92.5	21.1	266.0	- 129.7	1,528.7
2022 <b>p</b>	1,821.2	955.9	666.8	198.6	1,918.1	974.0	307.9	238.4	100.9	26.5	270.4	- 96.9	1,633.4
<b>As a percentage of GDP</b>													
2017	45.5	23.7	16.8	5.0	44.2	24.0	7.7	5.2	2.2	1.0	4.1	+ 1.3	40.7
2018	46.3	24.0	17.0	5.2	44.3	23.9	7.7	5.2	2.3	0.9	4.1	+ 1.9	41.2
2019	46.5	24.0	17.2	5.3	45.0	24.4	7.9	5.4	2.4	0.8	4.2	+ 1.5	41.4
2020 <b>p</b>	46.1	23.0	17.9	5.3	50.5	26.6	8.4	6.2	2.7	0.6	5.9	- 4.3	41.0
2021 <b>p</b>	47.3	24.6	17.5	5.3	50.9	26.0	8.2	6.3	2.6	0.6	7.4	- 3.6	42.3
2022 <b>p</b>	47.0	24.7	17.2	5.1	49.5	25.1	7.9	6.1	2.6	0.7	7.0	- 2.5	42.1
<b>Percentage growth rates</b>													
2017	+ 4.2	+ 4.6	+ 4.8	+ 0.5	+ 3.8	+ 4.0	+ 4.1	+ 4.3	+ 5.1	- 9.3	+ 4.5	.	+ 4.7
2018	+ 4.7	+ 4.5	+ 4.2	+ 7.6	+ 3.3	+ 2.6	+ 3.9	+ 4.1	+ 9.7	- 7.8	+ 5.1	.	+ 4.4
2019	+ 3.8	+ 3.3	+ 4.5	+ 4.0	+ 4.8	+ 5.1	+ 5.1	+ 6.2	+ 7.2	- 12.0	+ 3.5	.	+ 3.8
2020 <b>p</b>	- 2.9	- 6.3	+ 1.6	- 1.9	+ 9.9	+ 6.9	+ 4.2	+ 12.7	+ 10.4	- 20.8	+ 39.7	.	- 3.0
2021 <b>p</b>	+ 9.1	+ 13.7	+ 3.9	+ 6.5	+ 7.3	+ 4.1	+ 3.6	+ 7.2	- 0.5	- 3.1	+ 31.7	.	+ 9.4
2022 <b>p</b>	+ 6.3	+ 7.5	+ 5.5	+ 3.6	+ 4.1	+ 3.5	+ 4.3	+ 5.2	+ 9.0	+ 25.8	+ 1.7	.	+ 6.9

Source: Federal Statistical Office. \* Figures in accordance with ESA 2010. **1** Taxes and social contributions plus customs duties and bank levies to the Single Resolution Fund.

## X. Public finances in Germany

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

€ billion

Period	Central, state and local government 1									Social security funds 2			General government, total			
	Revenue			Expenditure						Deficit/ surplus	Rev- enue 6	Expend- iture	Deficit/ surplus	Rev- enue	Expend- iture	Deficit/ surplus
	Total 4	of which:		Total 4	of which: 3											
		Taxes	Finan- cial transac- tions 5		Person- nel expend- iture	Current grants	Interest	Fixed asset forma- tion	Finan- cial transac- tions 5							
2016	859.7	705.8	8.8	842.8	251.3	320.8	43.3	48.3	11.7	+ 16.8	601.8	594.8	+ 7.1	1,352.5	1,328.6	+ 23.9
2017	897.6	734.5	7.7	867.8	261.5	327.2	41.9	51.7	13.8	+ 29.8	631.5	622.0	+ 9.5	1,414.9	1,375.6	+ 39.3
2018	949.2	776.3	6.0	904.0	272.4	337.3	39.1	55.1	16.1	+ 45.2	656.2	642.5	+ 13.6	1,488.1	1,429.3	+ 58.8
2019	1,007.7	799.4	11.0	973.9	285.9	348.9	33.5	62.2	16.8	+ 33.7	685.0	676.7	+ 8.3	1,571.2	1,529.2	+ 42.0
2020	944.3	739.9	13.7	1,109.7	299.4	422.0	25.8	68.6	59.9	- 165.4	719.5	747.8	- 28.3	1,516.2	1,709.9	- 193.7
2021	1,105.4	833.3	25.3	1,239.9	310.7	530.8	21.0	69.3	26.1	- 134.5	769.2	777.1	- 7.9	1,701.6	1,844.0	- 142.4
2022 P	1,145.2	895.9	32.4	1,287.0	325.7	499.6	33.5	72.5	79.3	- 141.8	800.6	794.8	+ 5.9	1,773.0	1,908.9	- 135.9
2021 Q1	240.7	185.3	4.3	300.6	75.5	130.8	7.3	11.1	14.6	- 59.9	P 182.4	P 196.3	P - 13.9	P 385.2	P 458.9	P - 73.8
Q2	267.0	195.8	7.5	297.1	74.8	122.7	10.7	15.2	10.5	- 30.2	P 185.9	P 197.0	P - 11.1	P 414.1	P 455.3	P - 41.2
Q3	270.9	210.7	7.4	290.2	75.8	116.3	- 0.4	16.5	10.4	- 19.3	P 183.4	P 191.9	P - 8.6	P 413.5	P 441.4	P - 27.8
Q4	332.9	237.7	6.1	347.8	84.1	153.4	3.1	26.4	- 9.4	- 14.9	P 197.3	P 190.4	P + 6.9	P 492.6	P 500.6	P - 8.0
2022 Q1	278.2	224.0	5.0	279.3	79.6	116.8	5.5	11.9	7.0	- 1.0	P 193.8	P 199.8	P - 6.0	P 430.3	P 437.3	P - 7.1
Q2	288.0	224.6	5.1	294.2	77.8	126.4	10.6	15.3	5.9	- 6.2	P 199.9	P 196.7	P + 3.2	P 444.7	P 447.7	P - 3.1
Q3	267.9	207.0	13.3	299.0	78.1	117.0	10.8	17.7	10.8	- 31.0	P 194.0	P 197.6	P - 3.6	P 418.7	P 453.3	P - 34.6
Q4	319.0	244.5	9.0	414.0	89.7	139.0	6.5	27.5	55.6	- 95.0	P 210.5	P 198.1	P + 12.4	P 486.2	P 568.8	P - 82.5
2023 Q1	281.9	215.4	9.3	331.8	81.3	131.6	20.1	13.6	17.8	- 49.9	P 195.4	P 200.8	P - 5.4	P 441.7	P 497.0	P - 55.3

Source: Bundesbank calculations based on Federal Statistical Office data. 1 Annual figures based on the quarterly figures of the Federal Statistical Office, core budgets and off-budget entities which are assigned to the general government sector. 2 The annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional. The quarterly figures for some insurance sectors are estimated. 3 The development of the types of expenditure recorded here is influenced in part by statistical

changeovers. 4 Including discrepancies in clearing transactions between central, state and local government. 5 On the revenue side, this contains proceeds booked as disposals of equity interests and as loan repayments. On the expenditure side, this contains the acquisition of equity interests and loans granted. 6 Excluding central government liquidity assistance to the Federal Employment Agency.

### 4. Central, state and local government: budgetary development (as per the government finance statistics)

€ billion

Period	Central government			State government 2,3			Local government 3		
	Revenue 1	Expenditure	Deficit/surplus	Revenue	Expenditure	Deficit/surplus	Revenue	Expenditure	Deficit/surplus
2016	344.7	338.4	+ 6.2	380.2	372.0	+ 8.2	247.1	241.7	+ 5.4
2017	357.8	352.8	+ 5.0	396.7	385.5	+ 11.3	258.5	247.7	+ 10.7
2018	374.4	363.5	+ 10.9	419.6	399.8	+ 19.9	270.0	260.1	+ 9.8
2019	382.5	369.2	+ 13.3	436.3	419.3	+ 17.0	282.4	276.7	+ 5.7
2020	341.4	472.1	- 130.7	455.5	489.0	- 33.6	295.2	293.2	+ 2.0
2021	370.3	525.9	- 155.6	509.3	508.7	+ 0.5	308.0	303.4	+ 4.6
2022	399.6	515.6	- 116.0	534.8	522.5	+ 12.3	328.5	325.8	+ 2.7
2021 Q1	75.0	127.5	- 52.5	113.7	120.7	- 7.1	61.1	69.7	- 8.6
Q2	86.4	123.5	- 37.1	122.8	122.0	+ 0.8	74.6	71.7	+ 2.9
Q3	93.9	128.7	- 34.7	125.9	120.2	+ 5.7	74.6	74.9	- 0.3
Q4	115.1	146.3	- 31.2	145.6	144.5	+ 1.2	97.6	87.0	+ 10.6
2022 Q1	94.7	114.0	- 19.3	134.6	122.7	+ 11.9	68.4	73.8	- 5.4
Q2	99.7	123.5	- 23.7	133.2	123.6	+ 9.6	81.0	77.3	+ 3.7
Q3	89.0	127.8	- 38.7	126.1	121.4	+ 4.7	81.1	80.3	+ 0.8
Q4	116.1	150.4	- 34.2	139.6	153.4	- 13.8	98.0	94.5	+ 3.5
2023 Q1	96.2	116.9	- 20.7	121.0	122.3	- 1.3	73.3	81.0	- 7.7
Q2	101.8	119.8	- 18.0	138.5	133.6	+ 4.9	87.0	86.6	+ 0.4

Source: Federal Ministry of Finance, Federal Statistical Office data and Bundesbank calculations. 1 Any amounts of the Bundesbank's profit distribution exceeding the reference value that were used to repay parts of the debt of central government's

special funds are not included here. 2 Including the local authority level of the city states Berlin, Bremen and Hamburg. 3 Data of core budgets and off-budget entities which are assigned to the general government sector.

## X. Public finances in Germany

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

€ million

Period	Central and state government and European Union							Local government 3	Balance of untransferred tax shares 4	Memo item: Amounts deducted in the Federal budget 5
	Total	Total	Central government 1	State government 1	European Union 2					
2016	705,797	606,965	316,854	260,837	29,273	98,648	+ 186	27,836		
2017	734,540	629,458	336,730	271,046	21,682	105,158	- 76	27,368		
2018	776,314	665,005	349,134	287,282	28,589	111,308	+ 1	26,775		
2019	799,416	684,491	355,050	298,519	30,921	114,902	+ 23	25,998		
2020	739,911	632,268	313,381	286,065	32,822	107,916	- 274	30,266		
2021	833,337	706,978	342,988	325,768	38,222	125,000	+ 1,359	29,321		
2022	895,854	760,321	372,121	349,583	38,617	134,146	+ 1,387	34,911		
2021 Q1	189,316	159,271	72,814	73,137	13,320	19,882	+ 10,163	6,887		
Q2	191,931	163,158	81,129	74,024	8,005	29,609	- 835	7,438		
Q3	211,364	180,378	87,603	84,312	8,464	29,726	+ 1,260	7,823		
Q4	240,726	204,171	101,442	94,295	8,433	45,784	- 9,229	7,173		
2022 Q1	224,006	189,158	92,112	87,240	9,806	24,772	+ 10,077	7,261		
Q2	224,538	190,982	94,153	86,852	9,977	34,149	- 594	11,576		
Q3	205,544	174,232	84,078	80,020	10,133	33,618	- 2,306	7,953		
Q4	241,767	205,950	101,778	95,471	8,702	41,607	- 5,790	8,121		
2023 Q1	220,950	186,173	93,366	83,536	9,271	26,505	+ 8,271	7,665		
Q2	221,225	186,597	94,492	82,961	9,144	35,152	- 525	8,959		
Q3	...	195,334	98,626	87,824	8,884	...	...	8,678		
2022 Oct.	.	52,876	25,996	24,125	2,756	.	.	2,374		
2023 Oct.	.	52,724	26,053	23,611	3,061	.	.	2,590		

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

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

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

€ million

Period	Joint taxes											Local government share in joint taxes		
	Total 1	Income taxes 2					Value added taxes (VAT) 7			Local business tax transfers 8	Central government taxes 9		State government taxes 9	EU customs duties
		Total	Wage tax 3	Assessed income tax 4	Corporation tax 5	Investment income tax 6	Total	Domestic VAT	Import VAT					
2016	648,309	291,492	184,826	53,833	27,442	25,391	217,090	165,932	51,157	7,831	104,441	22,342	5,113	41,345
2017	674,598	312,462	195,524	59,428	29,259	28,251	226,355	170,498	55,856	8,580	99,934	22,205	5,063	45,141
2018	713,576	332,141	208,231	60,415	33,425	30,069	234,800	175,437	59,363	9,078	108,586	23,913	5,057	48,571
2019	735,869	344,016	219,660	63,711	32,013	28,632	243,256	183,113	60,143	8,114	109,548	25,850	5,085	51,379
2020	682,376	320,798	209,286	58,982	24,268	28,261	219,484	168,700	50,784	3,954	105,632	27,775	4,734	50,107
2021	760,953	370,296	218,407	72,342	42,124	37,423	250,800	187,631	63,169	4,951	98,171	31,613	5,122	53,976
2022	814,886	390,111	227,205	77,411	46,334	39,161	284,850	198,201	86,649	6,347	96,652	30,097	6,829	54,565
2021 Q1	171,974	86,381	50,854	17,826	10,203	7,498	54,795	45,403	9,392	252	21,712	7,757	1,076	12,703
Q2	175,242	84,505	50,783	14,347	8,860	10,515	57,634	43,399	14,235	1,215	23,210	7,398	1,281	12,085
Q3	193,910	90,619	53,857	17,973	9,853	8,936	69,528	49,052	20,476	1,189	23,469	7,813	1,292	13,532
Q4	219,827	108,791	62,913	22,196	13,208	10,474	68,843	49,777	19,066	2,295	29,780	8,645	1,473	15,656
2022 Q1	203,130	96,245	56,206	20,915	11,178	7,946	73,584	54,234	19,350	615	22,252	8,975	1,459	13,972
Q2	204,740	101,822	60,363	17,194	11,246	13,019	67,763	46,755	21,008	1,521	24,441	7,564	1,630	13,758
Q3	185,552	82,392	43,431	17,598	10,724	10,639	71,164	49,323	21,841	1,471	21,657	7,115	1,753	11,320
Q4	221,464	109,652	67,205	21,704	13,186	7,557	72,339	47,889	24,451	2,740	28,302	6,444	1,987	15,514
2023 Q1	199,764	94,453	55,669	19,728	10,700	8,357	73,522	52,197	21,325	370	23,110	6,815	1,494	13,591
Q2	199,993	98,917	59,538	15,467	12,406	11,506	67,260	47,855	19,405	1,499	24,740	6,142	1,435	13,396
Q3	208,722	98,832	56,370	17,010	9,902	15,550	76,093	56,986	19,106	1,583	24,665	6,160	1,389	13,388
2022 Oct.	56,673	22,786	19,375	1,204	593	1,614	23,210	15,358	7,852	1,175	6,866	1,986	651	3,797
2023 Oct.	56,324	21,173	17,764	1,009	88	2,312	23,790	17,629	6,162	1,260	7,665	1,981	456	3,600

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 benefits and subsidies for supplementary private pension plans. **4** After deducting employee

refunds and research grants. **5** After deducting research grants. **6** Final withholding tax on interest income and capital gains, non-assessed taxes on earnings. **7** 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 2022: 46.6:50.5:2.8. The EU share is deducted from central government's share. **8** Respective percentage share of central and state government for 2022: 41.4:58.6. **9** For the breakdown, see Table X. 7.

## X. Public finances in Germany

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

€ million

Period	Central government taxes 1								State government taxes 1				Local government taxes		
	Energy tax	Sol- idarity surcharge	Tobacco tax	Insurance tax	Motor vehicle tax	Electri- city tax	Alcohol tax	Other	Tax on the ac- quisition of land and buildings	Inher- itance tax	Bet- ting and lottery tax	Other	Total	of which:	
														Local business tax 2	Real property taxes
2016	40,091	16,855	14,186	12,763	8,952	6,569	2,070	2,955	12,408	7,006	1,809	1,119	65,319	50,103	13,654
2017	41,022	17,953	14,399	13,269	8,948	6,944	2,094	- 4,695	13,139	6,114	1,837	1,115	68,522	52,899	13,966
2018	40,882	18,927	14,339	13,779	9,047	6,858	2,133	2,622	14,083	6,813	1,894	1,122	71,817	55,904	14,203
2019	40,683	19,646	14,257	14,136	9,372	6,689	2,118	2,648	15,789	6,987	1,975	1,099	71,661	55,527	14,439
2020	37,635	18,676	14,651	14,553	9,526	6,561	2,238	1,792	16,055	8,600	2,044	1,076	61,489	45,471	14,676
2021	37,120	11,028	14,733	14,980	9,546	6,691	2,089	1,984	18,335	9,824	2,333	1,121	77,335	61,251	14,985
2022	33,667	11,978	14,229	15,672	9,499	6,830	2,191	2,585	17,122	9,226	2,569	1,180	87,315	70,382	15,282
2021 Q1	4,126	3,171	2,585	6,776	2,567	1,692	395	400	4,716	2,110	578	353	17,594	13,798	3,503
Q2	8,717	2,546	4,053	2,843	2,469	1,640	528	413	4,231	2,374	538	255	17,904	13,692	4,034
Q3	9,532	2,338	3,636	2,911	2,381	1,618	514	538	4,571	2,457	516	269	18,643	14,215	4,133
Q4	14,745	2,972	4,458	2,449	2,130	1,741	651	633	4,816	2,884	700	244	23,194	19,546	3,316
2022 Q1	4,452	2,840	2,372	7,175	2,594	1,785	531	503	5,061	2,827	701	385	21,492	17,454	3,577
Q2	9,092	3,518	3,648	2,872	2,433	1,722	505	651	4,406	2,238	661	259	21,318	16,839	4,077
Q3	7,103	2,571	3,742	3,059	2,325	1,598	549	710	4,100	2,138	596	281	21,463	16,792	4,249
Q4	13,020	3,049	4,467	2,567	2,147	1,725	606	722	3,555	2,023	611	254	23,043	19,298	3,380
2023 Q1	4,362	2,888	2,669	7,637	2,632	1,749	530	643	3,362	2,368	666	420	21,555	17,471	3,610
Q2	8,796	3,649	3,830	3,091	2,475	1,669	517	712	2,937	2,323	615	267	22,731	18,117	4,192
Q3	9,477	2,607	3,879	3,309	2,339	1,749	532	773	2,997	2,302	577	284	...	...	...
2022 Oct.	2,465	462	1,436	758	756	567	172	250	1,089	608	202	87	.	.	.
2023 Oct.	3,198	492	1,451	837	699	557	171	260	952	729	216	85	.	.	.

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

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

€ million

Period	Revenue 1			Expenditure 1			Deficit/ surplus	Assets 3				Memo item: Adminis- trative assets	
	Total	of which:		Total	of which:			Total	Deposits 4	Securities	Equity interests, mortgages and other loans 5		Real estate
		Contri- butions 2	Payments from central government		Pension payments	Pen- sioners' health insurance							
2016	286,399	202,249	83,154	288,641	246,118	17,387	- 2,242	34,094	31,524	2,315	203	52	4,147
2017	299,826	211,424	87,502	299,297	255,261	18,028	+ 529	35,366	33,740	1,335	238	53	4,032
2018	312,788	221,572	90,408	308,356	263,338	18,588	+ 4,432	40,345	38,314	1,713	262	56	4,008
2019	327,298	232,014	94,467	325,436	277,282	20,960	+ 1,861	42,963	40,531	2,074	303	56	3,974
2020	335,185	235,988	98,447	339,072	289,284	21,865	- 3,887	39,880	38,196	1,286	344	55	3,901
2021	348,679	245,185	102,772	347,486	296,343	22,734	+ 1,192	42,014	40,320	1,241	400	52	3,807
2022	363,871	258,269	104,876	360,436	308,168	23,792	+ 3,435	46,087	44,181	1,399	457	51	3,746
2021 Q1	83,066	57,351	25,542	86,048	73,799	5,600	- 2,982	36,888	35,326	1,166	342	54	3,887
Q2	86,386	60,666	25,545	86,486	73,905	5,679	- 100	36,941	35,554	988	345	53	3,871
Q3	85,535	59,941	25,468	87,123	74,453	5,718	- 1,588	36,041	34,670	973	345	53	3,840
Q4	92,818	67,211	25,415	87,385	74,556	5,730	+ 5,432	41,974	40,310	1,241	370	52	3,835
2022 Q1	86,684	60,599	25,937	86,841	74,568	5,734	- 157	41,784	39,952	1,367	399	65	3,783
Q2	90,040	63,978	25,879	87,138	74,644	5,756	+ 2,903	44,425	42,441	1,513	406	65	3,761
Q3	89,284	62,891	26,218	92,606	79,400	6,127	- 3,322	41,548	39,767	1,315	415	51	3,775
Q4	96,931	70,750	25,995	93,444	79,944	6,170	+ 3,487	46,082	44,186	1,399	446	51	3,767
2023 Q1	91,370	64,171	26,972	92,422	79,330	6,142	- 1,052	45,109	43,030	1,569	460	51	3,724
Q2	94,735	67,459	26,942	92,585	79,177	6,165	+ 2,151	47,245	45,043	1,693	461	48	3,705
Q3	93,776	66,300	26,950	97,619	83,549	6,513	- 3,843	44,354	42,208	1,632	481	34	3,703

Sources: German pension insurance scheme and Bundesbank calculations. \* Excluding the German pension insurance scheme for mining, railway and maritime industries. The final annual figures generally differ from the total of the reported quarterly figures as the latter are not revised. 1 Including financial compensation payments. Excluding investment spending and proceeds. 2 Including contributions for recipients of government cash benefits. 3 Largely corresponds to the sustainability reserves. End of year or quarter. 4 Including cash. 5 Excluding loans to other social security funds.

## X. Public finance in Germany

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

€ million

Period	Revenue				Expenditure						Deficit/ surplus	Memo item: Deficit- offsetting grant or loan from central government
	Total 1	of which:			Total	of which:						
		Contri- butions	Insolvency compen- sation levy	Government funds		Unemploy- ment benefit 2	Short-time working benefits 3	Job promotion 4	Insolvency benefit payment	Adminis- trative expendi- ture 5		
2016	36,352	31,186	1,114	–	30,889	14,435	749	7,035	595	5,314	+ 5,463	–
2017	37,819	32,501	882	–	31,867	14,055	769	7,043	687	6,444	+ 5,952	–
2018	39,335	34,172	622	–	33,107	13,757	761	6,951	588	8,129	+ 6,228	–
2019	35,285	29,851	638	–	33,154	15,009	772	7,302	842	6,252	+ 2,131	–
2020	33,678	28,236	630	–	61,013	20,617	22,719	7,384	1,214	6,076	– 27,335	6,913
2021	35,830	29,571	1,302	–	57,570	19,460	21,003	7,475	493	6,080	– 21,739	16,935
2022	37,831	31,651	1,062	–	37,530	16,588	3,865	7,125	534	6,256	+ 300	423
2021 Q1	8,228	6,747	289	–	18,260	5,956	8,006	1,935	184	1,391	– 10,033	–
Q2	8,830	7,301	324	–	16,720	5,029	7,495	1,912	108	1,452	– 7,890	–
Q3	8,791	7,290	330	–	12,042	4,447	3,631	1,744	91	1,452	+ 3,251	–
Q4	9,982	8,234	359	–	10,547	4,028	1,871	1,884	110	1,785	– 565	16,935
2022 Q1	8,827	7,374	251	–	10,685	4,424	2,087	1,821	135	1,412	– 1,858	–
Q2	9,327	7,857	262	–	9,457	4,091	1,215	1,794	147	1,450	– 130	–
Q3	9,278	7,740	261	–	8,401	4,056	408	1,621	107	1,506	+ 877	–
Q4	10,398	8,679	289	–	8,987	4,016	156	1,889	145	1,888	+ 1,411	423
2023 Q1	9,836	8,442	178	–	9,942	4,727	592	1,858	376	1,550	– 106	–
Q2	10,387	8,976	186	–	9,661	4,604	380	1,902	271	1,689	+ 726	–
Q3	10,361	8,804	182	–	9,351	4,712	141	1,775	284	1,691	+ 1,010	–

Source: Federal Employment Agency and Bundesbank calculations. \* 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 contributions. 4 Vocational training, meas-

ures to encourage job take-up, rehabilitation, integration, compensation top-up payments and promotion of business start-ups. 5 Including collection charges to other social security funds, excluding administrative expenditure within the framework of the basic allowance for job seekers.

### 10. Statutory health insurance scheme: budgetary development

€ million

Period	Revenue 1			Expenditure 1							Deficit/ surplus	
	Total	of which:		Total	of which:							
		Contri- butions	Central government funds 2		Hospital treatment	Pharma- ceuticals	Medical treatment	Dental treatment 3	Remedies and therapeutic appliances	Sickness benefits		Adminis- trative expendi- ture 4
2016	223,692	206,830	14,000	222,936	70,450	35,981	37,300	13,790	14,256	11,677	11,032	+ 757
2017	233,814	216,227	14,500	230,773	72,303	37,389	38,792	14,070	14,776	12,281	10,912	+ 3,041
2018	242,360	224,912	14,500	239,706	74,506	38,327	39,968	14,490	15,965	13,090	11,564	+ 2,654
2019	251,295	233,125	14,500	252,440	77,551	40,635	41,541	15,010	17,656	14,402	11,136	– 1,145
2020	269,158	237,588	27,940	275,268	78,531	42,906	44,131	14,967	18,133	15,956	11,864	– 6,110
2021	289,270	249,734	36,977	294,602	82,748	46,199	45,058	16,335	20,163	16,612	11,727	– 5,332
2022	315,248	262,367	50,223	310,594	85,061	48,354	46,379	16,737	21,259	17,947	12,418	+ 4,654
2021 Q1	72,970	59,338	13,303	72,660	19,631	11,175	11,564	4,069	4,564	4,287	2,967	+ 310
Q2	71,964	61,819	9,965	74,492	20,287	11,275	11,536	4,219	5,085	4,120	2,850	– 2,529
Q3	70,592	61,899	7,942	73,569	20,748	11,756	10,730	4,060	5,085	4,004	2,849	– 2,977
Q4	74,020	66,678	5,767	73,209	21,340	12,043	11,252	4,062	5,290	4,200	3,109	+ 810
2022 Q1	79,253	62,142	17,049	81,493	20,550	11,891	11,847	4,286	5,216	4,574	3,510	– 2,240
Q2	79,112	64,611	14,280	79,269	21,080	12,053	11,753	4,249	5,335	4,457	2,958	– 158
Q3	75,516	65,242	9,804	75,011	21,164	12,221	11,384	3,956	5,352	4,441	2,996	+ 505
Q4	81,512	70,384	9,091	74,894	21,659	12,242	11,566	4,310	5,442	4,486	3,148	+ 6,617
2023 Q1	73,718	66,513	6,759	77,593	22,196	12,209	12,012	4,370	5,621	4,927	3,169	– 3,875
Q2	73,722	68,792	4,495	76,031	22,421	12,284	11,762	4,476	5,762	4,682	3,166	– 2,309
Q3	75,330	69,236	5,244	76,967	22,632	12,540	11,502	4,371	5,958	4,695	3,030	– 1,637

Source: Federal Ministry of Health and Bundesbank calculations. 1 The final annual figures generally differ from the total of the reported quarterly figures as the latter are not revised. Excluding revenue and expenditure as part of the risk structure compensation

scheme. 2 Federal grant and liquidity assistance. 3 Including dentures. 4 Net, i.e. after deducting reimbursements for expenses for levying contributions incurred by other social security funds.

## X. Public finances in Germany

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

€ million

Period	Revenue		Expenditure 1						Deficit/ surplus
	Total	of which:	Total	of which:					
		Contributions		Non-cash care benefits	Inpatient care total 2	Nursing benefit	Contributions to pension insur- ance scheme 3	Administrative expenditure	
2016	32,171	32,100	30,936	4,904	13,539	6,673	983	1,422	+ 1,235
2017	36,305	36,248	38,862	6,923	16,034	10,010	1,611	1,606	- 2,557
2018	37,949	37,886	41,265	7,703	16,216	10,809	2,093	1,586	- 3,315
2019	47,228	46,508	44,008	8,257	16,717	11,689	2,392	1,781	+ 3,220
2020	50,622	48,003	49,284	8,794	16,459	12,786	2,714	1,946	+ 1,338
2021	52,573	49,764	53,903	9,573	16,511	13,865	3,070	2,024	- 1,330
2022	57,944	52,604	60,100	10,405	20,542	14,872	3,223	2,166	- 2,156
2021 Q1	12,093	11,831	13,344	2,355	3,971	3,387	725	512	- 1,251
Q2	12,933	12,329	13,521	2,287	4,030	3,421	745	510	- 587
Q3	12,624	12,294	13,390	2,393	4,182	3,466	783	509	- 767
Q4	14,853	13,242	13,595	2,475	4,270	3,646	788	503	+ 1,258
2022 Q1	12,912	12,412	14,739	2,564	4,974	3,572	775	529	- 1,827
Q2	15,350	12,951	14,827	2,464	5,026	3,698	795	548	+ 523
Q3	13,708	13,021	15,387	2,638	5,197	3,755	802	542	- 1,679
Q4	15,813	14,067	15,078	2,581	5,281	3,892	837	528	+ 735
2023 Q1	14,283	13,169	14,698	2,876	5,377	3,846	843	570	- 415
Q2	14,227	13,668	14,392	2,745	5,539	3,940	869	561	- 165
Q3	15,585	15,228	14,823	2,867	5,776	4,074	891	571	+ 762

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

cluding benefits for short-term care and daytime/night-time nursing care, inter alia. 3 For non-professional carers.

### 12. Maastricht debt by creditor

€ million

Period (end of year or quarter)	Banking system					Domestic non-banks				Foreign creditors		
	Bundesbank		Domestic MFIs			Other domestic financial corporations		Other domestic creditors				
	Total	of which:		Total	of which:		Total	of which:		Total	of which:	
		Total	Debt securities		Total	Debt securities		Total	Debt securities		Total	Debt securities
2016	2,161,570	205,391	191,880	585,375	223,407	211,515	111,843	48,712	14,182	1,110,577	1,012,273	
2017	2,130,325	319,159	305,301	546,063	194,619	180,104	81,125	56,798	10,456	1,028,201	941,750	
2018	2,083,675	364,731	350,487	504,476	167,506	186,346	89,794	56,071	8,725	972,052	892,222	
2019	2,069,889	366,562	352,025	468,957	158,119	183,714	88,771	61,050	7,225	989,606	908,749	
2020	2,340,849	522,392	507,534	505,373	157,828	191,231	99,840	54,238	8,373	1,067,615	996,417	
2021	2,495,538	716,004	700,921	497,968	144,646	191,580	103,049	51,633	7,435	1,038,353	969,245	
2022	2,561,675	742,514	727,298	509,106	128,892	210,888	126,042	58,444	10,782	1,040,723	975,545	
2021 Q1	2,369,872	561,444	546,540	480,026	162,961	190,136	99,333	63,796	8,060	1,074,470	1,010,641	
Q2	2,419,762	620,473	605,430	482,767	151,182	189,993	99,735	52,647	7,699	1,073,882	1,008,532	
Q3	2,453,545	669,659	654,600	484,986	152,068	191,571	101,742	54,275	8,070	1,053,054	987,736	
Q4	2,495,538	716,004	700,921	497,968	144,646	191,580	103,049	51,633	7,435	1,038,353	969,245	
2022 Q1	2,499,123	737,978	722,843	481,772	143,411	194,096	106,165	50,834	6,959	1,034,442	967,915	
Q2	2,537,417	759,385	744,213	485,392	133,999	202,680	115,576	53,648	8,086	1,036,311	970,548	
Q3	2,551,283	741,360	726,147	515,161	126,865	202,278	116,268	53,765	8,987	1,038,718	968,178	
Q4	2,561,675	742,514	727,298	509,106	128,892	210,888	126,042	58,444	10,782	1,040,723	975,545	
2023 Q1 P	2,586,725	741,587	726,326	480,745	129,372	208,933	124,776	63,130	16,123	1,092,330	1,029,400	
Q2 P	2,585,237	719,981	704,639	459,051	126,047	209,149	124,765	64,680	20,887	1,132,377	1,069,277	

Source: Bundesbank calculations based on data from the Federal Statistical Office.

## X. Public finances in Germany

### 13. Maastricht debt by instrument

€ million

Period (end of year or quarter)	Total	Currency and deposits <sup>1</sup>	Debt securities by original maturity		Loans by original maturity		Memo item: 2	
			Short-term debt securities (up to one year)	Long-term debt securities (more than one year)	Short-term loans (up to one year)	Long-term loans (more than one year)	Debt vis-à-vis other government subsectors	Claims vis-à-vis other government subsectors
<b>General government</b>								
2016	2,161,570	15,491	69,715	1,483,871	96,254	496,239	.	.
2017	2,130,325	14,298	48,789	1,484,462	88,841	493,935	.	.
2018	2,083,675	14,680	52,572	1,456,160	79,171	481,091	.	.
2019	2,069,889	14,449	56,350	1,458,540	64,464	476,086	.	.
2020	2,340,849	14,486	173,851	1,596,141	85,384	470,987	.	.
2021 Q1	2,369,872	12,283	190,039	1,637,496	62,705	467,348	.	.
Q2	2,419,762	13,065	182,676	1,689,902	69,170	464,949	.	.
Q3	2,453,545	13,565	192,489	1,711,727	70,496	465,268	.	.
Q4	2,495,538	17,743	195,421	1,729,876	88,481	464,017	.	.
2022 Q1	2,499,123	15,676	172,809	1,774,484	70,930	465,223	.	.
Q2	2,537,417	17,793	161,844	1,810,578	76,484	470,718	.	.
Q3	2,551,283	22,631	149,825	1,796,620	82,049	500,158	.	.
Q4	2,561,675	16,985	150,371	1,818,189	112,199	463,933	.	.
2023 Q1 P	2,586,725	14,913	145,595	1,880,403	83,390	462,424	.	.
Q2 P	2,585,237	14,829	154,379	1,891,236	66,907	457,886	.	.
<b>Central government</b>								
2016	1,365,579	15,491	55,208	1,123,853	50,004	121,022	556	8,567
2017	1,361,492	14,298	36,297	1,131,896	48,305	130,696	1,131	10,618
2018	1,334,500	14,680	42,246	1,107,140	43,067	127,367	933	9,975
2019	1,312,338	14,449	38,480	1,101,866	29,956	127,587	605	10,301
2020	1,526,491	14,486	154,498	1,180,683	48,414	128,410	609	14,521
2021 Q1	1,552,060	12,283	167,485	1,212,495	31,284	128,513	604	22,929
Q2	1,602,137	13,065	165,374	1,259,206	36,297	128,195	647	29,448
Q3	1,630,056	13,565	170,962	1,280,586	37,116	127,826	693	31,382
Q4	1,679,310	17,743	176,428	1,300,416	57,779	126,943	618	8,078
2022 Q1	1,684,290	15,676	155,123	1,340,340	41,680	131,472	576	10,430
Q2	1,723,415	17,793	147,681	1,373,616	47,196	137,129	623	10,491
Q3	1,757,005	22,631	144,999	1,369,628	55,559	164,188	828	13,101
Q4	1,775,982	16,985	146,989	1,391,638	93,352	127,017	8,815	9,011
2023 Q1 P	1,798,377	14,913	140,499	1,456,147	59,981	126,837	3,664	10,500
Q2 P	1,805,711	14,829	150,168	1,471,888	42,105	126,722	2,889	11,235
<b>State government</b>								
2016	642,291	-	14,515	361,996	20,482	245,298	11,273	1,694
2017	616,785	-	12,543	354,688	19,790	229,764	14,038	2,046
2018	603,166	-	10,332	351,994	19,250	221,590	14,035	1,891
2019	612,698	-	17,873	360,495	19,076	215,254	14,934	1,826
2020	664,421	-	19,354	419,862	19,481	205,724	11,924	1,410
2021 Q1	667,651	-	22,556	429,623	14,375	201,097	10,942	1,995
Q2	667,940	-	17,304	435,709	16,178	198,750	12,454	2,041
Q3	673,373	-	21,528	436,499	16,334	199,012	11,414	2,110
Q4	665,250	-	18,994	434,930	14,074	197,252	12,441	1,772
2022 Q1	663,427	-	17,688	439,767	12,533	193,438	11,634	1,915
Q2	660,169	-	14,166	442,621	12,404	190,979	11,393	1,742
Q3	643,827	-	4,828	432,653	14,873	191,472	14,067	2,147
Q4	634,152	-	3,384	432,186	9,881	188,702	11,585	1,719
2023 Q1 P	631,772	-	5,099	429,985	10,929	185,759	11,918	2,360
Q2 P	623,344	-	4,215	424,818	11,664	182,648	13,336	2,041
<b>Local government</b>								
2016	166,205	-	-	2,404	27,002	136,798	1,819	431
2017	168,305	-	-	3,082	24,909	140,314	1,881	466
2018	162,175	-	1	3,046	20,903	138,225	1,884	497
2019	161,367	-	-	2,996	19,607	138,763	1,856	532
2020	163,163	-	-	3,366	18,520	141,276	1,402	330
2021 Q1	163,189	-	-	3,121	17,998	142,070	2,009	325
Q2	164,321	-	-	3,121	18,969	142,231	2,070	323
Q3	163,772	-	-	3,000	18,156	142,616	2,127	321
Q4	165,316	-	-	3,241	18,011	144,064	1,813	313
2022 Q1	164,860	-	-	3,052	17,532	144,276	1,884	349
Q2	166,840	-	-	2,902	17,566	146,373	1,724	370
Q3	166,624	-	-	2,856	15,623	148,145	2,098	392
Q4	172,244	-	-	2,896	17,917	151,431	1,614	399
2023 Q1 P	173,058	-	-	2,883	17,102	153,073	2,163	422
Q2 P	172,862	-	-	2,988	17,667	152,207	1,746	748

For footnotes see end of table.

## X. Public finances in Germany

### 13. Maastricht debt by instrument (cont'd)

€ million

Period (end of year or quarter)	Currency and deposits <sup>1</sup>	Debt securities by original maturity		Loans by original maturity		Memo item: <sup>2</sup>		
		Short-term debt securities (up to one year)	Long-term debt securities (more than one year)	Short-term loans (up to one year)	Long-term loans (more than one year)	Debt vis-à-vis other government subsectors	Claims vis-à-vis other government subsectors	
Total								
<b>Social security funds</b>								
2016	1,232	-	-	-	562	670	89	3,044
2017	807	-	-	-	262	545	15	3,934
2018	704	-	-	-	388	316	16	4,506
2019	899	-	-	-	375	524	16	4,753
2020	7,641	-	-	-	7,128	513	6,931	4,606
2021 Q1	16,381	-	-	-	15,985	395	15,853	4,160
Q2	21,395	-	-	-	20,995	400	20,860	4,220
Q3	24,449	-	-	-	24,053	395	23,872	4,292
Q4	553	-	-	-	131	422	19	4,729
2022 Q1	3,378	-	-	-	2,883	496	2,739	4,140
Q2	3,690	-	-	-	3,098	592	2,958	4,095
Q3	4,151	-	-	-	3,459	692	3,330	4,683
Q4	2,755	-	-	-	608	2,147	1,442	12,328
2023 Q1 P	3,527	-	-	-	1,411	2,116	2,263	6,728
Q2 P	2,733	-	-	-	591	2,142	1,442	5,389

Source: Bundesbank calculations based on data from the Federal Statistical Office and the Federal Republic of Germany - Finance Agency. <sup>1</sup> Particularly liabilities resulting from coins in circulation. <sup>2</sup> Besides direct loan relationships, claims and debt vis-à-vis

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

### 14. Maastricht debt of central government by instrument and category

€ million

Period (end of year or quarter)	Currency and deposits <sup>2</sup>		Debt securities									Loans <sup>1</sup>	
	Total <sup>1</sup>	Total <sup>1</sup>	of which: <sup>3</sup> Federal day bond	Total <sup>1</sup>	of which: <sup>3</sup>								
					Conventional Federal bonds (Bunds)	Conventional Federal notes (Boblis)	Conventional Federal Treasury notes (Schätze) <sup>4</sup>	Treasury discount paper (Bubills) <sup>5</sup>	Federal savings notes	Green Federal securities	Inflation- linked Federal securities <sup>6</sup>		Capital indexation of inflation- linked securities
2007	987,909	6,675	.	917,584	564,137	173,949	102,083	37,385	10,287	.	13,464	506	63,650
2008	1,019,905	12,466	3,174	928,754	571,913	164,514	105,684	40,795	9,649	.	19,540	1,336	78,685
2009	1,086,173	9,981	2,495	1,013,072	577,798	166,471	113,637	104,409	9,471	.	24,730	1,369	63,121
2010	1,337,160	10,890	1,975	1,084,019	602,624	185,586	126,220	85,867	8,704	.	35,906	2,396	242,251
2011	1,346,869	10,429	2,154	1,121,331	615,200	199,284	130,648	58,297	8,208	.	44,241	3,961	215,109
2012	1,390,377	9,742	1,725	1,177,168	631,425	217,586	117,719	56,222	6,818	.	52,119	5,374	203,467
2013	1,392,735	10,582	1,397	1,192,025	643,200	234,759	110,029	50,004	4,488	.	51,718	4,730	190,127
2014	1,398,472	12,146	1,187	1,206,203	653,823	244,633	103,445	27,951	2,375	.	63,245	5,368	180,123
2015	1,371,933	13,949	1,070	1,188,463	663,296	232,387	96,389	18,536	1,305	.	74,495	5,607	169,521
2016	1,365,579	15,491	1,010	1,179,062	670,245	221,551	95,727	23,609	737	.	66,464	3,602	171,026
2017	1,361,492	14,298	966	1,168,193	693,687	203,899	91,013	10,037	289	.	72,855	4,720	179,001
2018	1,334,500	14,680	921	1,149,386	710,513	182,847	86,009	12,949	48	.	64,647	5,139	170,435
2019	1,312,338	14,449	-	1,140,346	719,747	174,719	89,230	13,487	.	.	69,805	6,021	157,543
2020	1,526,491	14,486	.	1,335,181	801,910	179,560	98,543	113,141	.	9,876	58,279	3,692	176,824
2021	1,679,310	17,743	.	1,476,844	892,464	190,839	103,936	153,978	.	21,627	65,390	6,722	184,722
2022	1,775,982	16,985	.	1,538,628	947,349	198,084	113,141	137,990	.	36,411	72,357	15,844	220,369
2021 Q1	1,552,060	12,283	.	1,379,980	814,864	189,935	103,910	134,800	.	11,026	60,687	3,857	159,797
Q2	1,602,137	13,065	.	1,424,579	861,455	184,413	104,997	139,451	.	16,526	62,569	5,056	164,492
Q3	1,630,056	13,565	.	1,451,549	869,195	198,692	105,398	146,533	.	19,824	63,851	5,456	164,942
Q4	1,679,310	17,743	.	1,476,844	892,464	190,839	103,936	153,978	.	21,627	65,390	6,722	184,722
2022 Q1	1,684,290	15,676	.	1,495,463	911,280	204,534	108,702	140,427	.	23,961	67,776	7,809	173,152
Q2	1,723,415	17,793	.	1,521,297	937,949	198,472	111,343	138,495	.	29,425	70,217	11,209	184,325
Q3	1,757,005	22,631	.	1,514,627	918,838	208,509	111,675	137,740	.	35,527	71,498	12,879	219,747
Q4	1,775,982	16,985	.	1,538,628	947,349	198,084	113,141	137,990	.	36,411	72,357	15,844	220,369
2023 Q1 P	1,798,377	14,913	.	1,596,646	987,363	213,514	120,904	127,143	.	39,459	73,591	15,497	186,818
Q2 P	1,805,711	14,829	.	1,622,056	1,007,004	211,742	124,160	139,012	.	50,243	59,227	13,604	168,826

Sources: Federal Republic of Germany - Finance Agency, Federal Statistical Office, and Bundesbank calculations. <sup>1</sup> Comprises all of central government, i.e. all off-budget entities in addition to the core budget, including the government-owned bad bank FMS Wertmanagement and liabilities attributed to central government from an economic perspective under the European System of Accounts (ESA) 2010. <sup>2</sup> Particularly liabilities

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



## XI. Economic conditions in Germany

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

Item	2020			2021			2022				2023		
	2020	2021	2022	2020	2021	2022	Q1	Q2	Q3	Q4	Q1	Q2	Q3
	Index 2015=100			Annual percentage change									
<b>At constant prices, chained</b>													
<b>I. Origin of domestic product</b>													
Production sector (excluding construction)	100.8	108.2	107.6	- 7.0	7.4	- 0.5	0.7	- 0.9	0.3	- 2.1	0.3	- 2.0	- 3.8
Construction	102.8	97.4	94.1	2.5	- 5.3	- 3.3	4.3	- 3.7	- 4.9	- 7.0	- 1.6	- 1.0	1.2
Wholesale/retail trade, transport and storage, hotel and restaurant services	101.6	102.8	106.3	- 7.1	1.2	3.3	8.3	5.1	1.6	- 0.9	0.6	- 1.2	- 0.4
Information and communication	120.7	130.1	136.5	0.2	7.8	5.0	5.1	4.1	6.8	3.8	2.6	3.0	2.1
Financial and insurance activities	94.4	100.8	105.0	- 0.9	6.8	4.2	4.6	3.0	2.9	6.3	2.2	- 0.7	- 1.2
Real estate activities	101.3	102.6	103.5	0.2	1.4	0.8	1.6	1.2	0.8	- 0.3	0.8	0.4	1.0
Business services <sup>1</sup>	104.9	109.7	112.5	- 5.1	4.6	2.6	6.7	1.5	1.0	1.0	- 0.2	0.4	0.3
Public services, education and health	105.5	106.8	109.6	- 1.2	1.2	2.7	2.6	2.4	2.5	3.1	2.7	0.7	- 0.5
Other services	90.2	90.3	95.7	-12.8	0.2	6.0	8.8	7.5	2.4	5.7	1.7	0.9	1.1
Gross value added	102.7	106.1	107.9	- 4.0	3.3	1.7	3.7	1.7	1.3	0.3	0.8	- 0.3	- 0.7
Gross domestic product <sup>2</sup>	103.0	106.3	108.2	- 3.8	3.2	1.8	4.3	1.6	1.2	0.2	0.2	- 0.4	- 0.8
<b>II. Use of domestic product</b>													
Private consumption <sup>3</sup>	100.9	102.4	106.4	- 5.9	1.5	3.9	8.4	6.0	1.8	0.2	- 0.2	- 0.8	- 2.0
Government consumption	113.9	117.5	119.3	4.1	3.1	1.6	4.5	1.6	0.1	0.1	- 2.4	- 3.2	- 1.6
Machinery and equipment	100.6	103.4	107.5	-11.1	2.8	4.0	0.9	0.7	9.5	4.9	7.2	4.6	1.1
Premises	112.9	110.0	108.0	3.9	- 2.6	- 1.8	3.2	- 3.6	- 1.6	- 4.8	- 3.3	- 1.8	- 1.0
Other investment <sup>4</sup>	114.3	116.7	115.8	- 4.0	2.1	- 0.7	- 1.6	- 1.3	- 1.3	1.0	- 0.8	- 0.8	- 0.6
Changes in inventories <sup>5,6</sup>	.	.	.	- 0.2	0.9	0.7	- 0.4	0.2	1.7	1.3	0.3	0.7	- 0.3
Domestic demand	105.8	108.4	111.8	- 3.1	2.5	3.2	5.3	3.2	3.1	1.2	- 0.3	- 0.4	- 1.7
Net exports <sup>6</sup>	.	.	.	- 1.0	0.9	- 1.2	- 0.7	- 1.5	- 1.8	- 0.9	0.3	0.0	0.9
Exports	102.0	111.8	115.5	- 9.3	9.7	3.3	4.6	3.7	5.3	- 0.2	1.1	- 2.0	- 3.8
Imports	108.4	118.0	125.9	- 8.3	8.9	6.6	7.1	7.8	10.3	1.8	0.5	- 2.2	- 5.7
Gross domestic product <sup>2</sup>	103.0	106.3	108.2	- 3.8	3.2	1.8	4.3	1.6	1.2	0.2	0.2	- 0.4	- 0.8
<b>At current prices (€ billion)</b>													
<b>III. Use of domestic product</b>													
Private consumption <sup>3</sup>	1,708.7	1,785.5	1,979.3	- 5.3	4.5	10.9	13.4	12.8	9.3	8.5	8.0	6.0	3.8
Government consumption	749.6	796.8	850.9	6.6	6.3	6.8	9.3	6.5	5.7	5.8	2.0	3.9	4.7
Machinery and equipment	217.1	227.5	253.4	-10.0	4.8	11.4	6.4	7.6	18.1	13.1	15.2	11.3	6.6
Premises	384.6	406.5	463.5	5.9	5.7	14.0	18.8	14.8	13.3	9.9	10.8	5.9	4.6
Other investment <sup>4</sup>	131.4	136.5	139.3	- 3.5	3.8	2.1	2.3	2.0	1.9	2.2	1.6	1.9	2.1
Changes in inventories <sup>5</sup>	14.6	69.4	114.1	.	.	.	.	.	.	.	.	.	.
Domestic use	3,206.1	3,422.2	3,800.5	- 1.9	6.7	11.1	12.9	12.2	11.3	8.1	5.7	4.3	1.9
Net exports	197.6	195.3	76.3	.	.	.	.	.	.	.	.	.	.
Exports	1,479.8	1,710.3	1,974.2	- 9.6	15.6	15.4	16.6	17.8	19.0	9.1	5.9	- 1.4	- 5.9
Imports	1,282.2	1,515.0	1,897.9	-10.4	18.2	25.3	26.8	29.6	33.3	13.4	3.6	- 5.7	-13.7
Gross domestic product <sup>2</sup>	3,403.7	3,617.5	3,876.8	- 2.0	6.3	7.2	9.1	7.7	5.8	6.2	6.7	6.3	6.0
<b>IV. Prices (2015=100)</b>													
Private consumption	105.7	108.8	116.1	0.6	3.0	6.7	4.6	6.4	7.4	8.3	8.2	6.9	5.9
Gross domestic product	109.2	112.5	118.4	1.9	3.0	5.3	4.6	6.0	4.5	6.0	6.5	6.7	6.9
Terms of trade	102.8	99.8	95.0	2.0	- 2.9	- 4.9	- 5.9	- 5.5	- 6.5	- 1.9	1.6	4.3	6.8
<b>V. Distribution of national income</b>													
Compensation of employees	1,853.6	1,918.3	2,023.6	- 0.1	3.5	5.5	6.8	5.5	4.3	5.4	6.7	7.1	6.9
Entrepreneurial and property income	712.1	851.0	867.4	- 7.1	19.5	1.9	4.6	- 0.5	3.8	- 0.6	9.7	7.4	4.2
National income	2,565.7	2,769.3	2,890.9	- 2.2	7.9	4.4	6.1	3.7	4.2	3.7	7.6	7.2	6.1
Memo item: Gross national income	3,500.9	3,756.8	4,027.6	- 2.9	7.3	7.2	9.6	7.6	5.8	6.0	6.5	6.6	6.4

Source: Federal Statistical Office; figures computed in November 2023. <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 insti-

tutions 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 valubles. <sup>6</sup> Contribution of growth to GDP.

## XI. Economic conditions in Germany

### 2. Output in the production sector \*

Adjusted for working-day variations ◦

Production sector, total	of which:											
	Construc-tion	Energy	Industry									
			Total	of which: by main industrial grouping				of which: by economic sector				
				Inter-mediate goods	Capital goods	Durable goods	Non-durable goods	Manu-facture of basic metals and fabricated metal products	Manu-facture of computers, electronic and optical products and electrical equipment	Machinery and equipment	Motor vehicels, trailers and semi-trailers	
<b>2015 = 100</b>												
% of total 1	100	14.04	6.37	79.60	29.44	36.96	2.28	10.92	10.27	9.95	12.73	14.14
Period												
2019	102.9	112.7	90.4	102.2	101.8	102.6	106.2	101.0	102.8	106.5	103.4	94.9
2020	95.0	116.2	84.4	92.2	94.9	88.2	97.6	97.2	90.6	98.5	89.5	75.9
2021	98.4	114.3	87.0	96.5	102.6	90.5	103.6	99.1	98.9	108.7	95.9	73.9
2022	97.9	112.5	85.5	96.3	99.5	92.3	105.4	99.6	96.5	114.0	96.7	76.7
2022 Q3	98.0	116.5	79.7	96.2	99.8	91.6	105.4	100.0	95.9	117.9	96.5	75.2
Q4	100.3	119.9	84.3	98.0	93.2	100.3	106.9	101.4	93.0	116.9	105.7	83.0
2023 Q1	95.9	96.7	85.1	96.7	98.0	95.8	104.7	95.0	95.8	117.6	92.9	90.4
Q2	97.3	114.8	66.2	96.7	96.4	97.3	99.2	95.0	96.1	115.9	95.9	88.6
Q3 x	95.6	117.4	62.0	94.5	94.5	93.8	96.8	96.0	93.0	116.9	95.4	78.7
2022 Oct.	101.6	121.8	80.8	99.7	100.4	96.7	111.5	105.3	100.7	118.6	98.4	83.7
Nov.	105.8	124.0	85.1	104.2	100.6	106.2	113.6	104.9	100.1	124.2	106.3	95.4
Dec.	93.4	113.9	86.9	90.2	78.6	98.0	95.7	93.9	78.2	108.0	112.3	69.9
2023 Jan.	88.0	80.1	89.2	89.3	93.7	84.7	94.2	92.0	90.3	108.4	83.2	78.3
Feb.	95.1	97.0	82.2	95.8	96.6	96.1	103.2	91.4	94.1	115.9	91.8	93.9
Mar.	104.7	113.0	83.9	105.0	103.6	106.5	116.6	101.5	102.9	128.6	103.7	99.1
Apr.	96.4	113.4	73.1	95.2	96.1	94.6	101.4	93.8	96.0	113.5	92.3	86.9
May	96.5	114.7	64.2	95.8	95.8	96.8	95.9	92.8	95.4	114.2	93.8	90.3
June	99.0	116.4	61.2	99.0	97.2	100.6	100.2	98.4	96.8	120.1	101.6	88.5
July 2,x	97.3	122.6	64.1	95.5	96.2	94.4	97.3	97.2	94.4	115.9	95.7	79.4
Aug. 2,x	89.8	110.1	61.1	88.5	91.6	84.3	89.6	94.0	88.9	113.5	86.1	67.3
Sep. x	99.7	119.5	60.7	99.4	95.8	102.8	103.6	96.7	95.7	121.3	104.3	89.5
Oct. x,p	98.0	119.3	72.5	96.3	95.7	95.9	101.2	98.0	94.9	116.1	92.8	85.1
<b>Annual percentage change</b>												
2019	- 2.3	+ 3.5	- 7.2	- 2.9	- 3.5	- 1.9	± 0.0	- 5.5	- 4.2	- 2.3	- 2.9	- 5.0
2020	- 7.7	+ 3.1	- 6.6	- 9.8	- 6.8	- 14.0	- 8.1	- 3.8	- 11.9	- 7.5	- 13.4	- 20.0
2021	+ 3.6	- 1.6	+ 3.1	+ 4.7	+ 8.1	+ 2.6	+ 6.1	+ 2.0	+ 9.2	+ 10.4	+ 7.2	- 2.6
2022	- 0.5	- 1.6	- 1.7	- 0.2	- 3.0	+ 2.0	+ 1.7	+ 0.5	- 2.4	+ 4.9	+ 0.8	+ 3.8
2022 Q3	+ 1.2	- 2.4	- 1.1	+ 2.1	- 2.5	+ 7.7	+ 3.5	- 1.6	- 2.0	+ 8.1	+ 1.9	+ 21.9
Q4	- 1.2	- 4.0	- 9.8	+ 0.1	- 5.7	+ 5.5	- 1.7	- 1.3	- 3.1	+ 6.7	+ 3.4	+ 11.8
2023 Q1	+ 0.1	- 2.1	- 10.8	+ 1.3	- 5.0	+ 9.5	+ 0.9	- 4.8	- 3.1	+ 7.0	+ 2.6	+ 23.2
Q2	- 0.2	- 0.1	- 20.0	+ 1.1	- 5.3	+ 8.6	- 6.0	- 2.3	- 2.1	+ 4.2	+ 1.9	+ 18.0
Q3 x	- 2.4	+ 0.8	- 22.2	- 1.8	- 5.3	+ 2.4	- 8.1	- 4.0	- 3.1	- 0.8	- 1.1	+ 4.7
2022 Oct.	- 0.5	- 1.5	- 12.3	+ 0.6	- 3.9	+ 5.5	- 1.3	- 0.9	- 0.8	+ 7.2	+ 2.2	+ 14.0
Nov.	± 0.0	- 2.7	- 8.6	+ 1.2	- 3.7	+ 6.5	- 0.8	- 2.6	- 3.2	+ 9.8	+ 4.4	+ 13.7
Dec.	- 3.1	- 7.8	- 8.7	- 1.6	- 10.3	+ 4.5	- 3.1	- 0.3	- 5.7	+ 2.8	+ 3.6	+ 6.7
2023 Jan.	- 1.7	- 2.1	- 9.8	- 1.0	- 6.0	+ 4.8	- 1.4	- 3.2	- 4.2	+ 5.6	+ 2.5	+ 11.7
Feb.	+ 0.4	+ 0.2	- 13.2	+ 1.5	- 4.5	+ 9.0	- 1.3	- 4.0	- 3.6	+ 7.2	+ 2.8	+ 18.9
Mar.	+ 1.4	- 3.9	- 9.5	+ 3.2	- 4.5	+ 14.0	+ 5.0	- 7.1	- 1.7	+ 8.2	+ 2.5	+ 39.4
Apr.	+ 0.8	+ 1.1	- 18.1	+ 2.1	- 5.1	+ 10.6	- 3.8	- 1.3	- 1.4	+ 5.5	+ 3.7	+ 22.2
May	+ 0.1	+ 0.6	- 20.7	+ 1.4	- 5.4	+ 10.4	- 8.6	- 4.0	- 2.2	+ 3.4	+ 2.3	+ 22.4
June	- 1.6	- 1.9	- 21.3	- 0.2	- 5.4	+ 5.1	- 5.6	- 1.5	- 2.6	+ 3.8	± 0.0	+ 10.3
July 2,x	- 1.8	+ 1.3	- 22.0	- 1.1	- 5.9	+ 3.2	- 4.0	- 0.2	- 3.2	+ 0.3	+ 0.3	+ 4.6
Aug. 2,x	- 1.9	- 0.3	- 21.8	- 0.8	- 3.6	+ 3.2	- 8.8	- 2.8	- 1.2	+ 1.3	- 3.7	+ 11.8
Sep. x	- 3.6	+ 1.2	- 22.9	- 3.3	- 6.3	+ 1.2	- 11.1	- 8.7	- 4.6	- 3.8	- 0.3	- 0.1
Oct. x,p	- 3.5	- 2.1	- 10.3	- 3.4	- 4.7	- 0.8	- 9.2	- 6.9	- 5.8	- 2.1	- 5.7	+ 1.7

Source of the unadjusted figures: Federal Statistical Office. \* For explanatory notes, see Statistical Series - Seasonally adjusted business statistics, Tables III.1.a to III.1.c ◦ Using JDemetra+ 2.2.2 (X13). 1 Share of gross value added at factor cost of the production sector in the base year 2015. 2 Influenced by a change in holiday dates. x Provisional;

estimated and adjusted in advance by the Federal Statistical Office to the results of the Quarterly Production Survey and the Quarterly Survey in the specialised construction industry, respectively.

## XI. Economic conditions in Germany

### 3. Orders received by industry \*

Adjusted for working-day variations ◦

Period	Industry		of which:				Consumer goods		of which:			
	2015 = 100	Annual percentage change	Intermediate goods		Capital goods		2015 = 100	Annual percentage change	Durable goods		Non-durable goods	
			2015 = 100	Annual percentage change	2015 = 100	Annual percentage change			2015 = 100	Annual percentage change	2015 = 100	Annual percentage change
<b>Total</b>												
2019	104.9	- 5.1	103.5	- 7.2	105.4	- 4.2	107.0	- 2.7	123.3	+ 3.7	101.7	- 5.0
2020	97.2	- 7.3	97.9	- 5.4	95.6	- 9.3	105.7	- 1.2	124.4	+ 0.9	99.6	- 2.1
2021	119.3	+ 22.7	124.6	+ 27.3	116.3	+ 21.7	117.4	+ 11.1	146.5	+ 17.8	107.9	+ 8.3
2022	126.2	+ 5.8	138.4	+ 11.1	118.3	+ 1.7	129.0	+ 9.9	164.8	+ 12.5	117.2	+ 8.6
2022 Oct.	125.5	+ 7.1	134.8	+ 8.0	119.3	+ 6.3	129.0	+ 7.7	173.6	+ 22.3	114.2	+ 1.5
Nov.	124.4	- 0.7	135.4	+ 1.9	117.0	- 3.1	129.4	+ 3.9	149.6	± 0.0	122.8	+ 5.7
Dec.	121.3	- 1.9	127.6	+ 6.2	118.6	- 6.5	112.0	- 2.1	139.7	- 6.2	102.9	- 0.2
2023 Jan.	125.8	- 5.3	139.2	- 3.5	118.1	- 6.9	122.2	- 3.4	135.6	- 11.9	117.8	+ 0.3
Feb.	128.9	+ 0.1	133.7	- 2.1	126.3	+ 1.9	125.8	- 2.4	154.0	+ 0.1	116.6	- 3.4
Mar.	130.2	- 6.3	138.7	- 9.4	124.8	- 3.4	132.5	- 8.9	168.5	- 13.0	120.6	- 6.9
Apr.	115.9	- 6.1	128.6	- 10.0	107.6	- 1.9	118.6	- 13.0	156.4	- 17.1	106.1	- 10.9
May	121.4	- 2.0	124.5	- 10.8	120.1	+ 5.5	117.1	- 8.2	133.2	- 25.5	111.8	+ 1.2
June	136.6	+ 5.6	128.4	- 9.8	142.7	+ 18.5	128.6	- 5.4	153.1	- 9.0	120.6	- 3.8
July	116.3	- 8.9	120.0	- 16.4	113.1	- 4.9	123.6	+ 2.4	128.6	- 14.3	122.1	+ 10.0
Aug.	107.4	- 6.2	112.0	- 12.8	102.1	- 2.7	127.4	+ 4.3	151.2	- 6.1	119.6	+ 9.3
Sep.	119.4	- 3.5	120.6	- 8.6	118.6	+ 1.3	119.6	- 11.0	143.9	- 13.5	111.7	- 9.8
Oct. p	116.7	- 7.0	122.0	- 9.5	112.4	- 5.8	124.6	- 3.4	145.6	- 16.1	117.6	+ 3.0
<b>From the domestic market</b>												
2019	101.2	- 5.6	99.1	- 8.7	103.0	- 3.4	101.2	- 1.7	116.2	+ 1.3	96.2	- 2.7
2020	94.9	- 6.2	94.2	- 4.9	95.1	- 7.7	97.9	- 3.3	105.5	- 9.2	95.4	- 0.8
2021	115.5	+ 21.7	119.6	+ 27.0	113.1	+ 18.9	108.0	+ 10.3	114.9	+ 8.9	105.6	+ 10.7
2022	122.7	+ 6.2	135.4	+ 13.2	112.6	- 0.4	118.2	+ 9.4	125.0	+ 8.8	115.9	+ 9.8
2022 Oct.	120.4	+ 4.2	133.7	+ 8.7	108.9	- 1.0	121.8	+ 10.2	123.7	+ 15.9	121.1	+ 8.3
Nov.	123.2	+ 3.2	134.4	+ 6.1	113.3	- 0.4	125.7	+ 8.9	128.2	+ 9.0	124.8	+ 8.9
Dec.	115.5	- 3.0	127.6	+ 14.4	108.6	- 14.9	92.1	- 12.6	99.3	- 2.6	89.7	- 15.9
2023 Jan.	121.5	- 2.6	137.4	- 0.9	110.5	- 3.0	105.0	- 10.7	105.7	- 9.0	104.8	- 11.3
Feb.	125.8	+ 2.0	133.3	+ 0.8	121.4	+ 4.3	111.8	- 5.6	113.6	- 3.4	111.2	- 6.3
Mar.	130.1	- 6.0	137.0	- 7.9	126.0	- 3.7	118.6	- 8.9	133.1	- 6.8	113.7	- 9.8
Apr.	117.5	- 4.9	132.5	- 4.3	106.9	- 2.6	102.9	- 21.1	118.9	- 13.7	97.5	- 23.9
May	122.9	+ 0.3	124.7	- 8.6	124.0	+ 10.7	104.9	- 7.3	110.5	- 19.9	103.0	- 1.7
June	125.2	- 0.3	120.3	- 12.2	132.6	+ 14.3	104.3	- 16.4	103.1	- 19.1	104.7	- 15.4
July	114.4	- 8.1	118.2	- 17.8	112.2	+ 1.9	107.2	- 3.0	107.4	- 13.9	107.1	+ 1.3
Aug.	105.0	- 4.7	112.5	- 10.0	98.5	+ 0.6	106.2	- 1.8	112.0	- 7.7	104.3	+ 0.6
Sep.	107.7	- 10.8	112.7	- 12.6	103.4	- 8.4	107.4	- 14.6	118.2	- 4.3	103.7	- 18.0
Oct. p	111.7	- 7.2	120.5	- 9.9	104.0	- 4.5	112.9	- 7.3	106.8	- 13.7	114.9	- 5.1
<b>From abroad</b>												
2019	107.6	- 4.8	108.3	- 5.5	106.9	- 4.6	111.5	- 3.5	129.0	+ 5.6	105.9	- 6.6
2020	98.9	- 8.1	102.0	- 5.8	95.9	- 10.3	111.8	+ 0.3	139.6	+ 8.2	102.8	- 2.9
2021	122.2	+ 23.6	130.1	+ 27.5	118.2	+ 23.3	124.8	+ 11.6	171.9	+ 23.1	109.6	+ 6.6
2022	128.8	+ 5.4	141.6	+ 8.8	121.8	+ 3.0	137.4	+ 10.1	196.8	+ 14.5	118.2	+ 7.8
2022 Oct.	129.3	+ 9.1	136.0	+ 7.3	125.5	+ 10.6	134.6	+ 6.0	213.8	+ 25.6	109.0	- 3.6
Nov.	125.3	- 3.5	136.5	- 2.2	119.2	- 4.6	132.3	+ 0.6	166.8	- 4.9	121.2	+ 3.2
Dec.	125.7	- 1.1	127.7	- 1.5	124.6	- 1.5	127.4	+ 4.9	172.2	- 7.8	113.0	+ 12.5
2023 Jan.	129.1	- 7.3	141.2	- 6.0	122.7	- 8.9	135.5	+ 1.6	159.7	- 13.4	127.8	+ 9.3
Feb.	131.3	- 1.2	134.2	- 5.0	129.2	+ 0.6	136.7	- 0.2	186.5	+ 1.9	120.7	- 1.2
Mar.	130.3	- 6.4	140.5	- 11.0	124.0	- 3.3	143.2	- 8.9	196.9	- 16.1	125.9	- 4.8
Apr.	114.6	- 7.0	124.3	- 15.8	108.1	- 1.4	130.7	- 7.2	186.6	- 18.8	112.7	+ 0.4
May	120.3	- 3.8	124.2	- 13.0	117.7	+ 2.4	126.5	- 8.7	151.4	- 28.4	118.5	+ 3.1
June	145.2	+ 9.9	137.1	- 7.5	148.8	+ 21.0	147.5	+ 1.9	193.4	- 3.9	132.7	+ 5.0
July	117.8	- 9.5	122.0	- 14.9	113.6	- 8.5	136.4	+ 6.1	145.6	- 14.5	133.5	+ 16.0
Aug.	109.2	- 7.2	111.4	- 15.6	104.2	- 4.5	143.9	+ 8.2	182.8	- 5.2	131.3	+ 15.5
Sep.	128.2	+ 1.8	129.1	- 4.7	127.7	+ 6.8	129.1	- 8.6	164.5	- 18.1	117.8	- 3.4
Oct. p	120.5	- 6.8	123.7	- 9.0	117.4	- 6.5	133.6	- 0.7	176.8	- 17.3	119.7	+ 9.8

Source of the unadjusted figures: Federal Statistical Office. \* At current prices; for explanatory notes, see Statistical Series - Seasonally adjusted business statistics, Tables III.2.a to III.2.c. ◦ Using JDemetra+ 2.2.2 (X13).

## XI. Economic conditions in Germany

### 4. Orders received by construction \*

Adjusted for working-day variations ◦

Zeit	Breakdown by type of construction											Breakdown by client <sup>1</sup>					
	Structural engineering											Civil engineering		Industrial clients		Public sector <sup>2</sup>	
	Total		Residential construction		Industrial construction		Public sector construction										
2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change		
2019	146.2	+ 8.2	145.3	+ 10.3	150.4	+ 9.7	142.6	+ 10.8	138.9	+ 10.9	147.1	+ 5.9	148.1	+ 8.8	141.3	+ 6.6	
2020	145.6	- 0.4	144.2	- 0.8	160.8	+ 6.9	130.2	- 8.7	141.5	+ 1.9	147.3	+ 0.1	139.6	- 5.7	143.3	+ 1.4	
2021	159.0	+ 9.2	164.1	+ 13.8	174.3	+ 8.4	156.6	+ 20.3	158.5	+ 12.0	153.0	+ 3.9	161.5	+ 15.7	146.7	+ 2.4	
2022	166.8	+ 4.9	161.7	- 1.5	167.7	- 3.8	155.0	- 1.0	166.8	+ 5.2	172.7	+ 12.9	171.9	+ 6.4	160.5	+ 9.4	
2022 Sep.	164.2	- 9.3	159.4	- 15.6	162.5	- 15.1	153.9	- 20.3	169.5	+ 2.6	169.9	- 1.1	166.1	- 13.8	163.2	+ 1.3	
Oct.	161.8	+ 2.0	145.1	- 14.1	148.3	- 12.3	140.2	- 18.4	153.0	- 2.7	181.3	+ 23.5	172.5	+ 0.5	157.9	+ 14.8	
Nov.	148.3	+ 2.1	134.7	- 5.7	130.9	- 17.9	127.0	- 4.2	176.1	+ 38.6	164.0	+ 10.7	155.2	- 2.7	150.9	+ 25.3	
Dec.	166.0	- 10.3	162.2	- 21.0	154.8	- 21.1	165.5	- 4.4	174.5	- 50.9	170.4	+ 5.4	188.6	+ 1.0	146.9	- 16.8	
2023 Jan.	132.2	- 7.4	125.7	- 13.6	126.8	- 23.5	128.4	- 4.3	112.1	- 7.5	139.7	- 0.1	145.8	- 2.3	119.8	- 1.6	
Feb.	151.8	- 2.5	130.4	- 19.0	127.4	- 27.6	133.0	- 15.9	130.9	+ 7.5	176.6	+ 18.1	167.6	+ 1.5	148.5	+ 12.1	
Mar.	192.7	- 8.0	179.4	- 14.0	155.1	- 29.3	197.2	- 2.0	193.1	- 3.5	208.2	- 1.1	216.9	- 0.1	187.8	- 3.5	
Apr.	169.9	+ 3.5	147.6	- 6.4	144.6	- 18.8	141.6	- 0.8	179.7	+ 22.7	195.9	+ 14.0	178.4	+ 15.8	175.6	+ 4.8	
May	176.1	+ 0.1	153.5	- 10.8	153.9	- 15.5	147.4	- 9.6	175.1	+ 0.9	202.4	+ 12.3	187.5	+ 9.8	176.5	- 0.8	
June	181.0	+ 3.3	164.1	- 1.3	165.3	- 7.1	135.5	- 11.6	266.8	+ 51.1	200.6	+ 8.1	178.6	+ 0.6	193.1	+ 12.9	
July	194.4	+ 7.6	170.9	- 4.7	160.9	- 6.0	166.2	- 6.6	221.6	+ 4.8	221.7	+ 21.7	190.6	+ 0.3	219.1	+ 24.8	
Aug.	191.7	+ 21.9	153.7	+ 3.7	140.4	- 3.2	156.6	+ 9.5	186.4	+ 4.7	235.8	+ 40.7	241.5	+ 54.9	165.7	- 0.1	
Sep.	192.8	+ 17.4	184.4	+ 15.7	145.1	- 10.7	191.4	+ 24.4	288.2	+ 70.0	202.6	+ 19.2	223.9	+ 34.8	186.2	+ 14.1	

Source of the unadjusted figures: Federal Statistical Office. \* At current prices; excluding value added tax; for explanatory notes, see Statistical Series – Seasonally adjusted

business statistics, Table III.2.f. ◦ Using JDemetra+ 2.2.2 (X13). <sup>1</sup> Excluding residential construction. <sup>2</sup> Including road construction.

### 5. Retail trade turnover \*

Adjusted for calendar variations ◦

Zeit	of which:															
	In stores by enterprises main product range															
	Food, beverages, tobacco <sup>1</sup>		Textiles, clothing, footwear and leather goods		Information and communications equipment		Construction and flooring materials, household appliances, furniture		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles		Retail sale via mail order houses or via internet as well as other retail sale <sup>2</sup>					
At current prices		At 2015 prices		At current prices		At current prices		At current prices		At current prices		At current prices				
2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change			
2019	114.9	+ 3.8	111.0	+ 3.3	112.2	+ 2.4	106.7	+ 1.0	108.9	+ 1.7	107.1	+ 4.0	118.8	+ 5.7	138.4	+ 8.3
2020	121.4	+ 5.7	115.9	+ 4.4	121.4	+ 8.2	81.9	- 23.2	106.9	- 1.8	117.1	+ 9.3	125.4	+ 5.6	168.6	+ 21.8
2021	124.7	+ 2.7	116.7	+ 0.7	121.7	+ 0.2	78.1	- 4.6	95.4	- 10.8	110.4	- 5.7	135.2	+ 7.8	190.1	+ 12.8
2022 <sup>3</sup>	134.4	+ 7.8	115.9	- 0.7	128.3	+ 5.4	102.9	+ 31.8	107.9	+ 13.1	122.9	+ 11.3	144.8	+ 7.1	188.8	- 0.7
2022 Oct.	137.9	+ 5.8	114.6	- 5.1	132.1	+ 10.4	116.0	+ 1.0	112.0	+ 2.6	125.6	- 0.2	145.6	+ 3.2	193.3	+ 0.1
Nov.	146.4	+ 4.5	122.0	- 6.1	132.4	+ 9.1	115.7	+ 10.1	134.9	- 0.2	130.2	+ 0.4	153.2	+ 4.2	233.3	- 0.1
Dec.	151.6	+ 4.1	126.0	- 6.3	147.2	+ 6.9	124.2	+ 27.3	147.7	- 0.1	125.9	+ 3.2	157.4	+ 1.0	213.0	- 4.4
2023 Jan.	124.3	+ 2.1	103.7	- 7.1	123.0	+ 4.7	84.7	+ 18.1	110.7	- 0.8	106.3	- 2.7	139.2	- 2.0	173.2	- 3.0
Feb.	123.3	+ 2.8	101.7	- 6.6	123.5	+ 6.5	83.3	+ 14.0	99.7	+ 2.7	108.1	- 4.3	134.8	- 0.4	168.9	- 0.4
Mar.	139.5	+ 0.8	114.0	- 7.2	137.9	+ 5.3	100.2	+ 5.1	106.5	+ 3.8	129.4	- 4.9	149.4	- 0.3	188.7	- 0.6
Apr.	137.9	+ 3.9	112.1	- 3.9	137.5	+ 8.2	107.9	+ 6.1	95.0	± 0.0	126.4	- 3.2	143.5	+ 2.1	181.9	- 1.4
May	141.2	+ 4.7	114.8	- 1.7	140.1	+ 9.7	113.2	+ 2.9	91.9	+ 0.9	127.9	- 1.3	147.1	+ 3.3	183.5	+ 1.0
June	138.0	+ 5.3	112.2	- 0.6	137.1	+ 8.1	117.5	+ 11.3	95.5	+ 1.1	120.2	± 0.0	147.6	+ 5.4	178.2	+ 2.1
July	139.5	+ 3.0	113.8	- 1.8	140.2	+ 7.2	109.1	+ 3.3	98.1	- 2.1	118.3	- 3.3	152.0	+ 3.3	181.2	- 2.2
Aug.	132.8	+ 2.3	108.0	- 2.2	133.3	+ 5.5	102.5	+ 4.4	97.3	- 1.7	111.4	- 1.9	144.5	+ 3.7	170.0	- 1.7
Sep.	133.3	+ 0.2	107.7	- 3.6	132.6	+ 6.4	104.5	- 10.8	104.3	- 4.0	112.1	- 5.6	148.7	+ 3.0	171.7	- 9.2
Oct. <sup>4</sup>	141.5	+ 2.6	114.5	- 0.1	137.4	+ 4.0	123.1	+ 6.1	107.8	- 3.8	121.8	- 3.0	152.7	+ 4.9	197.0	+ 1.9

Source of the unadjusted figures: Federal Statistical Office. \* Excluding value added tax; for explanatory notes, see Statistical Series - Seasonally adjusted business statistics, Table III.4.c. ◦ Using JDemetra+ 2.2.2 (X13). <sup>1</sup> Including stalls and markets. <sup>2</sup> Excluding

stores, stalls and markets. <sup>3</sup> As of January 2022 figures are provisional and particularly uncertain in recent months due to estimates for missing reports. <sup>4</sup> Unadjusted figures partially estimated by the Federal Statistical Office.

## XI. Economic conditions in Germany

### 6. Labour market \*

Period	Employment 1		Employment subject to social contributions 2					Short-time workers 3			Unemployment 4		Unemployment rate in % 4.5	Vacancies, thousands 4.6
	Thousands	Annual percentage change	Total		of which:			Total	of which:		Total	Assigned to the legal category of the Third Book of the Social Security Code (SGB III)		
			Thousands	Annual percentage change	Production sector	Services excluding temporary employment	Temporary employment		Solely jobs exempt from social contributions 2	Cyclically induced				
2018	44,866	+ 1.4	32,964	+ 2.3	9,349	22,532	840	4,671	118	25	2,340	802	5.2	796
2019	45,276	+ 0.9	33,518	+ 1.7	9,479	23,043	751	4,579	145	60	2,267	827	5.0	774
2020	44,915	- 0.8	33,579	+ 0.2	9,395	23,277	660	4,290	2,939	2,847	2,695	1,137	5.9	613
2021	44,984	+ 0.2	33,897	+ 0.9	9,344	23,602	702	4,101	1,852	1,744	2,613	999	5.7	706
2022	45,596	+ 1.4	34,507	+ 1.8	9,400	24,135	721	4,125	426	337	2,418	808	5.3	845
2020 Q3	44,809	- 1.3	33,424	- 0.4	9,359	23,171	640	4,273	2,705	2,691	2,904	1,266	6.3	583
Q4	44,994	- 1.3	33,836	- 0.3	9,395	23,518	676	4,194	2,433	2,361	2,722	1,167	5.9	595
2021 Q1	44,518	- 1.4	33,568	- 0.2	9,294	23,376	665	4,051	3,473	3,157	2,878	1,248	6.3	586
Q2	44,815	+ 0.2	33,718	+ 0.9	9,322	23,446	697	4,066	2,164	2,143	2,691	1,024	5.9	658
Q3	45,161	+ 0.8	33,929	+ 1.5	9,347	23,606	719	4,161	935	915	2,545	920	5.5	774
Q4	45,443	+ 1.0	34,374	+ 1.6	9,415	23,982	727	4,125	835	762	2,341	802	5.1	804
2022 Q1	45,199	+ 1.5	34,242	+ 2.0	9,348	23,943	715	4,061	1,033	792	2,417	874	5.3	818
Q2	45,519	+ 1.6	34,401	+ 2.0	9,372	24,056	718	4,112	337	324	2,311	777	5.0	864
Q3	45,707	+ 1.2	34,522	+ 1.7	9,405	24,133	724	4,159	103	92	2,501	804	5.5	880
Q4	45,959	+ 1.1	34,864	+ 1.4	9,475	24,409	730	4,166	229	139	2,443	778	5.3	817
2023 Q1	45,643	+ 1.0	34,614	+ 1.1	9,395	24,288	696	4,152	430	153	2,610	900	5.7	773
Q2	45,915	+ 0.9	34,701	+ 0.9	9,410	24,351	687	4,209	...	146	2,561	839	5.6	770
Q3	46,044	+ 0.7	34,758	+ 0.7	9,420	24,397	686	4,245	...	124	2,647	885	5.7	768
2020 July	44,699	- 1.4	33,233	- 0.4	9,322	23,024	635	4,302	3,319	3,306	2,910	1,258	6.3	573
Aug.	44,737	- 1.3	33,482	- 0.4	9,367	23,218	642	4,266	2,551	2,537	2,955	1,302	6.4	584
Sep.	44,991	- 1.2	33,792	- 0.4	9,421	23,454	656	4,240	2,244	2,229	2,847	1,238	6.2	591
Oct.	45,076	- 1.1	33,862	- 0.3	9,410	23,530	671	4,229	2,037	2,021	2,760	1,183	6.0	602
Nov.	45,031	- 1.3	33,899	- 0.2	9,400	23,559	696	4,166	2,405	2,386	2,699	1,152	5.9	601
Dec.	44,874	- 1.3	33,700	- 0.1	9,327	23,478	666	4,134	2,856	2,676	2,707	1,166	5.9	581
2021 Jan.	44,493	- 1.5	33,515	- 0.3	9,282	23,347	657	4,045	3,638	2,901	2,998	1,298	6.3	566
Feb.	44,490	- 1.5	33,521	- 0.3	9,281	23,343	662	4,026	3,766	3,358	2,904	1,270	6.3	583
Mar.	44,570	- 1.1	33,636	- 0.0	9,309	23,397	685	4,032	3,016	2,818	2,827	1,177	6.2	609
Apr.	44,680	- 0.3	33,689	+ 0.8	9,324	23,427	687	4,039	2,583	2,560	2,771	1,091	6.0	629
May	44,799	+ 0.3	33,747	+ 1.3	9,326	23,461	703	4,067	2,342	2,320	2,687	1,020	5.9	654
June	44,966	+ 0.6	33,802	+ 1.4	9,324	23,504	716	4,151	1,568	1,548	2,614	961	5.7	693
July	45,030	+ 0.7	33,731	+ 1.5	9,304	23,458	715	4,194	1,088	1,068	2,590	956	5.6	744
Aug.	45,101	+ 0.8	33,994	+ 1.5	9,358	23,658	722	4,153	857	838	2,578	940	5.6	779
Sep.	45,352	+ 0.8	34,323	+ 1.6	9,432	23,903	726	4,123	859	839	2,465	864	5.4	799
Oct.	45,440	+ 0.8	34,369	+ 1.5	9,425	23,965	724	4,123	780	762	2,377	814	5.2	809
Nov.	45,496	+ 1.0	34,449	+ 1.6	9,423	24,039	739	4,133	767	750	2,317	789	5.1	808
Dec.	45,393	+ 1.2	34,284	+ 1.7	9,364	23,980	708	4,112	957	772	2,330	803	5.1	794
2022 Jan.	45,126	+ 1.4	34,176	+ 2.0	9,332	23,900	711	4,048	1,123	847	2,462	903	5.4	792
Feb.	45,187	+ 1.6	34,243	+ 2.2	9,346	23,939	719	4,049	1,087	803	2,428	884	5.3	822
Mar.	45,284	+ 1.6	34,334	+ 2.1	9,369	23,999	719	4,061	888	727	2,362	835	5.1	839
Apr.	45,399	+ 1.6	34,368	+ 2.0	9,366	24,037	713	4,091	453	439	2,309	800	5.0	852
May	45,536	+ 1.6	34,445	+ 2.1	9,376	24,089	719	4,131	318	305	2,260	771	4.9	865
June	45,623	+ 1.5	34,445	+ 1.9	9,376	24,084	724	4,164	241	228	2,363	761	5.2	877
July	45,584	+ 1.2	34,322	+ 1.8	9,361	23,988	718	4,176	115	102	2,470	801	5.4	881
Aug.	45,643	+ 1.2	34,571	+ 1.7	9,417	24,169	725	4,151	87	76	2,547	827	5.6	887
Sep.	45,894	+ 1.2	34,899	+ 1.7	9,499	24,401	733	4,136	108	97	2,486	782	5.4	873
Oct.	45,990	+ 1.2	34,893	+ 1.5	9,489	24,414	734	4,161	134	124	2,442	764	5.3	846
Nov.	46,006	+ 1.1	34,897	+ 1.3	9,478	24,435	738	4,179	156	147	2,434	770	5.3	823
Dec.	45,882	+ 1.1	34,705	+ 1.2	9,414	24,357	704	4,182	397	146	2,454	799	5.4	781
2023 Jan.	45,572	+ 1.0	34,550	+ 1.1	9,381	24,240	697	4,138	451	145	2,616	911	5.7	764
Feb.	45,637	+ 1.0	34,601	+ 1.0	9,392	24,279	692	4,148	441	157	2,620	910	5.7	778
Mar.	45,720	+ 1.0	34,679	+ 1.0	9,412	24,332	692	4,157	398	159	2,594	878	5.7	777
Apr.	45,819	+ 0.9	34,685	+ 0.9	9,410	24,342	684	4,188	146	139	2,586	855	5.7	773
May	45,925	+ 0.9	34,728	+ 0.8	9,413	24,371	687	4,228	149	142	2,544	829	5.5	767
June	46,002	+ 0.8	34,700	+ 0.7	9,402	24,353	689	4,269	...	156	2,555	833	5.5	769
July	45,968	+ 0.8	34,576	+ 0.7	9,381	24,258	686	4,282	...	111	2,617	878	5.7	772
Aug.	45,973	+ 0.7	34,801	+ 0.7	9,428	24,433	685	4,225	...	111	2,696	910	5.8	771
Sep.	46,191	+ 0.6	35,094	+ 0.6	9,501	24,647	685	4,187	...	149	2,627	869	5.7	761
Oct.	46,262	+ 0.6	...	...	...	...	...	...	...	...	2,607	861	5.7	749
Nov.	...	...	...	...	...	...	...	...	...	...	2,606	865	5.6	733

Sources: Federal Statistical Office; Federal Employment Agency. \* Annual and quarterly figures: averages; calculated by the Bundesbank; deviations from the official figures are due to rounding. 1 Workplace concept; averages. 2 Monthly figures: end of month. 3 Number within a given month. 4 Mid-month level. 5 Relative to the total civilian labour force. 6 Excluding government-assisted forms of employment and seasonal jobs, including jobs located abroad. 7 Statistical break due to late recording of unemployed persons in the legal category of the Second Book of the Social Security Code (SGB II).

8 Unadjusted figures estimated by the Federal Employment Agency. In 2021 and 2022, the estimated values for Germany deviated from the final data by a maximum of 0.1% for employees subject to social contributions, by a maximum of 0.5% for persons solely in jobs exempt from social contributions, and by a maximum of 61.3% for cyclically induced short-time work. 9 From May 2023, calculated on the basis of new labour force figures. 10 Initial preliminary estimate by the Federal Statistical Office.

## XI. Economic conditions in Germany

### 7. Prices

Period	Harmonised Index of Consumer Prices										Memo item: Consumer price index (national concept)	Con- struction price index	Index of producer prices of industrial products sold on the domestic market <sup>3</sup>	Index of producer prices of agri- cultural products <sup>3</sup>	Indices of foreign trade prices	
	Total	of which:				Actual rents for housing	Exports	Imports								
		Food 1,2	Non- energy industrial goods <sup>1</sup>	Energy <sup>1</sup>	Services <sup>1</sup>											
	2015 = 100										2020 = 100	2015 = 100				
<b>Index level</b>																
2020	<sup>4</sup> 105.8	<sup>4</sup> 110.9	<sup>4</sup> 104.1	<sup>4</sup> 99.0	<sup>4</sup> 106.9	107.6	<sup>4</sup> 100.0	<sup>4</sup> 117.0	103.8	108.0	101.7	97.3				
2021	<sup>4</sup> 109.2	<sup>4</sup> 114.1	<sup>4</sup> 106.7	<sup>4</sup> 109.0	<sup>4</sup> 109.0	109.0	<sup>4</sup> 103.1	<sup>4</sup> 127.0	114.7	117.5	107.4	110.4				
2022	118.7	126.2	112.7	146.8	112.2	110.8	110.2	148.3	152.4	156.3	123.1	139.4				
2022 Jan.	112.3	117.2	108.4	123.7	109.8	109.9	105.2		132.8	129.2	115.0	127.0				
Feb.	113.3	118.2	109.1	127.4	110.2	110.0	106.0	138.1	134.6	133.4	116.1	128.6				
Mar.	116.1	119.1	110.4	146.1	110.6	110.2	108.1		141.2	153.6	120.7	135.9				
Apr.	116.9	122.2	111.3	142.7	111.7	110.4	108.8		145.2	162.3	121.7	138.3				
May	118.2	124.2	112.3	146.7	112.0	110.6	109.8	147.9	147.5	160.7	122.4	139.5				
June	118.1	125.4	112.5	147.8	111.0	110.8	109.8		148.4	157.5	123.5	140.9				
July	119.0	127.6	112.6	147.8	112.1	110.9	110.3		156.3	156.5	126.0	142.9				
Aug.	119.5	129.1	113.0	148.6	112.2	111.1	110.7	151.7	168.6	159.8	128.7	149.1				
Sep.	122.1	130.9	114.5	158.8	113.9	111.2	112.7		172.5	163.8	127.9	147.8				
Oct.	123.5	132.2	115.8	164.5	114.3	111.4	113.5		165.2	166.7	125.5	146.0				
Nov.	123.5	133.6	116.3	163.5	113.7	111.6	113.7	155.4	158.7	165.9	124.9	139.4				
Dec.	122.0	134.6	116.6	143.9	114.8	111.7	113.2		158.1	165.3	125.0	137.1				
2023 Jan.	122.6	136.7	116.4	154.8	113.8	112.1	114.3		154.8	<sup>5</sup> 162.1	124.0	135.4				
Feb.	123.8	139.5	117.0	154.9	115.0	112.2	115.2	159.7	152.8	160.8	123.8	132.2				
Mar.	125.1	141.3	118.3	155.0	116.1	112.5	116.1		150.6	155.5	123.5	130.8				
Apr.	125.8	141.1	119.0	156.1	117.1	112.6	116.6		151.1	152.0	123.0	128.6				
May	125.6	141.1	119.3	154.0	116.9	112.8	116.5	161.0	149.0	148.7	122.5	126.8				
June	126.1	141.2	119.5	153.7	117.8	113.0	116.8		148.6	149.8	122.4	124.8				
July	126.7	141.2	118.8	153.6	119.6	113.2	117.1		147.0	150.9	122.0	124.1				
Aug.	127.2	141.0	119.2	156.5	119.8	113.5	117.5	161.6	147.4	150.8	122.1	124.6				
Sep.	127.4	141.5	120.1	157.6	119.3	113.6	117.8		147.1	144.9	122.6	126.6				
Oct.	127.2	141.6	120.5	154.7	119.1	113.7	117.8		147.0	142.5	122.5	127.0				
Nov.	126.3	142.4	120.5	151.6	117.6	113.9	117.3	...	...	...	...	...				
<b>Annual percentage change</b>																
2020	<sup>4</sup> + 0.4	<sup>4</sup> + 2.3	<sup>4</sup> - 0.1	<sup>4</sup> - 4.5	<sup>4</sup> + 1.2	+ 1.4	<sup>4</sup> + 0.5	<sup>4</sup> + 1.4	- 1.0	- 3.1	- 0.7	- 4.3				
2021	<sup>4</sup> + 3.2	<sup>4</sup> + 2.9	<sup>4</sup> + 2.5	<sup>4</sup> + 10.1	<sup>4</sup> + 2.0	+ 1.3	<sup>4</sup> + 3.1	<sup>4</sup> + 8.6	+ 10.5	+ 8.8	+ 5.6	+ 13.5				
2022	+ 8.7	+ 10.6	+ 5.7	+ 34.7	+ 2.9	+ 1.7	+ 6.9	+ 16.8	+ 32.9	+ 33.0	+ 14.6	+ 26.3				
2022 Jan.	+ 5.1	+ 4.4	+ 3.1	+ 20.6	+ 2.7	+ 1.4	+ 4.2		+ 25.0	+ 21.0	+ 11.9	+ 26.9				
Feb.	+ 5.5	+ 4.6	+ 3.4	+ 22.4	+ 2.7	+ 1.4	+ 4.3	+ 13.9	+ 25.9	+ 22.5	+ 12.4	+ 26.3				
Mar.	+ 7.6	+ 5.3	+ 4.4	+ 37.6	+ 2.8	+ 1.5	+ 5.9		+ 30.9	+ 34.7	+ 15.9	+ 31.2				
Apr.	+ 7.8	+ 6.7	+ 5.2	+ 34.5	+ 3.1	+ 1.6	+ 6.3		+ 33.5	+ 40.0	+ 16.0	+ 31.7				
May	+ 8.7	+ 8.8	+ 5.6	+ 37.5	+ 3.0	+ 1.6	+ 7.0	+ 18.2	+ 33.6	+ 35.6	+ 15.9	+ 30.6				
June	+ 8.2	+ 9.9	+ 5.6	+ 37.4	+ 1.7	+ 1.7	+ 6.7		+ 32.7	+ 33.8	+ 16.1	+ 29.9				
July	+ 8.5	+ 11.5	+ 5.8	+ 35.6	+ 1.7	+ 1.6	+ 6.7		+ 37.2	+ 33.5	+ 17.0	+ 28.9				
Aug.	+ 8.8	+ 12.8	+ 6.1	+ 35.8	+ 1.7	+ 1.7	+ 7.0	+ 17.2	+ 45.8	+ 34.6	+ 18.6	+ 32.7				
Sep.	+ 10.9	+ 14.4	+ 6.4	+ 44.2	+ 3.6	+ 1.7	+ 8.6		+ 45.8	+ 39.5	+ 16.8	+ 29.8				
Oct.	+ 11.6	+ 15.5	+ 7.2	+ 43.5	+ 3.9	+ 1.7	+ 8.8		+ 34.5	+ 38.1	+ 13.1	+ 23.5				
Nov.	+ 11.3	+ 16.3	+ 7.3	+ 40.1	+ 3.8	+ 1.9	+ 8.8	+ 17.5	+ 28.2	+ 32.1	+ 11.6	+ 14.5				
Dec.	+ 9.6	+ 16.3	+ 7.4	+ 25.1	+ 4.1	+ 1.9	+ 8.1		+ 21.6	+ 30.0	+ 10.6	+ 12.6				
2023 Jan.	+ 9.2	+ 16.6	+ 7.4	+ 25.1	+ 3.6	+ 2.0	+ 8.7		+ 16.6	<sup>5</sup> + 25.5	+ 7.8	+ 6.6				
Feb.	+ 9.3	+ 18.0	+ 7.2	+ 21.6	+ 4.4	+ 2.0	+ 8.7	+ 15.6	+ 13.5	+ 20.5	+ 6.6	+ 2.8				
Mar.	+ 7.8	+ 18.6	+ 7.2	+ 6.1	+ 5.0	+ 2.1	+ 7.4		+ 6.7	+ 1.2	+ 2.3	- 3.8				
Apr.	+ 7.6	+ 15.5	+ 6.9	+ 9.4	+ 4.8	+ 2.0	+ 7.2		+ 4.1	- 6.3	+ 1.1	- 7.0				
May	+ 6.3	+ 13.6	+ 6.2	+ 5.0	+ 4.4	+ 2.0	+ 6.1	+ 8.9	+ 1.0	- 7.5	+ 0.1	- 9.1				
June	+ 6.8	+ 12.6	+ 6.2	+ 4.0	+ 6.1	+ 2.0	+ 6.4		+ 0.1	- 4.9	- 0.9	- 11.4				
July	+ 6.5	+ 10.7	+ 5.5	+ 3.9	+ 6.7	+ 2.1	+ 6.2		- 6.0	- 3.6	- 3.2	- 13.2				
Aug.	+ 6.4	+ 9.2	+ 5.5	+ 5.3	+ 6.8	+ 2.2	+ 6.1	+ 6.5	- 12.6	- 5.6	- 5.1	- 16.4				
Sep.	+ 4.3	+ 8.1	+ 4.9	- 0.8	+ 4.7	+ 2.2	+ 4.5		- 14.7	- 11.5	- 4.1	- 14.3				
Oct.	+ 3.0	+ 7.1	+ 4.1	- 6.0	+ 4.2	+ 2.1	+ 3.8		- 11.0	- 14.5	- 2.4	- 13.0				
Nov.	+ 2.3	+ 6.6	+ 3.6	- 7.3	+ 3.4	+ 2.1	+ 3.2	...	...	...	...	...				

Sources: Eurostat; Federal Statistical Office and Bundesbank calculation based on data from the Federal Statistical Office. <sup>1</sup> The last data point is at times based on the Bundesbank's own estimates. <sup>2</sup> Including alcoholic beverages and tobacco. <sup>3</sup> Excluding va-

lue added tax. <sup>4</sup> Influenced by a temporary reduction of value added tax between July and December 2020. <sup>5</sup> From January 2023 onwards, provisional figures.

## XI. Economic conditions in Germany

### 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
2015	1,285.5	4.2	863.3	4.0	410.5	4.2	1,273.8	4.0	1,782.3	2.8	179.4	5.1	10.1
2016	1,337.4	4.0	896.3	3.8	426.2	3.8	1,322.5	3.8	1,841.5	3.3	187.8	4.7	10.2
2017	1,395.4	4.3	932.5	4.0	441.8	3.6	1,374.3	3.9	1,905.2	3.5	202.8	8.0	10.6
2018	1,462.7	4.8	976.1	4.7	455.2	3.0	1,431.3	4.1	1,976.6	3.7	223.2	10.1	11.3
2019	1,524.7	4.2	1,021.8	4.7	477.5	4.9	1,499.3	4.8	2,024.4	2.4	219.8	- 1.5	10.9
2020	1,515.3	- 0.6	1,021.1	- 0.1	523.9	9.7	1,545.0	3.0	2,046.9	1.1	338.2	53.9	16.5
2021	1,571.3	3.7	1,062.9	4.1	534.1	1.9	1,597.0	3.4	2,098.5	2.5	313.0	- 7.5	14.9
2022	1,661.8	5.8	1,118.8	5.3	541.8	1.4	1,660.6	4.0	2,227.5	6.1	248.2	- 20.7	11.1
2022 Q2	399.3	5.8	262.3	4.6	132.0	- 2.4	394.3	2.2	544.2	5.0	55.9	- 34.3	10.3
Q3	410.2	4.3	282.7	4.1	138.5	5.3	421.2	4.5	565.8	8.4	54.6	1.3	9.6
Q4	463.0	5.5	312.0	5.4	136.6	5.5	448.6	5.5	575.1	7.4	60.2	- 1.1	10.5
2023 Q1	416.8	7.1	285.9	9.2	143.8	6.7	429.7	8.4	580.0	6.9	78.0	0.6	13.4
Q2	429.5	7.6	287.7	9.7	141.0	6.8	428.7	8.7	582.8	7.1	65.1	16.5	11.2
Q3	440.1	7.3	307.5	8.8	145.8	5.3	453.3	7.6	591.8	4.6	61.2	12.1	10.3

Source: Federal Statistical Office; figures computed in November 2023. \* 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				Basic pay rates <sup>2</sup>			
	2015=100	Annual percentage change	2015=100	Annual percentage change	2015=100	Annual percentage change	2015=100	Annual percentage change	2015=100	Annual percentage change
2015	100.0	2.3	100.0	2.3	100.0	2.3	100.0	2.4	100.0	2.9
2016	102.2	2.2	102.2	2.2	102.2	2.2	102.3	2.3	102.5	2.5
2017	104.5	2.3	104.5	2.3	104.6	2.3	104.7	2.4	105.1	2.6
2018	107.6	3.0	107.6	3.0	107.5	2.8	107.6	2.8	108.4	3.2
2019	110.8	3.0	110.8	3.0	110.6	2.9	110.4	2.6	111.7	3.0
2020	113.2	2.1	113.2	2.2	112.9	2.0	112.6	2.0	111.6	- 0.1
2021	114.9	1.5	114.9	1.5	114.7	1.6	114.3	1.5	115.3	3.3
2022	117.9	2.7	117.9	2.6	117.3	2.2	116.7	2.1	120.1	4.1
2022 Q2	109.9	2.0	109.9	1.9	109.3	2.1	116.6	2.1	115.6	4.0
Q3	120.9	2.5	120.9	2.5	120.9	2.5	116.9	2.2	118.5	2.9
Q4	130.1	2.0	130.0	2.0	130.0	2.0	117.8	2.4	132.6	4.2
2023 Q1	115.1	3.9	115.1	3.8	111.7	2.6	118.6	2.7	120.1	5.9
Q2	114.2	3.9	114.2	3.9	112.0	2.5	119.5	2.5	123.2	6.5
Q3	126.5	4.7	126.5	4.7	124.8	3.2	120.4	3.0	126.1	6.4
2023 Apr.	112.3	2.5	112.3	2.5	112.0	2.4	119.2	2.4	.	.
May	113.0	1.6	113.0	1.6	111.8	2.3	119.2	2.2	.	.
June	117.4	7.7	117.3	7.7	112.3	2.9	120.1	2.9	.	.
July	150.9	4.9	150.8	4.9	148.8	3.6	120.3	3.0	.	.
Aug.	114.2	4.3	114.2	4.3	112.8	3.0	120.4	3.0	.	.
Sep.	114.6	4.8	114.5	4.8	112.7	3.0	120.5	3.0	.	.
Oct.	115.0	4.6	115.0	4.6	112.7	2.5	120.6	2.6	.	.

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

retirement provisions). **3** Source: Federal Statistical Office; figures computed in November 2023.

## XI. Economic conditions in Germany

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

End of year/half

Period	Assets									Equity and liabilities						
	Total assets	Non-current assets	of which:			Current assets	of which:			Equity	Total	Liabilities				
			Intangible assets	Tangible assets	Financial assets		Inventories	Trade receivables	Cash <sup>1</sup>			Total	Long-term		Short-term	
													of which: Financial debt	Total	Financial debt	Trade payables
<b>Total (€ billion)</b>																
2019	2,800.6	1,769.7	586.3	737.1	333.4	1,030.9	257.5	237.6	168.4	821.0	1,979.6	1,091.2	676.3	888.4	289.8	207.6
2020	2,850.0	1,797.3	607.6	733.1	335.1	1,052.7	243.6	225.9	240.5	811.5	2,038.5	1,181.5	746.4	857.0	304.4	196.1
2021	3,292.0	1,971.6	680.1	773.8	384.8	1,320.4	272.1	261.5	261.5	994.4	2,297.6	1,206.9	772.1	1,090.7	321.4	236.7
2022	3,431.6	2,057.0	713.5	804.3	410.1	1,374.6	326.2	268.3	244.3	1,133.2	2,298.4	1,195.7	760.2	1,102.8	331.8	273.3
2021 H2	3,292.0	1,971.6	680.1	773.8	384.8	1,320.4	272.1	261.5	261.5	994.4	2,297.6	1,206.9	772.1	1,090.7	321.4	236.7
2022 H1	3,593.6	2,108.1	719.1	796.3	447.4	1,485.5	322.4	284.8	225.4	1,075.4	2,518.2	1,237.0	789.5	1,281.2	313.7	260.7
H2	3,431.6	2,057.0	713.5	804.3	410.1	1,374.6	326.2	268.3	244.3	1,133.2	2,298.4	1,195.7	760.2	1,102.8	331.8	273.3
2023 H1 P	3,322.4	2,009.5	699.5	799.0	373.5	1,312.9	343.9	263.7	234.3	1,134.0	2,188.3	1,130.8	752.5	1,057.5	327.4	259.9
As a percentage of total assets																
2019	100.0	63.2	20.9	26.3	11.9	36.8	9.2	8.5	6.0	29.3	70.7	39.0	24.2	31.7	10.4	7.4
2020	100.0	63.1	21.3	25.7	11.8	36.9	8.6	7.9	8.4	28.5	71.5	41.5	26.2	30.1	10.7	6.9
2021	100.0	59.9	20.7	23.5	11.7	40.1	8.3	7.9	7.9	30.2	69.8	36.7	23.5	33.1	9.8	7.2
2022	100.0	59.9	20.8	23.4	12.0	40.1	9.5	7.8	7.1	33.0	67.0	34.8	22.2	32.1	9.7	8.0
2021 H2	100.0	59.9	20.7	23.5	11.7	40.1	8.3	7.9	7.9	30.2	69.8	36.7	23.5	33.1	9.8	7.2
2022 H1	100.0	58.7	20.0	22.2	12.5	41.3	9.0	7.9	6.3	29.9	70.1	34.4	22.0	35.7	8.7	7.3
H2	100.0	59.9	20.8	23.4	12.0	40.1	9.5	7.8	7.1	33.0	67.0	34.8	22.2	32.1	9.7	8.0
2023 H1 P	100.0	60.5	21.1	24.1	11.2	39.5	10.4	7.9	7.1	34.1	65.9	34.0	22.7	31.8	9.9	7.8
<b>Groups with a focus on the production sector (€ billion) <sup>2</sup></b>																
2019	2,302.9	1,396.4	419.6	565.4	319.7	906.5	243.8	188.5	136.8	662.2	1,640.7	887.5	523.8	753.2	257.5	158.0
2020	2,265.0	1,354.9	399.1	543.5	320.0	910.1	228.7	179.5	187.9	636.3	1,628.8	904.7	537.0	724.0	267.3	149.8
2021	2,626.3	1,479.3	441.7	573.9	363.5	1,147.0	254.4	206.3	204.2	764.7	1,861.6	918.5	548.5	943.2	285.9	184.0
2022	2,730.8	1,538.3	461.5	591.7	388.3	1,192.4	307.7	209.1	186.5	879.7	1,851.1	912.7	534.3	938.4	291.2	215.2
2021 H2	2,626.3	1,479.3	441.7	573.9	363.5	1,147.0	254.4	206.3	204.2	764.7	1,861.6	918.5	548.5	943.2	285.9	184.0
2022 H1	2,898.3	1,582.5	462.4	583.8	422.6	1,315.9	303.6	222.5	177.2	830.9	2,067.4	945.2	558.2	1,122.2	272.8	207.6
H2	2,730.8	1,538.3	461.5	591.7	388.3	1,192.4	307.7	209.1	186.5	879.7	1,851.1	912.7	534.3	938.4	291.2	215.2
2023 H1 P	2,651.0	1,504.1	460.3	588.8	348.8	1,146.8	326.4	210.9	183.6	892.6	1,758.4	854.6	532.3	903.8	282.9	210.1
As a percentage of total assets																
2019	100.0	60.6	18.2	24.6	13.9	39.4	10.6	8.2	5.9	28.8	71.3	38.5	22.7	32.7	11.2	6.9
2020	100.0	59.8	17.6	24.0	14.1	40.2	10.1	7.9	8.3	28.1	71.9	39.9	23.7	32.0	11.8	6.6
2021	100.0	56.3	16.8	21.9	13.8	43.7	9.7	7.9	7.8	29.1	70.9	35.0	20.9	35.9	10.9	7.0
2022	100.0	56.3	16.9	21.7	14.2	43.7	11.3	7.7	6.8	32.2	67.8	33.4	19.6	34.4	10.7	7.9
2021 H2	100.0	56.3	16.8	21.9	13.8	43.7	9.7	7.9	7.8	29.1	70.9	35.0	20.9	35.9	10.9	7.0
2022 H1	100.0	54.6	16.0	20.1	14.6	45.4	10.5	7.7	6.1	28.7	71.3	32.6	19.3	38.7	9.4	7.2
H2	100.0	56.3	16.9	21.7	14.2	43.7	11.3	7.7	6.8	32.2	67.8	33.4	19.6	34.4	10.7	7.9
2023 H1 P	100.0	56.7	17.4	22.2	13.2	43.3	12.3	8.0	6.9	33.7	66.3	32.2	20.1	34.1	10.7	7.9
<b>Groups with a focus on the services sector (€ billion)</b>																
2019	497.7	373.3	166.7	171.8	13.7	124.4	13.7	49.1	31.6	158.8	338.9	203.8	152.6	135.1	32.3	49.6
2020	585.0	442.4	208.5	189.6	15.1	142.6	14.9	46.4	52.6	175.3	409.7	276.7	209.4	133.0	37.1	46.3
2021	665.7	492.2	238.5	200.0	21.3	173.5	17.7	55.2	57.3	229.7	436.0	288.4	223.6	147.6	35.5	52.6
2022	700.9	518.7	251.9	212.5	21.8	182.2	18.5	59.1	57.8	253.5	447.3	283.0	225.9	164.3	40.7	58.1
2021 H2	665.7	492.2	238.5	200.0	21.3	173.5	17.7	55.2	57.3	229.7	436.0	288.4	223.6	147.6	35.5	52.6
2022 H1	695.3	525.7	256.7	212.5	24.8	169.6	18.8	62.2	48.2	244.5	450.8	291.8	231.4	159.0	40.9	53.1
H2	700.9	518.7	251.9	212.5	21.8	182.2	18.5	59.1	57.8	253.5	447.3	283.0	225.9	164.3	40.7	58.1
2023 H1 P	671.4	505.4	239.2	210.2	24.7	166.0	17.4	52.9	50.7	241.5	429.9	276.2	220.1	153.8	44.6	49.9
As a percentage of total assets																
2019	100.0	75.0	33.5	34.5	2.8	25.0	2.8	9.9	6.4	31.9	68.1	41.0	30.7	27.2	6.5	10.0
2020	100.0	75.6	35.6	32.4	2.6	24.4	2.6	7.9	9.0	30.0	70.0	47.3	35.8	22.7	6.3	7.9
2021	100.0	73.9	35.8	30.0	3.2	26.1	2.7	8.3	8.6	34.5	65.5	43.3	33.6	22.2	5.3	7.9
2022	100.0	74.0	36.0	30.3	3.1	26.0	2.6	8.4	8.3	36.2	63.8	40.4	32.2	23.5	5.8	8.3
2021 H2	100.0	73.9	35.8	30.0	3.2	26.1	2.7	8.3	8.6	34.5	65.5	43.3	33.6	22.2	5.3	7.9
2022 H1	100.0	75.6	36.9	30.6	3.6	24.4	2.7	9.0	6.9	35.2	64.8	42.0	33.3	22.9	5.9	7.6
H2	100.0	74.0	36.0	30.3	3.1	26.0	2.6	8.4	8.3	36.2	63.8	40.4	32.2	23.5	5.8	8.3
2023 H1 P	100.0	75.3	35.6	31.3	3.7	24.7	2.6	7.9	7.6	36.0	64.0	41.1	32.8	22.9	6.6	7.4

\* Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. In

some cases revised. Excluding groups engaged 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 3	Annual percentage change 4	€ billion 3	Annual percentage change 4	Weighted average	Distribution 2			Operating income (EBIT)	Annual percentage change 4	Weighted average	Distribution 2				
						First quartile	Median	Third quartile				First quartile	Median	Third quartile		
	%	Annual change in percentage points 4	%	Annual change in percentage points 4	%	%	%	€ billion 3	Annual percentage change 4	%	Annual change in percentage points 4	%	%	%		
<b>Total</b>																
2015	1,633.9	6.9	195.9	-1.1	12.0	-1.0	6.3	10.6	17.8	91.5	-16.4	5.6	-1.5	1.8	6.7	11.3
2016	1,624.3	-0.4	214.4	7.8	13.2	1.0	6.7	11.4	17.9	111.7	9.0	6.9	0.5	2.6	6.7	12.0
2017	1,719.3	5.1	243.4	14.6	14.2	1.2	7.0	11.0	18.0	141.9	33.3	8.3	1.8	2.5	6.8	12.1
2018 <sup>6</sup>	1,706.8	0.7	232.8	-0.9	13.6	-0.2	6.1	10.6	17.8	129.2	-6.3	7.6	-0.6	2.1	6.5	11.9
2019	1,764.6	2.6	233.6	0.4	13.2	-0.3	6.9	12.2	19.2	105.5	-17.9	6.0	-1.5	1.6	5.8	11.8
2020	1,632.8	-8.8	213.6	-7.7	13.1	0.2	6.5	11.5	17.9	52.1	-41.0	3.2	-2.1	-0.8	4.9	10.5
2021	1,994.7	20.4	297.7	37.7	14.9	1.9	7.8	13.4	19.9	161.5	212.6	8.1	5.0	2.9	8.2	12.2
2022	2,431.3	20.8	324.8	7.8	13.4	-1.6	6.4	11.8	18.4	171.0	4.1	7.0	-1.1	1.6	6.6	12.4
2018 H2	869.4	1.4	114.4	0.5	13.2	-0.1	6.3	11.2	18.0	58.0	-7.6	6.7	-0.6	2.1	6.8	12.5
2019 H1	861.3	2.7	112.3	-4.0	13.0	-0.9	6.5	11.8	18.6	53.4	-23.3	6.2	-2.1	1.5	5.7	11.7
H2	903.7	2.4	121.3	4.8	13.4	0.3	6.6	11.8	20.0	52.0	-11.4	5.8	-0.9	0.8	6.1	12.5
2020 H1	744.5	-14.4	78.2	-34.1	10.5	-3.0	4.8	9.9	16.7	7.9	-88.0	1.1	-5.3	-2.1	3.5	8.8
H2	888.4	-3.3	135.4	17.1	15.2	2.8	7.6	13.2	19.8	44.2	8.6	5.0	0.7	1.7	6.5	11.6
2021 H1	920.0	20.3	151.5	87.2	16.5	5.9	7.4	12.6	19.5	84.5	.	9.2	8.3	2.3	7.8	12.2
H2	1,075.6	20.4	146.4	8.1	13.6	-1.6	7.9	13.2	20.8	77.0	73.1	7.2	2.2	2.9	7.7	13.4
2022 H1	1,149.7	23.5	161.0	4.8	14.0	-2.5	6.1	11.5	18.4	84.9	-1.6	7.4	-1.9	1.6	6.4	11.8
H2	1,283.3	18.5	163.9	11.0	12.8	-0.9	5.9	11.6	18.9	86.2	10.4	6.7	-0.5	1.7	6.7	12.9
2023 H1 p	1,112.0	-3.0	172.0	7.4	15.5	1.5	6.4	10.8	17.5	98.1	16.2	8.8	1.5	1.2	6.5	10.8
<b>Groups with a focus on the production sector<sup>5</sup></b>																
2015	1,309.7	7.0	149.0	-2.6	11.4	-1.1	6.3	10.5	16.3	69.1	-19.7	5.3	-1.8	2.2	6.6	10.4
2016	1,295.9	-0.8	161.9	6.3	12.5	0.8	6.5	10.6	16.0	84.8	4.2	6.5	0.3	2.8	6.3	10.5
2017	1,395.9	5.5	187.5	16.6	13.4	1.3	7.1	11.0	15.8	112.5	40.6	8.1	2.0	3.2	6.7	10.4
2018 <sup>6</sup>	1,367.7	1.0	175.7	-1.5	12.9	-0.3	6.9	10.7	16.0	100.7	-7.1	7.4	-0.6	2.8	6.9	11.4
2019	1,410.9	2.0	168.1	-4.4	11.9	-0.8	6.9	11.3	16.6	76.3	-23.8	5.4	-1.8	1.4	5.7	10.1
2020	1,285.2	-9.4	143.6	-8.6	11.2	0.1	5.7	10.6	16.5	29.1	-48.1	2.3	-2.3	-0.7	4.3	9.8
2021	1,585.8	22.4	208.9	45.9	13.2	2.1	7.9	12.8	17.9	118.6	325.8	7.5	5.4	2.8	7.8	11.1
2022	1,957.4	21.7	222.9	4.7	11.4	-1.8	6.9	11.3	16.4	117.3	-3.9	6.0	-1.6	1.8	6.6	10.7
2018 H2	695.4	2.1	83.1	0.7	12.0	-0.2	6.2	11.1	16.2	42.1	-8.7	6.1	-0.7	2.0	6.4	11.4
2019 H1	689.9	2.4	83.3	-8.8	12.1	-1.5	7.1	10.9	16.1	41.9	-26.8	6.1	-2.4	1.8	6.0	9.5
H2	721.0	1.7	84.8	0.3	11.8	-0.2	6.1	10.8	16.9	34.4	-19.7	4.8	-1.3	0.6	5.2	11.1
2020 H1	580.6	-16.0	49.0	-42.4	8.4	-3.8	4.4	8.8	14.9	0.2	-101.7	0.0	-6.2	-2.1	3.1	7.8
H2	704.6	-3.0	94.6	25.4	13.4	3.4	7.0	12.1	18.6	28.9	19.6	4.1	1.1	0.3	6.0	10.4
2021 H1	731.9	24.0	111.2	126.9	15.2	6.9	8.2	12.6	18.6	66.7	.	9.1	9.3	2.9	7.9	12.1
H2	854.2	21.1	97.7	3.8	11.4	-1.9	7.8	12.3	17.5	51.9	80.8	6.1	2.0	2.6	7.0	11.5
2022 H1	923.4	23.8	110.9	-2.5	12.0	-3.3	7.7	11.5	16.3	59.0	-14.2	6.4	-2.8	2.3	6.4	10.4
H2	1,035.8	19.9	112.2	13.1	10.8	-0.7	5.9	10.8	16.7	58.4	9.6	5.6	-0.5	1.3	6.5	11.4
2023 H1 p	894.9	-2.8	129.0	16.6	14.4	2.4	7.1	11.7	16.3	76.7	30.5	8.6	2.2	2.1	6.7	10.7
<b>Groups with a focus on the services sector</b>																
2015	324.1	6.1	46.9	4.0	14.5	-0.3	5.9	11.1	22.1	22.3	-3.8	6.9	-0.7	1.3	6.7	13.9
2016	328.4	1.3	52.5	12.8	16.0	1.6	6.8	13.4	25.1	26.9	24.4	8.2	1.5	2.3	8.2	15.3
2017	323.4	3.5	55.9	8.3	17.3	0.8	6.8	11.5	23.0	29.4	11.4	9.1	0.6	2.1	7.2	15.1
2018 <sup>6</sup>	339.2	-0.6	57.1	1.3	16.8	0.3	5.5	10.5	24.7	28.5	-3.5	8.4	-0.3	1.4	5.8	16.6
2019	353.7	4.8	65.4	15.2	18.5	1.7	6.9	13.7	24.5	29.2	2.8	8.3	-0.2	2.4	6.2	16.2
2020	347.6	-6.1	70.0	-5.4	20.1	0.1	6.9	13.3	22.1	23.0	-22.1	6.6	-1.4	-1.2	6.5	12.2
2021	408.9	13.0	88.8	21.6	21.7	1.6	7.6	15.0	24.0	42.8	79.7	10.5	3.9	3.0	9.2	15.6
2022	473.9	17.4	101.9	15.3	21.5	-0.4	5.2	13.1	22.8	53.8	26.4	11.3	0.8	1.0	6.9	14.4
2018 H2	174.0	-1.3	31.3	-0.0	18.0	0.2	6.7	11.3	25.6	15.9	-4.6	9.1	-0.3	2.2	7.0	17.8
2019 H1	171.4	4.0	29.0	13.1	16.9	1.4	5.7	12.3	24.4	11.6	-7.5	6.7	-0.9	0.0	4.9	14.5
H2	182.7	5.5	36.5	16.9	20.0	1.9	7.1	15.1	24.4	17.7	10.9	9.7	0.5	1.8	8.2	16.3
2020 H1	163.9	-8.1	29.2	-9.4	17.8	-0.3	5.6	10.8	21.2	7.7	-36.4	4.7	-2.1	-2.2	4.3	10.9
H2	183.8	-4.2	40.8	-2.2	22.2	0.4	8.9	14.7	23.3	15.3	-12.8	8.3	-0.9	2.6	7.5	13.3
2021 H1	188.1	7.7	40.3	26.1	21.5	3.1	6.9	12.6	24.5	17.8	119.9	9.5	4.8	0.9	6.9	13.6
H2	221.4	17.9	48.7	18.2	22.0	0.1	9.4	16.5	24.7	25.1	59.1	11.3	3.0	3.8	9.5	17.7
2022 H1	226.3	22.0	50.1	25.3	22.2	0.6	4.6	11.6	20.9	25.9	46.4	11.5	1.9	-0.5	6.3	13.5
H2	247.6	13.4	51.8	7.0	20.9	-1.3	5.2	14.1	24.0	27.8	12.1	11.2	-0.1	2.2	7.5	15.4
2023 H1 p	217.1	-3.8	43.1	-13.3	19.8	-2.2	4.7	9.6	19.2	21.4	-16.4	9.9	-1.5	-2.2	4.2	12.0

\* Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. In some cases revised. Excluding groups engaged in real estate activities. 1 Earnings before interest, taxes, depreciation and amortisation. 2 Quantile data are based on the groups' unweighted return on sales. 3 Annual figures do not always match the sum of

the two half-year figures. See Quality report on consolidated financial statement statistics, p. 3. 4 Adjusted for substantial changes in the basis of consolidation of large groups and in the reporting sample. See Quality report on consolidated financial statement statistics, p. 6. 5 Including groups in agriculture and forestry. 6 From 2018 onwards: significant changes in IFRS standards, impairing comparability with previous periods.

## XII. External sector

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

€ million

Item	2020	2021	2022	2023					
				Q1	Q2	Q3 P	July r	August r	September P
I. Current Account	+ 203,643	+ 349,732	- 79,173	+ 32,567	+ 39,876	+ 102,126	+ 27,610	+ 33,737	+ 40,779
1. Goods									
Receipts	2,176,527	2,501,971	2,948,338	739,302	724,232	716,987	237,434	233,360	246,193
Expenditure	1,843,734	2,224,666	3,030,270	690,256	667,695	631,766	210,125	206,587	215,054
Balance	+ 332,793	+ 277,305	- 81,931	+ 49,046	+ 56,537	+ 85,221	+ 27,310	+ 26,773	+ 31,138
2. Services									
Receipts	883,923	1,035,941	1,263,669	296,670	321,373	334,378	111,672	110,461	112,245
Expenditure	891,717	928,525	1,113,422	281,263	278,823	287,467	94,763	96,564	96,139
Balance	- 7,794	+ 107,416	+ 150,247	+ 15,406	+ 42,550	+ 46,911	+ 16,909	+ 13,897	+ 16,105
3. Primary income									
Receipts	737,663	880,948	988,093	267,200	317,063	278,740	88,090	90,776	99,874
Expenditure	701,246	756,492	967,620	257,177	342,596	270,884	91,786	85,557	93,542
Balance	+ 36,418	+ 124,457	+ 20,473	+ 10,023	- 25,533	+ 7,855	- 3,696	+ 5,219	+ 6,332
4. Secondary income									
Receipts	128,895	159,503	165,471	39,715	45,829	38,463	13,170	12,061	13,232
Expenditure	286,669	318,948	333,433	81,624	79,508	76,325	26,084	24,212	26,029
Balance	- 157,774	- 159,445	- 167,961	- 41,908	- 33,679	- 37,862	- 12,913	- 12,151	- 12,797
II. Capital account	+ 4,715	+ 50,738	+ 154,861	+ 5,062	+ 3,843	+ 12,413	+ 1,846	+ 4,052	+ 6,514
III. Financial account <sup>1</sup>	+ 213,574	+ 410,360	+ 69,210	+ 35,203	+ 72,366	+ 87,844	+ 7,191	+ 41,253	+ 39,401
1. Direct investment	- 172,841	+ 384,178	+ 291,655	+ 34,765	+ 19,622	- 14,410	- 28,982	+ 7,611	+ 6,961
By resident units abroad the euro area	- 33,195	+ 332,065	- 16,704	+ 50,038	- 98,117	- 14,348	- 10,142	+ 7,425	- 11,631
By non-resident units of the euro area	+ 139,646	- 52,113	- 308,359	+ 15,273	- 117,739	+ 62	+ 18,840	- 186	- 18,592
2. Portfolio investment	+ 537,369	+ 307,455	- 288,964	- 97,446	+ 70,661	- 26,425	+ 13,045	- 1,766	- 37,703
By resident units abroad the euro area	+ 692,274	+ 782,483	- 228,473	+ 63,545	+ 205,678	+ 50,544	+ 40,419	+ 23,694	- 13,569
Equity and investment fund shares	+ 326,378	+ 362,157	- 186,068	+ 27,237	+ 30,518	- 30,314	+ 19,952	- 19,687	- 30,579
Short-term debt securities	+ 125,603	+ 118,607	- 110,943	- 57,604	+ 88,355	+ 41,658	+ 8,023	+ 34,862	- 1,228
Long-term debt securities	+ 240,293	+ 301,718	+ 68,538	+ 93,912	+ 86,805	+ 39,201	+ 12,444	+ 8,519	+ 18,238
By non-resident units of the euro area	+ 154,905	+ 475,028	+ 60,490	+ 160,991	+ 135,017	+ 76,969	+ 27,374	+ 25,461	+ 24,134
Equity and investment fund shares	+ 181,256	+ 640,342	+ 34,545	+ 23,685	+ 18,435	+ 15,477	- 17,996	+ 33,549	- 76
Short-term debt securities	+ 116,258	+ 35,539	- 66,432	- 2,500	- 5,702	- 8,706	+ 2,777	- 13,069	+ 1,586
Long-term debt securities	- 142,609	- 200,853	+ 92,377	+ 139,806	+ 122,284	+ 70,198	+ 42,593	+ 4,981	+ 22,624
3. Financial derivatives and employee stock options	+ 19,509	+ 63,710	+ 72,237	+ 15,603	- 5,138	+ 11,852	- 831	+ 8,876	+ 3,807
4. Other investment	- 183,645	- 475,355	- 23,696	+ 100,729	- 14,653	+ 119,005	+ 23,565	+ 25,231	+ 70,209
Eurosysteem	- 212,253	- 443,530	+ 175,031	+ 167,665	+ 78,208	+ 54,114	+ 39,437	+ 16,787	- 2,110
General government MFIs <sup>2</sup>	- 15,747	- 80,427	- 49,550	+ 5,929	+ 5,738	- 6,370	- 2,705	- 259	- 3,407
Enterprises and households	+ 24,491	- 130,433	- 282,827	- 3,850	- 61,820	+ 56,917	+ 5,950	+ 648	+ 50,319
5. Reserve assets	+ 13,183	+ 130,371	+ 17,978	- 18,447	+ 1,875	- 2,178	+ 394	+ 1,302	- 3,873
IV. Net errors and omissions	+ 5,216	+ 9,890	- 6,478	- 2,426	+ 28,647	- 26,694	- 22,265	+ 3,463	- 7,892

\* Source: ECB, according to the international standards of the International Monetary Fund's Balance of Payments Manual (sixth edition). <sup>1</sup> Increase: + / decrease: -. <sup>2</sup> Excluding the Eurosysteem.

## XII. External sector

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

€ million

Zeit	Current Account						Balance of capital account <sup>2</sup>	Financial account <sup>3</sup>		
	Total	Goods		Services	Primary income	Secondary income		Total	of which: Reserve assets	Errors and omissions <sup>4</sup>
		Total	of which: Supplementary trade items <sup>1</sup>							
2008	+ 144,954	+ 184,160	- 3,947	- 29,122	+ 24,063	- 34,147	- 893	+ 121,336	+ 2,008	- 22,725
2009	+ 142,744	+ 140,626	- 6,605	- 17,642	+ 54,524	- 34,764	- 1,858	+ 129,693	+ 8,648	- 11,194
2010	+ 147,298	+ 160,829	- 6,209	- 25,255	+ 51,306	- 39,582	+ 1,219	+ 92,757	+ 1,613	- 55,760
2011	+ 167,340	+ 162,970	- 9,357	- 29,930	+ 69,087	- 34,787	+ 419	+ 120,857	+ 2,836	- 46,902
2012	+ 195,712	+ 199,531	- 11,388	- 30,774	+ 65,658	- 38,703	+ 413	+ 151,417	+ 1,297	- 43,882
2013	+ 184,352	+ 203,802	- 12,523	- 39,321	+ 63,284	- 43,413	+ 563	+ 226,014	+ 838	+ 42,224
2014	+ 211,477	+ 219,629	- 14,296	- 25,303	+ 58,646	- 41,495	+ 3,255	+ 230,931	- 2,564	+ 16,200
2015	+ 259,781	+ 248,394	- 15,405	- 18,516	+ 69,324	- 39,420	+ 265	+ 237,733	- 2,213	- 22,313
2016	+ 270,200	+ 252,409	- 19,921	- 20,987	+ 77,258	- 38,480	+ 2,451	+ 258,906	+ 1,686	- 13,744
2017	+ 255,964	+ 255,077	- 13,613	- 23,994	+ 77,046	- 52,165	+ 2,653	+ 268,306	+ 1,269	+ 14,996
2018	+ 267,609	+ 221,983	- 22,985	- 15,806	+ 112,389	- 50,958	+ 914	+ 242,889	+ 392	- 25,634
2019	+ 283,849	+ 219,548	- 32,263	- 13,553	+ 128,602	- 50,747	+ 3,705	+ 200,312	- 544	- 79,832
2020	+ 240,239	+ 191,031	- 8,907	+ 7,418	+ 96,014	- 54,224	- 9,120	+ 191,481	- 51	- 39,638
2021	+ 278,689	+ 194,388	+ 4,757	+ 4,802	+ 138,545	- 59,046	- 1,179	+ 248,551	+ 31,892	- 28,959
2022	+ 170,937	+ 120,791	+ 9,999	- 31,036	+ 150,017	- 68,835	- 18,644	+ 227,707	+ 4,426	+ 75,414
2020 Q4	+ 76,342	+ 55,114	- 2,996	+ 7,417	+ 32,628	- 18,816	- 4,181	+ 84,069	+ 848	+ 11,908
2021 Q1	+ 77,373	+ 57,527	+ 679	+ 5,095	+ 32,650	- 17,899	- 834	+ 72,025	+ 385	- 4,514
Q2	+ 67,702	+ 48,292	+ 868	+ 7,141	+ 21,166	- 8,897	- 2,336	+ 87,467	+ 58	+ 22,101
Q3	+ 65,695	+ 49,316	+ 145	- 5,830	+ 37,736	- 15,527	+ 1,985	+ 16,702	+ 31,199	- 50,977
Q4	+ 67,919	+ 39,252	+ 3,064	- 1,604	+ 46,994	- 16,723	+ 7	+ 72,358	+ 250	+ 4,432
2022 Q1	+ 60,119	+ 34,968	+ 3,927	+ 3,038	+ 40,362	- 18,249	- 3,021	+ 78,775	+ 2,200	+ 21,677
Q2	+ 31,086	+ 27,654	+ 7,766	+ 5,314	+ 22,259	- 13,513	+ 4,780	+ 67,323	+ 597	+ 41,017
Q3	+ 22,958	+ 22,987	- 361	- 22,180	+ 39,507	- 17,356	- 5,860	- 30,017	+ 784	- 47,115
Q4	+ 56,774	+ 35,182	- 1,333	- 6,579	+ 47,889	- 19,718	+ 4,984	+ 111,625	+ 845	+ 59,835
2023 Q1	+ 69,937	+ 55,177	- 1,396	- 6,692	+ 41,057	- 19,605	- 11,325	+ 99,813	+ 224	+ 41,200
Q2	+ 58,912	+ 55,857	- 983	- 14,337	+ 26,742	- 9,349	+ 4,047	+ 51,855	+ 1,096	+ 3,011
Q3	+ 69,554	+ 62,010	- 1,556	- 24,854	+ 46,482	- 14,083	- 3,535	+ 55,215	- 790	- 10,804
2021 May	+ 16,786	+ 14,730	- 102	+ 2,453	+ 1,511	- 1,908	- 528	+ 23,514	+ 211	+ 7,257
June	+ 26,471	+ 17,139	+ 530	+ 1,168	+ 11,248	- 3,084	- 911	+ 34,700	+ 98	+ 9,140
July	+ 21,623	+ 18,516	- 472	- 1,848	+ 10,917	- 5,962	- 487	+ 1,156	+ 102	- 19,980
Aug.	+ 18,381	+ 12,984	+ 897	- 3,024	+ 13,086	- 4,665	+ 532	+ 17,522	+ 31,254	- 1,391
Sep.	+ 25,690	+ 17,816	- 280	- 958	+ 13,733	- 4,901	+ 1,939	- 1,977	- 158	- 29,606
Oct.	+ 18,128	+ 15,135	+ 1,038	- 4,720	+ 13,280	- 5,567	+ 506	+ 13,955	+ 261	- 4,680
Nov.	+ 22,113	+ 14,414	+ 759	+ 138	+ 13,670	- 6,108	+ 1,007	+ 33,852	+ 963	+ 12,746
Dec.	+ 27,678	+ 9,704	+ 1,266	+ 2,978	+ 20,043	- 5,048	+ 508	+ 24,551	- 974	- 3,634
2022 Jan.	+ 16,392	+ 6,644	+ 803	+ 1,740	+ 14,181	- 6,173	- 417	+ 29,438	+ 309	+ 13,462
Feb.	+ 23,856	+ 15,694	+ 1,472	+ 2,099	+ 11,673	- 5,609	- 1,637	+ 48,042	+ 1,161	+ 25,823
Mar.	+ 19,871	+ 12,630	+ 1,653	- 801	+ 14,508	- 6,467	- 968	+ 1,295	+ 730	- 17,608
Apr.	+ 11,144	+ 5,057	+ 2,536	- 917	+ 12,425	- 5,421	- 1,556	+ 19,988	+ 83	+ 10,400
May	+ 3,390	+ 10,859	+ 4,323	- 1,959	- 3,881	- 1,628	- 2,724	+ 893	+ 161	+ 227
June	+ 16,551	+ 11,738	+ 906	- 2,438	+ 13,715	- 6,464	- 501	+ 46,441	+ 353	+ 30,391
July	+ 8,854	+ 8,855	+ 382	- 6,089	+ 13,001	- 6,912	- 2,321	- 23,333	- 484	- 29,866
Aug.	+ 1,581	+ 3,017	- 567	- 9,555	+ 14,077	- 5,957	- 1,261	+ 16,672	+ 81	+ 16,352
Sep.	+ 12,523	+ 11,116	- 176	- 6,536	+ 12,429	- 4,486	- 2,277	- 23,355	+ 1,187	- 33,601
Oct.	+ 9,648	+ 7,306	- 34	- 5,287	+ 13,076	- 5,447	- 2,212	+ 44,969	+ 672	+ 37,533
Nov.	+ 20,246	+ 15,140	+ 731	- 2,077	+ 13,661	- 6,479	- 2,129	+ 466	+ 425	- 17,650
Dec.	+ 26,881	+ 12,736	- 2,030	+ 785	+ 21,152	- 7,792	- 643	+ 66,191	- 252	+ 39,953
2023 Jan.	+ 16,964	+ 11,678	+ 233	- 1,534	+ 12,362	- 5,542	- 4,700	+ 12,744	- 341	+ 481
Feb.	+ 22,466	+ 18,505	- 163	- 2,175	+ 12,175	- 6,039	- 1,789	+ 32,485	+ 143	+ 11,808
Mar.	+ 30,508	+ 24,994	- 1,466	- 2,983	+ 16,520	- 8,023	- 4,835	+ 54,584	+ 423	+ 28,911
Apr.	+ 22,352	+ 16,296	+ 301	- 3,330	+ 14,455	- 5,069	- 640	- 15,278	+ 88	- 36,990
May	+ 8,169	+ 15,803	+ 281	- 6,134	- 1,421	- 79	- 2,309	+ 11,923	+ 45	+ 6,062
June	+ 28,392	+ 23,757	- 1,566	- 4,874	+ 13,709	- 4,200	- 1,099	+ 55,210	+ 962	+ 27,917
July	+ 18,704	+ 19,175	- 2,709	- 8,304	+ 13,294	- 5,460	- 4,341	- 20	- 118	- 14,383
Aug.	+ 22,830	+ 20,345	+ 1,567	- 10,346	+ 17,385	- 4,554	- 686	+ 32,989	- 107	+ 10,846
Sep.	+ 28,020	+ 22,491	- 414	- 6,205	+ 15,803	- 4,069	+ 1,492	+ 22,245	- 566	- 7,267
Oct. <sup>p</sup>	+ 21,402	+ 23,063	+ 161	- 9,211	+ 13,824	- 6,273	- 4,182	+ 24,350	+ 858	+ 7,129

<sup>1</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>2</sup> Including net acquisition/disposal of non-produced non-financial assets.

<sup>3</sup> Net lending: + / net borrowing: -. <sup>4</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

Group of countries/country		2020	2021	2022	2023					
					May	June	July	Aug.	Sep.	Oct.
All countries <sup>1</sup>	Exports	1,206,928	1,379,346	1,594,034	131,314	139,309	126,108	123,770	129,262	130,894
	Imports	1,026,502	1,204,050	1,505,434	117,891	117,218	108,101	107,808	110,056	112,849
	Balance	+ 180,427	+ 175,296	+ 88,600	+ 13,424	+ 22,091	+ 18,006	+ 15,962	+ 19,206	+ 18,044
I. European countries	Exports	824,921	949,744	1,091,554	89,378	93,799	84,232	82,392	88,606	88,671
	Imports	682,477	803,687	973,063	76,973	76,204	69,894	68,401	71,221	72,969
	Balance	+ 142,444	+ 146,057	+ 118,492	+ 12,405	+ 17,595	+ 14,339	+ 13,991	+ 17,385	+ 15,702
1. EU Member States (27)	Exports	635,741	751,322	878,642	71,589	75,512	67,383	65,691	71,378	70,669
	Imports	546,655	638,064	737,668	62,922	62,762	57,320	56,151	58,625	59,659
	Balance	+ 89,087	+ 113,259	+ 140,974	+ 8,668	+ 12,750	+ 10,062	+ 9,540	+ 12,753	+ 11,010
Euro area (20) countries	Exports	445,225	525,992	617,068	50,171	53,225	47,811	44,949	49,807	49,504
	Imports	372,855	440,248	506,865	42,239	41,686	38,406	37,522	38,536	39,658
	Balance	+ 72,370	+ 85,744	+ 110,203	+ 7,932	+ 11,539	+ 9,404	+ 7,426	+ 11,271	+ 9,847
of which:										
Austria	Exports	60,118	72,385	90,270	6,668	6,881	6,372	6,327	6,650	6,434
	Imports	40,454	47,922	58,137	4,798	4,812	4,376	4,207	4,489	4,467
	Balance	+ 19,663	+ 24,893	+ 32,134	+ 1,870	+ 2,069	+ 1,996	+ 2,120	+ 2,161	+ 1,967
Belgium and Luxembourg	Exports	48,824	58,080	70,933	5,674	6,120	5,304	5,499	5,467	5,501
	Imports	39,584	55,726	67,071	5,236	4,968	4,318	5,169	4,637	4,720
	Balance	+ 9,240	+ 2,354	+ 3,861	+ 438	+ 1,153	+ 986	+ 330	+ 830	+ 781
France	Exports	90,910	102,741	118,168	9,701	10,633	9,349	8,417	9,936	9,787
	Imports	56,364	61,921	69,969	5,959	6,195	5,563	5,109	5,715	5,715
	Balance	+ 34,546	+ 40,820	+ 48,198	+ 3,742	+ 4,438	+ 3,786	+ 3,308	+ 4,221	+ 4,073
Italy	Exports	60,634	75,526	89,191	7,158	7,547	6,930	5,376	7,194	7,119
	Imports	53,906	65,389	73,177	6,264	6,372	6,253	5,127	5,711	6,187
	Balance	+ 6,728	+ 10,137	+ 16,014	+ 893	+ 1,175	+ 676	+ 249	+ 1,483	+ 931
Netherlands	Exports	84,579	101,050	112,261	9,177	9,691	8,920	8,651	9,214	9,209
	Imports	87,024	105,113	114,998	8,996	9,321	8,480	8,180	8,242	8,401
	Balance	- 2,445	- 4,063	- 2,737	+ 181	+ 370	+ 440	+ 471	+ 972	+ 809
Spain	Exports	37,618	43,932	49,935	4,605	4,732	4,493	3,714	4,517	4,571
	Imports	31,281	34,180	37,756	3,763	3,291	3,057	2,968	2,927	2,939
	Balance	+ 6,337	+ 9,752	+ 12,178	+ 842	+ 1,441	+ 1,436	+ 747	+ 1,590	+ 1,632
Other EU Member States	Exports	190,517	225,331	261,574	21,418	22,287	19,572	20,743	21,571	21,165
	Imports	173,800	197,815	230,803	20,683	21,076	18,914	18,629	20,089	20,001
	Balance	+ 16,717	+ 27,515	+ 30,772	+ 735	+ 1,211	+ 658	+ 2,114	+ 1,481	+ 1,163
2. Other European countries	Exports	189,180	198,421	212,912	17,788	18,287	16,850	16,701	17,228	18,002
	Imports	135,822	165,623	235,395	14,051	13,442	12,573	12,250	12,596	13,310
	Balance	+ 53,358	+ 32,798	- 22,483	+ 3,738	+ 4,845	+ 4,276	+ 4,450	+ 4,633	+ 4,692
of which:										
Switzerland	Exports	56,265	60,638	70,611	5,555	5,750	5,281	5,426	5,495	5,452
	Imports	45,556	49,247	55,723	4,669	4,569	3,996	4,010	4,455	4,349
	Balance	+ 10,708	+ 11,391	+ 14,888	+ 887	+ 1,180	+ 1,286	+ 1,417	+ 1,040	+ 1,103
United Kingdom	Exports	67,086	65,002	73,764	6,476	6,820	6,253	5,802	6,470	6,863
	Imports	35,018	32,245	40,314	3,260	3,178	2,906	2,811	3,216	2,811
	Balance	+ 32,068	+ 32,757	+ 33,449	+ 3,216	+ 3,643	+ 3,347	+ 2,991	+ 3,255	+ 4,052
II. Non-European countries	Exports	380,292	427,430	497,428	41,555	45,131	41,467	40,889	40,162	41,730
	Imports	343,270	399,604	531,409	40,803	40,903	38,068	39,273	38,671	39,712
	Balance	+ 37,022	+ 27,827	- 33,982	+ 752	+ 4,228	+ 3,399	+ 1,615	+ 1,491	+ 2,018
1. Africa	Exports	20,086	23,068	26,462	2,714	3,033	2,206	2,308	2,268	2,161
	Imports	18,758	26,241	34,213	2,959	2,894	2,233	2,330	2,638	2,801
	Balance	+ 1,328	- 3,173	- 7,751	- 246	+ 139	- 27	- 22	- 370	- 640
2. America	Exports	141,375	167,735	210,652	17,238	19,184	18,481	18,050	17,831	18,954
	Imports	94,005	101,525	131,979	10,630	10,542	10,566	10,675	10,075	10,819
	Balance	+ 47,370	+ 66,210	+ 78,673	+ 6,608	+ 8,642	+ 7,915	+ 7,376	+ 7,756	+ 8,136
of which:										
United States	Exports	103,476	121,980	156,208	12,490	13,872	13,610	13,068	13,082	14,161
	Imports	67,694	72,316	93,338	7,556	7,606	7,551	7,736	7,569	7,879
	Balance	+ 35,782	+ 49,664	+ 62,871	+ 4,934	+ 6,266	+ 6,058	+ 5,332	+ 5,514	+ 6,281
3. Asia	Exports	208,146	224,897	246,289	20,420	21,709	19,644	19,498	19,181	19,542
	Imports	226,646	267,604	357,702	26,598	27,051	24,727	25,794	25,574	25,676
	Balance	- 18,500	- 42,707	- 111,413	- 6,179	- 5,342	- 5,083	- 6,295	- 6,394	- 6,134
of which:										
Middle East	Exports	25,882	26,090	29,648	2,388	2,686	2,513	2,614	2,846	2,779
	Imports	6,721	7,509	13,304	1,598	1,246	1,101	1,362	1,448	1,066
	Balance	+ 19,161	+ 18,582	+ 16,344	+ 790	+ 1,440	+ 1,412	+ 1,252	+ 1,398	+ 1,713
Japan	Exports	17,396	18,245	20,511	1,660	1,802	1,749	1,567	1,630	1,740
	Imports	21,427	23,477	25,413	2,077	2,336	2,010	2,121	2,258	2,181
	Balance	- 4,032	- 5,232	- 4,902	- 417	- 534	- 260	- 554	- 627	- 442
People's Republic of China <sup>2</sup>	Exports	95,840	103,564	106,762	8,714	8,830	8,273	8,235	7,541	7,882
	Imports	117,373	142,964	192,830	12,923	13,872	12,337	13,065	12,480	13,269
	Balance	- 21,533	- 39,400	- 86,068	- 4,209	- 5,042	- 4,064	- 4,831	- 4,939	- 5,388
New industrial countries and emerging markets of Asia <sup>3</sup>	Exports	50,590	55,295	63,344	4,811	5,896	4,865	4,746	5,005	4,702
	Imports	48,222	55,441	71,012	6,120	5,648	5,246	5,121	5,350	5,206
	Balance	+ 2,368	- 146	- 7,668	- 1,309	+ 248	- 381	- 375	- 345	- 504
4. Oceania and polar regions	Exports	10,685	11,731	14,024	1,184	1,205	1,136	1,031	882	1,073
	Imports	3,861	4,233	7,515	616	415	542	474	383	416
	Balance	+ 6,824	+ 7,497	+ 6,510	+ 569	+ 789	+ 595	+ 557	+ 499	+ 657

\* Source: Federal Statistical Office. Exports (f.o.b.) by country of destination, Imports (c.i.f.) by country of origin. Individual countries and groups of countries according to the current position. Euro area incl. Croatia. <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)

€ million

Zeit	Services								Primary income		
	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	Telecommunications-, computer and information services	Other business services	Government goods and services <sup>2</sup>			
2018	- 15,806	- 2,044	- 44,543	+ 10,059	+ 17,219	- 7,060	+ 723	+ 3,322	+ 671	+ 112,410	- 692
2019	- 13,553	+ 3,607	- 45,947	+ 10,755	+ 18,368	- 9,763	- 2,948	+ 3,489	+ 492	+ 128,990	- 880
2020	+ 7,418	- 5,302	- 14,678	+ 10,051	+ 17,665	- 7,770	- 4,426	+ 3,368	+ 3,196	+ 94,205	- 1,387
2021	+ 4,802	- 6,635	- 24,323	+ 8,306	+ 32,834	- 8,466	- 9,361	+ 3,531	+ 2,664	+ 137,881	- 1,999
2022	- 31,036	- 8,643	- 55,244	+ 9,464	+ 31,406	- 11,241	- 10,085	+ 4,078	+ 1,993	+ 152,926	- 4,902
2022 Q1	+ 3,038	- 2,849	- 6,033	+ 1,996	+ 11,530	- 3,704	- 1,520	+ 1,063	+ 1,288	+ 40,527	- 1,453
Q2	- 5,314	- 187	- 13,125	+ 2,270	+ 7,307	- 2,182	- 2,722	+ 1,062	+ 425	+ 25,841	- 4,007
Q3	- 22,180	- 3,727	- 22,632	+ 2,159	+ 5,874	- 3,429	- 3,712	+ 1,100	- 82	+ 41,295	- 1,705
Q4	- 6,579	- 1,880	- 13,454	+ 3,039	+ 6,695	- 1,926	- 2,131	+ 853	+ 362	+ 45,264	+ 2,263
2023 Q1	- 6,692	- 2,788	- 8,001	+ 1,777	+ 5,263	- 3,682	- 3,001	+ 1,051	+ 1,224	+ 41,509	- 1,676
Q2	- 14,337	- 1,754	- 14,337	+ 2,074	+ 4,748	- 2,553	- 4,963	+ 776	+ 393	+ 29,351	- 3,002
Q3	- 24,854	- 2,847	- 23,750	+ 2,110	+ 4,893	- 3,454	- 4,695	+ 815	+ 49	+ 47,836	- 1,403
2022 Dec.	+ 785	- 729	- 2,276	+ 1,441	+ 2,710	- 505	- 577	+ 192	+ 194	+ 17,376	+ 3,582
2023 Jan.	- 1,534	- 637	- 2,326	+ 771	+ 1,928	- 1,434	- 1,302	+ 391	+ 449	+ 12,557	- 644
Feb.	- 2,175	- 1,101	- 2,334	+ 542	+ 946	- 910	- 398	+ 351	+ 409	+ 12,290	- 524
Mar.	- 2,983	- 1,050	- 3,341	+ 463	+ 2,388	- 1,338	- 1,301	+ 309	+ 366	+ 16,661	- 507
Apr.	- 3,330	- 452	- 3,406	+ 553	+ 2,362	- 1,519	- 1,599	+ 227	+ 104	+ 14,820	- 469
May	- 6,134	- 707	- 5,027	+ 677	+ 1,127	- 1,234	- 1,685	+ 220	+ 111	+ 666	- 867
June	- 4,874	- 595	- 5,904	+ 843	+ 1,259	+ 199	- 1,679	+ 328	+ 178	+ 15,197	- 1,666
July	- 8,304	- 624	- 6,694	+ 624	+ 1,031	- 1,588	- 1,762	+ 204	- 57	+ 13,783	- 433
Aug.	- 10,346	- 1,075	- 8,867	+ 804	+ 789	- 1,111	- 1,753	+ 301	- 17	+ 17,905	- 503
Sep.	- 6,205	- 1,147	- 8,189	+ 682	+ 3,072	- 755	- 1,180	+ 309	+ 122	+ 16,148	- 467
Oct. P	- 9,211	- 1,116	- 9,630	+ 585	+ 2,207	- 1,367	- 612	+ 332	+ 249	+ 14,080	- 506

<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 and Capital account of the Federal Republic of Germany (balances)

€ million

Zeit	Secondary income						Capital account			
	Total	General government			All sectors excluding general government <sup>2</sup>			Total	Non-produced non-financial assets	Capital transfers
		Total	of which:		Total	of which:				
		Current international cooperation <sup>1</sup>	Current taxes on income, wealth, etc.		Personal transfers between resident and non-resident households <sup>3</sup>	of which: Workers' remittances				
2018	- 50,958	- 33,109	- 10,849	+ 9,753	- 17,848	.	- 5,142	+ 914	+ 3,349	- 2,435
2019	- 50,747	- 30,251	- 11,473	+ 11,591	- 20,496	.	- 5,431	- 3,705	- 298	- 3,407
2020	- 54,224	- 36,074	- 13,498	+ 10,767	- 18,150	.	- 5,908	- 9,120	- 3,418	- 5,702
2021	- 59,046	- 36,974	- 11,303	+ 11,888	- 22,072	.	- 6,170	- 1,179	- 392	- 787
2022	- 68,835	- 41,923	- 17,878	+ 14,041	- 26,913	.	- 7,149	- 18,644	- 14,397	- 4,247
2022 Q1	- 18,249	- 10,960	- 3,153	+ 2,477	- 7,288	- 1,995	- 1,719	- 3,021	- 2,865	- 156
Q2	- 13,513	- 5,957	- 3,247	+ 7,339	- 7,556	.	- 1,810	- 4,780	- 3,988	- 792
Q3	- 17,356	- 11,401	- 3,727	+ 2,138	- 5,955	.	- 1,810	- 5,860	- 4,533	- 1,326
Q4	- 19,718	- 13,604	- 7,751	+ 2,086	- 6,113	.	- 1,810	- 4,984	- 3,011	- 1,973
2023 Q1	- 19,605	- 10,860	- 3,352	+ 2,580	- 8,744	.	- 1,731	- 11,325	- 10,563	- 762
Q2	- 9,349	- 3,481	- 1,697	+ 7,492	- 5,868	.	- 1,691	- 4,047	- 3,083	- 964
Q3	- 14,083	- 8,464	- 2,184	+ 2,039	- 5,620	.	- 1,691	- 3,535	- 2,265	- 1,270
2022 Dec.	- 7,792	- 5,628	- 4,623	+ 1,145	- 2,165	- 616	- 611	- 643	+ 394	- 1,037
2023 Jan.	- 5,542	- 3,794	- 1,910	+ 654	- 1,749	- 604	- 603	- 4,700	- 4,169	- 532
Feb.	- 6,039	- 3,879	- 923	+ 991	- 2,161	- 564	- 564	- 1,789	- 1,776	- 13
Mar.	- 8,023	- 3,188	- 519	+ 935	- 4,835	.	- 564	- 4,835	- 4,618	- 217
Apr.	- 5,069	- 3,264	- 1,060	+ 1,070	- 1,806	.	- 564	- 640	- 182	- 458
May	- 79	+ 1,974	- 254	+ 5,166	- 2,053	.	- 564	- 2,309	- 2,114	- 195
June	- 4,200	- 2,191	- 383	+ 1,256	- 2,010	.	- 564	- 1,099	- 787	- 312
July	- 5,460	- 3,498	- 911	+ 536	- 1,962	.	- 564	- 4,341	- 3,670	- 671
Aug.	- 4,554	- 2,818	- 823	+ 381	- 1,736	- 565	- 564	- 686	- 434	- 252
Sep.	- 4,069	- 2,147	- 451	+ 1,122	- 1,922	.	- 564	+ 1,492	+ 1,839	- 347
Oct. P	- 6,273	- 4,172	- 1,399	+ 391	- 2,101	.	- 560	- 4,182	- 3,587	- 595

<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

### 6. Financial account of the Federal Republic of Germany (net)

€ million

Item	2020	2021	2022	2023					
				Q1	Q2	Q3	August	September	October p
<b>I. Net domestic investment abroad (increase: +)</b>	<b>+ 724,008</b>	<b>+ 819,754</b>	<b>+ 328,088</b>	<b>+ 129,843</b>	<b>+ 26,252</b>	<b>+ 45,811</b>	<b>+ 6,958</b>	<b>+ 26,560</b>	<b>+ 91,966</b>
1. Direct investment	+ 134,017	+ 180,852	+ 169,006	+ 27,888	+ 34,896	+ 17,651	- 1,657	+ 22,032	+ 11,986
Equity	+ 89,898	+ 121,136	+ 114,061	+ 23,029	+ 23,725	+ 21,222	+ 7,527	+ 11,472	+ 4,104
of which:									
Reinvestment of earnings <sup>1</sup>	+ 17,533	+ 59,185	+ 69,943	+ 16,481	+ 14,343	+ 19,016	+ 7,101	+ 6,200	+ 3,739
Debt instruments	+ 44,119	+ 59,716	+ 54,945	+ 4,859	+ 11,172	- 3,571	- 9,184	+ 10,560	+ 7,882
2. Portfolio investment	+ 166,417	+ 174,958	+ 16,697	+ 78,923	+ 49,343	+ 4,599	+ 3,132	- 2,943	- 3,008
Shares <sup>2</sup>	+ 53,110	+ 46,753	- 16,698	+ 4,072	- 4,568	- 6,069	- 1,176	- 6,764	- 550
Investment fund shares <sup>3</sup>	+ 35,932	+ 116,401	+ 33,614	+ 10,899	+ 4,737	+ 8,982	+ 643	+ 3,555	+ 700
Short-term <sup>4</sup>									
debt securities	+ 10,507	- 107	+ 12,340	+ 7,640	+ 2,892	- 710	- 791	- 20	+ 123
Long-term <sup>5</sup>									
debt securities	+ 66,867	+ 11,912	- 12,559	+ 56,312	+ 46,281	+ 2,395	+ 4,456	+ 286	- 3,281
3. Financial derivatives and employee stock options <sup>6</sup>	+ 94,579	+ 60,178	+ 42,677	+ 20,246	+ 11,251	+ 12,599	+ 12,347	+ 1,536	+ 11,697
4. Other investment <sup>7</sup>	+ 329,046	+ 371,874	+ 95,282	+ 2,562	- 70,335	+ 11,753	- 6,757	+ 6,502	+ 70,433
MFIs <sup>8</sup>	- 4,313	+ 112,903	+ 59,476	+ 65,798	- 23,037	+ 20,168	- 6,309	- 1,048	+ 14,530
Short-term	+ 3,683	+ 99,380	+ 34,961	+ 68,459	- 18,346	+ 2,381	- 11,639	- 8,666	+ 7,688
Long-term	- 8,021	+ 13,204	+ 24,474	- 2,691	- 4,705	+ 17,766	+ 5,325	+ 7,612	+ 6,836
Enterprises and households <sup>9</sup>	+ 88,179	+ 143,700	+ 46,596	+ 33,033	+ 52,932	+ 16,145	- 4,488	+ 18,016	+ 45,697
Short-term	+ 44,218	+ 113,230	+ 23,769	+ 28,685	+ 48,375	+ 13,065	- 4,805	+ 16,899	+ 45,537
Long-term	+ 22,325	- 13,944	- 7,625	+ 594	+ 563	+ 950	- 92	+ 409	- 516
General government	+ 2,069	- 8,123	- 24,958	+ 9,444	- 2,659	- 1,719	- 1,660	- 84	- 228
Short-term	+ 3,461	- 7,256	- 23,451	+ 3,286	- 1,897	- 1,571	- 1,488	- 42	- 179
Long-term	- 2,485	- 2,327	- 2,883	+ 4,337	- 1,000	- 627	- 172	- 43	- 49
Bundesbank	+ 243,112	+ 123,394	+ 14,167	- 105,713	- 97,571	- 22,840	+ 5,700	- 10,382	+ 10,434
5. Reserve assets	- 51	+ 31,892	+ 4,426	+ 224	+ 1,096	- 790	- 107	- 566	+ 858
<b>II. Net foreign investment in the reporting country (increase: +)</b>	<b>+ 532,526</b>	<b>+ 571,203</b>	<b>+ 100,381</b>	<b>+ 30,030</b>	<b>- 25,603</b>	<b>- 9,404</b>	<b>- 26,031</b>	<b>+ 4,315</b>	<b>+ 67,616</b>
1. Direct investment	+ 138,902	+ 80,483	+ 43,725	- 10,209	+ 21,404	- 5,333	- 1,327	+ 2,735	+ 9,253
Equity	+ 45,841	+ 41,374	+ 14,811	+ 13,182	+ 3,229	- 1,706	+ 1,619	+ 809	+ 2,142
of which:									
Reinvestment of earnings <sup>1</sup>	+ 707	+ 7,659	+ 7,123	+ 5,976	- 4,384	+ 1,524	+ 721	+ 1,352	+ 374
Debt instruments	+ 93,061	+ 39,109	+ 28,914	- 23,391	+ 18,174	- 3,627	- 2,945	+ 1,926	+ 7,111
2. Portfolio investment	+ 150,014	- 28,581	- 7,600	+ 53,182	+ 32,870	+ 58,974	+ 10,733	+ 20,089	- 10,902
Shares <sup>2</sup>	- 17,040	+ 2,101	- 4,695	- 4,868	- 5,005	- 1,359	- 3,072	- 1,113	- 2,689
Investment fund shares <sup>3</sup>	+ 962	- 8,433	- 3,235	+ 932	- 1,061	- 1,592	+ 149	- 793	+ 90
Short-term <sup>4</sup>									
debt securities	+ 84,459	+ 29,313	- 37,218	+ 1,551	+ 9,964	- 2,040	+ 5,827	- 8,524	- 17,310
Long-term <sup>5</sup>									
debt securities	+ 81,632	- 51,563	+ 37,548	+ 55,568	+ 28,973	+ 63,964	+ 7,830	+ 30,519	+ 9,007
3. Other investment <sup>7</sup>	+ 243,611	+ 519,301	+ 64,255	- 12,943	- 79,877	- 63,045	- 35,437	- 18,509	+ 69,266
MFIs <sup>8</sup>	+ 108,426	+ 161,287	+ 152,946	+ 108,354	- 33,858	- 35,890	- 36,794	- 26,743	+ 35,554
Short-term	+ 74,908	+ 115,265	+ 160,854	+ 88,506	- 37,871	- 50,804	- 36,478	- 40,233	+ 34,491
Long-term	+ 33,579	+ 46,044	- 7,910	+ 19,847	+ 4,015	+ 14,912	- 317	+ 13,489	+ 1,063
Enterprises and households <sup>9</sup>	+ 32,084	+ 135,961	+ 6,958	+ 5,051	+ 26,516	- 24,784	+ 4,428	- 19,979	+ 55,405
Short-term	+ 14,969	+ 99,877	+ 9,271	- 711	+ 20,334	- 26,261	+ 3,006	- 19,995	+ 54,517
Long-term	+ 13,511	+ 12,382	+ 8,907	+ 4,498	+ 4,758	+ 112	+ 928	- 317	+ 445
General government	- 7,840	- 4,742	- 4,931	+ 1,074	+ 143	+ 2,890	- 762	+ 2,525	+ 2,894
Short-term	- 7,557	- 2,134	- 2,478	+ 1,683	+ 143	+ 3,157	- 701	+ 2,534	+ 2,907
Long-term	- 280	- 2,605	- 2,451	- 609	+ 0	- 77	- 62	- 9	- 13
Bundesbank	+ 110,941	+ 226,796	- 90,717	- 127,423	- 72,678	- 5,260	- 2,309	+ 25,688	- 24,587
<b>III. Net financial account (net lending: +/net borrowing: -)</b>	<b>+ 191,481</b>	<b>+ 248,551</b>	<b>+ 227,707</b>	<b>+ 99,813</b>	<b>+ 51,855</b>	<b>+ 55,215</b>	<b>+ 32,989</b>	<b>+ 22,245</b>	<b>+ 24,350</b>

<sup>1</sup> Estimated on the basis of the figures on the level of direct investment stocks abroad and in the Federal Republic of Germany (see Statistical series, direct investment statistics). <sup>2</sup> Including participation certificates. <sup>3</sup> Including reinvestment of earnings. <sup>4</sup> Short-term: original maturity up to one year. <sup>5</sup> Up to and including 2012 without accrued interest. Long-term: original maturity of more than one year or unlimited.

<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

### 7. External position of the Bundesbank \*

€ million

End of reporting period	External assets										External liabilities 3 4	Net external position 5
	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 1	Portfolio investment 2			
1999 Jan. 6	95,316	93,940	29,312	1,598	6,863	56,167	1,376	–	–	–	9,628	85,688
2003	95,394	76,680	36,533	1,540	6,069	32,538	18,259	4,474	454	–	83,329	12,065
2004	93,110	71,335	35,495	1,512	5,036	29,292	21,110	7,851	665	–	95,014	1,904
2005	130,268	86,181	47,924	1,601	2,948	33,708	43,184	29,886	902	–	115,377	14,891
2006	104,389	84,765	53,114	1,525	1,486	28,640	18,696	5,399	928	–	134,697	30,308
2007	179,492	92,545	62,433	1,469	949	27,694	84,420	71,046	2,527	–	176,569	2,923
2008	230,775	99,185	68,194	1,576	1,709	27,705	129,020	115,650	2,570	–	237,893	7,118
2009	323,286	125,541	83,939	13,263	2,705	25,634	190,288	177,935	7,458	–	247,645	75,641
2010	524,695	162,100	115,403	14,104	4,636	27,957	337,921	325,553	24,674	–	273,241	251,454
2011	714,662	184,603	132,874	14,118	8,178	29,433	475,994	463,311	54,065	–	333,730	380,932
2012	921,002	188,630	137,513	13,583	8,760	28,774	668,672	655,670	63,700	–	424,999	496,003
2013	721,741	143,753	94,876	12,837	7,961	28,080	523,153	510,201	54,834	–	401,524	320,217
2014	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	–	396,314	282,490
2015	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	–	481,787	318,921
2016	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	–	592,723	397,727
2017	1,142,845	166,842	117,347	13,987	4,294	31,215	923,765	906,941	52,238	–	668,527	474,318
2018	1,209,982	173,138	121,445	14,378	5,518	31,796	980,560	966,190	56,284	–	770,519	439,462
2019	1,160,971	199,295	146,562	14,642	6,051	32,039	909,645	895,219	52,031	–	663,320	497,651
2020	1,429,236	219,127	166,904	14,014	8,143	30,066	1,152,757	1,136,002	57,353	–	781,339	647,898
2021	1,592,822	261,387	173,821	14,378	8,426	32,649	1,276,150	1,260,673	55,285	–	1,009,488	583,334
2022	1,617,056	276,488	184,036	14,378	9,480	34,404	1,290,317	1,269,076	50,251	–	919,441	697,614
2021 June	1,384,834	213,600	159,995	14,326	8,094	31,184	1,115,447	1,101,897	55,787	–	670,632	714,202
July	1,319,694	219,775	165,984	14,345	8,104	31,343	1,042,015	1,024,970	57,903	–	657,905	661,789
Aug.	1,360,722	250,742	165,757	14,345	8,174	31,720	1,053,653	1,037,259	56,327	–	699,773	660,949
Sep.	1,431,909	246,908	160,943	14,345	8,267	32,092	1,130,558	1,115,126	54,443	–	746,128	685,781
Oct.	1,388,160	250,340	164,602	14,345	8,449	31,570	1,083,141	1,066,604	54,678	–	735,595	652,564
Nov.	1,456,861	258,815	170,460	14,345	8,405	33,575	1,142,719	1,127,545	55,327	–	773,217	683,644
Dec.	1,592,822	261,387	173,821	14,378	8,426	32,649	1,276,150	1,260,673	55,285	–	1,009,488	583,334
2022 Jan.	1,479,694	261,965	173,362	14,378	8,504	33,168	1,163,561	1,149,868	54,168	–	807,889	671,805
Feb.	1,491,552	273,726	184,255	14,378	8,711	33,905	1,164,098	1,149,722	53,729	–	774,786	716,766
Mar.	1,516,744	277,782	187,779	14,378	8,663	33,965	1,184,501	1,169,952	54,462	–	808,690	708,055
Apr.	1,491,558	288,953	196,274	14,378	8,799	35,263	1,148,681	1,135,400	53,923	–	790,221	701,337
May	1,505,419	278,174	186,481	14,378	8,681	34,980	1,173,376	1,159,716	53,869	–	805,179	700,240
June	1,566,099	281,157	187,573	14,378	8,948	35,923	1,232,176	1,216,530	52,767	–	826,280	739,819
July	1,514,570	280,910	185,950	14,378	9,086	36,409	1,179,431	1,166,155	54,229	–	810,881	703,689
Aug.	1,590,572	280,160	184,794	14,378	9,300	36,451	1,258,187	1,245,014	52,225	–	842,576	747,996
Sep.	1,613,008	281,258	184,022	14,378	9,358	37,592	1,281,266	1,266,647	50,483	–	829,129	783,879
Oct.	1,569,272	274,421	178,101	14,378	9,527	37,119	1,243,873	1,230,005	50,977	–	811,035	758,237
Nov.	1,577,175	277,458	183,052	14,378	9,315	35,923	1,248,088	1,233,980	51,629	–	810,314	766,861
Dec.	1,617,056	276,488	184,036	14,378	9,480	34,404	1,290,317	1,269,076	50,251	–	919,441	697,614
2023 Jan.	1,508,507	281,692	190,062	14,378	9,437	33,938	1,176,042	1,162,354	50,772	–	793,716	714,791
Feb.	1,455,724	276,016	183,755	14,378	9,480	34,199	1,130,353	1,114,888	49,356	–	743,006	712,718
Mar.	1,522,539	288,131	196,405	14,378	9,373	34,314	1,184,604	1,170,620	49,804	–	791,478	731,061
Apr.	1,431,180	285,667	194,679	14,378	9,297	34,049	1,096,324	1,081,284	49,189	–	726,986	704,194
May	1,435,049	290,368	197,915	14,378	9,379	34,416	1,095,750	1,081,900	48,931	–	701,467	733,582
June	1,416,292	280,820	188,991	14,378	9,292	33,919	1,087,034	1,068,747	48,438	–	718,324	697,969
July	1,399,374	282,438	191,458	14,378	9,184	33,429	1,068,875	1,052,218	48,061	–	689,447	709,927
Aug.	1,406,665	284,364	192,914	14,378	9,218	33,253	1,074,575	1,056,420	47,725	–	687,342	719,322
Sep.	1,393,337	282,490	190,232	14,378	9,278	33,333	1,064,193	1,048,059	46,654	–	713,662	679,675
Oct.	1,415,403	295,288	202,630	14,378	9,256	33,871	1,074,627	1,058,985	45,488	–	688,966	726,437
Nov.	1,414,241	292,718	201,195	14,378	8,958	33,627	1,076,415	1,060,074	45,107	–	691,309	722,932

\* 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 (acc. 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** Difference between External assets and External liabilities. **6** Euro opening balance sheet of the Bundesbank as at 1 January 1999.

## XII. External sector

### 8. External positions of enterprises \*

€ million

End of reporting period	Claims on non-residents						Liabilities to non-residents							
	Total	Balances with foreign banks	Claims on foreign non-banks				Total	Loans from foreign banks	Liabilities to 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>Rest of the world</b>														
2019	968,277	227,767	740,510	503,698	236,812	220,465	16,348	1,312,974	167,925	1,145,050	932,555	212,495	136,829	75,666
2020	1,030,962	244,325	786,637	546,252	240,385	213,568	26,816	1,419,220	172,112	1,247,108	1,028,217	218,891	130,165	88,726
2021	1,163,639	256,764	906,875	616,964	289,911	261,752	28,159	1,576,549	215,064	1,361,485	1,105,049	256,436	159,446	96,990
2022	1,232,675	251,857	980,818	661,948	318,870	289,264	29,606	1,607,074	174,307	1,432,767	1,139,934	292,833	189,258	103,576
2023 May	1,291,982	337,758	954,224	650,906	303,318	271,538	31,780	1,634,912	222,301	1,412,611	1,136,125	276,486	170,424	106,061
June	1,330,191	353,858	976,333	665,732	310,602	278,874	31,727	1,640,255	203,806	1,436,449	1,152,362	284,087	176,562	107,525
July	1,325,269	357,212	968,057	667,962	300,095	268,536	31,560	1,626,265	202,796	1,423,469	1,150,603	272,866	165,200	107,666
Aug.	1,312,101	353,215	958,886	667,907	290,980	259,478	31,501	1,630,134	206,965	1,423,169	1,157,253	265,916	157,918	107,998
Sep.	1,341,858	358,536	983,323	681,810	301,513	269,903	31,610	1,617,040	192,423	1,424,617	1,149,887	274,730	168,314	106,416
Oct. P	1,395,580	405,007	990,573	681,870	308,702	277,766	30,937	1,678,673	221,724	1,456,949	1,177,290	279,659	173,066	106,594
<b>EU Member States (27 excl. GB)</b>														
2019	573,453	176,913	396,539	304,545	91,994	83,227	8,768	841,017	91,513	749,504	663,166	86,337	63,664	22,674
2020	612,885	185,565	427,320	333,594	93,725	80,717	13,008	899,482	97,582	801,899	712,252	89,647	61,761	27,886
2021	660,557	194,046	466,511	358,320	108,191	95,340	12,851	988,142	151,193	836,949	733,188	103,761	74,174	29,587
2022	703,663	192,412	511,251	387,897	123,354	109,914	13,440	991,655	125,880	865,775	750,939	114,836	82,671	32,165
2023 May	789,513	280,245	509,267	385,234	124,033	109,647	14,386	985,185	124,431	860,754	747,268	113,487	81,388	32,099
June	807,519	288,895	518,624	392,072	126,552	112,044	14,508	1,015,255	128,117	887,137	768,463	118,675	86,648	32,027
July	807,953	290,841	517,111	396,243	120,869	106,293	14,576	997,716	118,205	879,511	767,757	111,754	79,410	32,344
Aug.	799,774	286,857	512,916	395,782	117,135	102,618	14,517	997,918	122,139	875,779	768,727	107,052	74,940	32,112
Sep.	814,429	289,623	524,805	404,137	120,669	106,068	14,601	1,003,027	130,574	872,452	759,188	113,265	80,760	32,505
Oct. P	862,771	331,286	531,485	407,677	123,808	109,367	14,441	1,025,211	131,973	893,237	777,176	116,062	83,249	32,813
<b>Extra-EU Member States (27 incl. GB)</b>														
2019	394,824	50,853	343,971	199,153	144,818	137,238	7,580	471,958	76,412	395,546	269,388	126,157	73,165	52,992
2020	418,077	58,760	359,317	212,658	146,659	132,851	13,808	519,738	74,530	445,208	315,965	129,244	68,404	60,840
2021	503,082	62,718	440,364	258,644	181,720	166,411	15,309	588,407	63,871	524,536	371,861	152,675	85,271	67,403
2022	529,012	59,445	469,567	274,050	195,517	179,351	16,166	615,419	48,427	566,992	388,995	177,997	106,587	71,410
2023 May	502,469	57,512	444,957	265,671	179,286	161,892	17,394	649,727	97,870	551,857	388,858	162,999	89,036	73,963
June	522,673	64,963	457,710	273,660	184,050	166,831	17,219	625,000	75,689	549,311	383,899	165,412	89,914	75,498
July	517,316	66,370	450,946	271,720	179,226	162,242	16,984	628,549	84,591	543,958	382,846	161,112	85,790	75,322
Aug.	512,327	66,357	445,970	272,125	173,845	156,860	16,985	632,216	84,826	547,390	388,526	158,864	82,978	75,886
Sep.	527,429	68,912	458,517	277,673	180,844	163,834	17,010	614,013	61,848	552,165	390,699	161,465	87,554	73,911
Oct. P	532,809	73,721	459,087	274,193	184,894	168,399	16,495	653,463	89,751	563,712	400,114	163,598	89,817	73,781
<b>Euro area (20)</b>														
2019	494,383	158,182	336,201	264,821	71,380	63,742	7,638	764,929	71,012	693,917	626,886	67,031	49,802	17,229
2020	526,584	164,691	361,893	288,485	73,408	61,662	11,746	812,136	75,869	736,267	666,749	69,518	47,547	21,971
2021	555,081	172,032	383,050	297,861	85,189	73,511	11,678	904,888	129,783	775,105	693,366	81,739	58,280	23,459
2022	597,491	173,395	424,096	328,761	95,336	83,244	12,092	903,757	105,435	798,322	709,668	88,654	63,579	25,075
2023 May	686,342	262,375	423,967	327,377	96,590	83,622	12,967	896,990	105,532	791,459	705,854	85,604	61,181	24,423
June	702,858	272,835	430,023	331,855	98,168	85,070	13,098	924,605	108,954	815,652	725,476	90,176	65,920	24,256
July	705,172	275,142	430,030	335,723	94,306	81,133	13,173	910,691	100,225	810,466	725,283	85,183	60,654	24,529
Aug.	697,670	270,789	426,881	335,841	91,040	77,968	13,072	911,291	103,710	807,580	726,079	81,501	57,115	24,386
Sep.	709,383	271,823	437,560	344,312	93,248	80,095	13,153	910,853	109,897	800,956	714,940	86,016	61,442	24,575
Oct. P	758,205	313,954	444,251	348,706	95,544	82,600	12,945	933,708	112,100	821,608	733,443	88,165	63,396	24,769
<b>Extra-Euro area (20)</b>														
2019	473,894	69,585	404,309	238,877	165,432	156,723	8,709	548,045	.	.	.	145,464	87,027	58,437
2020	504,378	79,634	424,743	257,766	166,977	151,907	15,070	607,084	96,243	510,840	361,467	149,373	82,618	66,755
2021	608,558	84,732	523,826	319,103	204,723	188,241	16,481	671,661	85,281	586,380	411,683	174,697	101,165	73,532
2022	635,184	.	.	.	223,535	206,021	17,514	703,317	.	.	.	204,179	125,679	78,501
2023 May	605,640	.	.	.	206,729	187,916	18,813	737,921	.	.	.	190,881	109,243	81,638
June	627,333	.	.	.	212,434	193,805	18,629	715,649	.	.	.	193,911	110,642	83,269
July	620,097	.	.	.	205,789	187,402	18,386	715,574	.	.	.	187,682	104,546	83,137
Aug.	614,431	.	.	.	199,939	181,510	18,429	718,843	.	.	.	184,415	100,803	83,612
Sep.	632,475	.	.	.	208,265	189,808	18,457	706,187	.	.	.	188,714	106,872	81,842
Oct. P	637,375	.	.	.	.	.	.	744,965	.	.	.	191,494	109,670	81,824

\* 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 XII.7.



## XII. External sector

### 9. 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	DKK	JPY	NOK	SEK	CHF	GBP	USD
2011	1.3484	1.3761	8.9960	7.4506	110.96	7.7934	9.0298	1.2326	0.86788	1.3920
2012	1.2407	1.2842	8.1052	7.4437	102.49	7.4751	8.7041	1.2053	0.81087	1.2848
2013	1.3777	1.3684	8.1646	7.4579	129.66	7.8067	8.6515	1.2311	0.84926	1.3281
2014	1.4719	1.4661	8.1857	7.4548	140.31	8.3544	9.0985	1.2146	0.80612	1.3285
2015	1.4777	1.4186	6.9733	7.4587	134.31	8.9496	9.3535	1.0679	0.72584	1.1095
2016	1.4883	1.4659	7.3522	7.4452	120.20	9.2906	9.4689	1.0902	0.81948	1.1069
2017	1.4732	1.4647	7.6290	7.4386	126.71	9.3270	9.6351	1.1117	0.87667	1.1297
2018	1.5797	1.5294	7.8081	7.4532	130.40	9.5975	10.2583	1.1550	0.88471	1.1810
2019	1.6109	1.4855	7.7355	7.4661	122.01	9.8511	10.5891	1.1124	0.87777	1.1195
2020	1.6549	1.5300	7.8747	7.4542	121.85	10.7228	10.4848	1.0705	0.88970	1.1422
2021	1.5749	1.4826	7.6282	7.4370	129.88	10.1633	10.1465	1.0811	0.85960	1.1827
2022	1.5167	1.3695	7.0788	7.4396	138.03	10.1026	10.6296	1.0047	0.85276	1.0530
2022 July	1.4856	1.3180	6.8538	7.4426	139.17	10.1823	10.5752	0.9876	0.84955	1.0179
Aug.	1.4550	1.3078	6.8884	7.4393	136.85	9.8309	10.5021	0.9690	0.84499	1.0128
Sep.	1.4820	1.3187	6.9508	7.4366	141.57	10.1697	10.7840	0.9640	0.87463	0.9904
Oct.	1.5474	1.3477	7.0687	7.4389	144.73	10.3919	10.9503	0.9791	0.87058	0.9826
Nov.	1.5455	1.3708	7.3171	7.4387	145.12	10.3357	10.8798	0.9842	0.86892	1.0201
Dec.	1.5685	1.4379	7.3859	7.4377	142.82	10.4480	10.9859	0.9865	0.86950	1.0589
2023 Jan.	1.5523	1.4474	7.3173	7.4383	140.54	10.7149	11.2051	0.9961	0.88212	1.0769
Feb.	1.5514	1.4400	7.3244	7.4447	142.38	10.9529	11.1725	0.9905	0.88550	1.0715
Mar.	1.6034	1.4649	7.3807	7.4456	143.01	11.2858	11.2276	0.9908	0.88192	1.0706
Apr.	1.6389	1.4792	7.5561	7.4518	146.51	11.5187	11.3370	0.9846	0.88115	1.0968
May	1.6346	1.4687	7.5948	7.4485	148.93	11.7330	11.3697	0.9751	0.87041	1.0868
June	1.6157	1.4414	7.7653	7.4492	153.15	11.7164	11.6766	0.9764	0.85861	1.0840
July	1.6423	1.4618	7.9482	7.4508	155.94	11.3474	11.6343	0.9663	0.85856	1.1058
Aug.	1.6818	1.4703	7.9096	7.4522	157.96	11.4127	11.8117	0.9588	0.85892	1.0909
Sep.	1.6622	1.4458	7.7967	7.4566	157.80	11.4525	11.8417	0.9600	0.86158	1.0684
Oct.	1.6637	1.4474	7.7200	7.4604	158.04	11.6284	11.6472	0.9547	0.86798	1.0563
Nov.	1.6634	1.4828	7.8087	7.4581	161.84	11.7958	11.5475	0.9634	0.87045	1.0808

\* 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 Series Exchange rate statistics.

### 10. Euro area countries and irrevocable euro conversion rates in the third stage of Economic and Monetary Union

From	Country	Currency	ISO currency code	EUR 1 = currency units ...
1999 January 1	Austria	Austrian schilling	ATS	13.7603
	Belgium	Belgian franc	BEF	40.3399
	Finland	Finnish markka	FIM	5.94573
	France	French franc	FRF	6.55957
	Germany	Deutsche Mark	DEM	1.95583
	Ireland	Irish pound	IEP	0.787564
	Italy	Italian lira	ITL	1,936.27
	Luxembourg	Luxembourg franc	LUF	40.3399
	Netherlands	Dutch guilder	NLG	2.20371
	Portugal	Portuguese escudo	PTE	200.482
	Spain	Spanish peseta	ESP	166.386
	2001 January 1	Greece	Greek drachma	GRD
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
2023 January 1	Croatia	Croatian kuna	HRK	7.53450

## XII. External sector

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

Q1 1999 = 100

Period	Effective exchange rates of the euro vis-à-vis the currencies of the						Indicators of the German economy's price competitiveness						
	extended EER group of trading partners 1				broad EER group of trading partners 2		Based on the deflators of total sales 3 vis-à-vis				Based on consumer price indices vis-à-vis		
	Nominal	In real terms based on consumer price indices	In real terms based on the deflators of gross domestic product 3	In real terms based on unit labour costs of national economy 3	Nominal	In real terms based on consumer price indices	27 selected industrial countries 4			37 countries 5	27 selected industrial countries 4	37 countries 5	60 countries 6
							Total	of which:					
						Euro area countries	Non-euro area countries						
1999	96.2	96.1	95.8	96.1	96.5	95.9	97.9	99.6	95.7	97.7	98.3	98.1	97.8
2000	87.0	86.8	85.9	85.6	88.0	86.1	92.0	97.5	85.5	91.1	93.1	92.3	91.2
2001	87.4	87.1	86.6	84.5	90.1	86.9	91.7	96.6	86.1	90.5	93.0	91.7	91.1
2002	89.7	90.3	89.8	88.2	94.4	90.6	92.3	95.7	88.4	91.0	93.5	92.2	91.9
2003	100.5	101.6	101.1	99.4	106.5	101.7	95.9	94.8	97.5	95.3	97.0	96.7	96.8
2004	104.3	105.6	104.3	102.8	111.0	105.6	96.2	93.6	100.0	95.6	98.5	98.2	98.4
2005	102.9	104.3	102.3	101.0	109.1	103.2	94.8	92.1	98.8	93.3	98.5	97.2	96.8
2006	102.9	104.3	101.8	100.0	109.3	102.6	93.6	90.4	98.2	91.6	98.6	96.8	96.0
2007	106.5	107.3	104.1	101.8	112.9	104.8	94.6	89.7	102.1	92.1	100.9	98.3	97.4
2008	110.4	110.3	106.3	105.8	117.8	107.3	95.0	88.4	105.3	91.4	102.4	98.5	97.6
2009	111.9	111.1	107.4	109.3	120.8	108.3	95.3	89.2	104.8	92.1	101.9	98.6	97.9
2010	104.6	103.3	99.1	101.8	112.1	99.3	92.5	88.7	98.3	88.2	98.8	94.3	92.5
2011	104.4	102.4	97.2	100.0	112.9	98.8	92.2	88.4	97.7	87.4	98.2	93.5	91.9
2012	98.6	97.0	91.6	94.1	107.6	94.0	90.1	88.3	92.6	84.8	95.9	90.5	88.9
2013	102.2	100.1	94.7	97.0	112.4	97.0	92.4	88.8	97.6	86.7	98.1	92.3	90.9
2014	102.4	99.5	94.7	97.2	114.7	97.4	93.0	89.6	98.0	87.4	98.2	92.5	91.5
2015	92.5	89.7	86.0	86.4	106.1	88.7	89.8	90.2	89.2	83.6	94.3	87.8	86.9
2016	95.2	91.6	88.3	p 87.6	110.1	90.7	90.7	90.7	90.7	85.0	95.0	88.8	88.1
2017	97.5	93.6	89.5	p 88.4	112.5	92.0	92.0	90.8	93.6	85.8	96.3	89.9	88.9
2018	100.0	95.8	91.1	p 90.0	117.3	95.2	93.3	91.0	96.7	86.8	97.7	91.2	90.8
2019	98.1	93.3	89.3	p 87.4	115.5	92.5	92.3	91.2	93.9	85.9	96.4	89.9	89.4
2020	99.7	93.7	90.1	p 88.5	119.2	93.9	92.6	91.5	94.0	86.6	96.4	90.1	90.1
2021	99.6	93.7	p 89.4	p 86.6	120.5	94.3	93.6	91.9	96.1	86.9	97.4	90.6	90.9
2022	95.3	90.8	p 84.4	p 81.8	116.1	p 90.9	92.3	91.7	93.0	85.3	95.9	89.1	p 89.0
2021 June	100.3	94.1			121.3	94.7				97.9	91.0	91.3	
July	99.8	93.8			120.6	94.3				97.8	91.0	91.2	
Aug.	99.4	93.4	p 89.3	p 86.4	120.2	93.9	93.8	92.0	96.3	87.0	97.4	90.6	90.8
Sep.	99.5	93.6			120.1	93.9				97.3	90.6	90.6	
Oct.	98.5	92.7			119.2	93.2				96.7	90.0	90.1	
Nov.	97.6	91.9	p 87.4	p 84.5	118.4	92.6	93.6	92.5	95.2	86.5	96.2	89.4	89.7
Dec.	97.0	91.4			118.6	92.4				95.7	88.9	89.3	
2022 Jan.	96.6	91.4			118.2	p 92.3				96.0	88.9	p 89.3	
Feb.	96.8	91.8	p 85.8	p 83.1	118.5	p 92.6	93.0	92.0	94.4	85.8	96.1	p 89.4	
Mar.	95.8	91.5			117.9	p 92.6				96.3	89.5	p 89.9	
Apr.	95.0	90.1			116.0	p 90.2				96.1	88.9	p 88.8	
May	95.4	90.5	p 84.2	p 81.5	115.8	p 90.2	92.3	91.6	93.2	85.0	96.5	p 89.5	p 89.2
June	95.7	90.7			116.1	p 90.3				95.7	88.7	p 88.4	
July	93.9	89.2			114.1	p 88.9				94.9	87.9	p 87.5	
Aug.	93.4	88.9	p 82.5	p 80.2	113.6	p 88.7	91.6	91.6	91.3	84.6	94.5	p 87.6	p 87.3
Sep.	93.9	89.9			113.9	p 89.4				95.9	89.1	p 88.7	
Oct.	94.5	91.3			114.8	p 90.8				96.0	89.7	p 89.4	
Nov.	95.7	92.3	p 85.1	p 82.5	116.6	p 92.0	92.4	91.8	93.1	85.8	97.0	p 90.6	p 90.4
Dec.	96.8	92.6			118.6	p 92.8				96.2	89.7	p 89.7	
2023 Jan.	97.1	92.8			119.2	p 93.1				97.4	90.3	p 90.3	
Feb.	97.0	93.0	p 86.9	p 84.5	119.3	p 93.4	93.2	91.6	95.5	86.2	97.6	p 90.4	p 90.5
Mar.	97.3	93.2			119.7	p 93.6				98.0	90.9	p 91.0	
Apr.	98.4	p 94.1			121.5	p 94.8				98.5	p 91.5	p 91.8	p 91.8
May	98.0	p 93.5	p 88.1	p 84.9	120.9	p 94.1	93.9	92.1	96.5	87.1	97.9	p 91.0	p 91.2
June	98.2	p 93.8			121.8	p 94.7				98.3	p 91.4	p 91.9	
July	99.2	p 95.0			123.7	p 96.2				98.4	p 91.8	p 92.5	
Aug.	99.0	p 95.1	...	...	123.7	p 96.1	93.8	92.1	96.5	87.6	98.2	p 91.8	p 92.4
Sep.	98.5	p 94.7			123.0	p 95.5				98.0	p 91.7	p 92.1	
Oct.	98.0	p 94.2			122.5	p 95.0				97.6	p 91.2	p 91.6	
Nov.	98.7	p 94.4	...	...	123.4	p 95.2	...	...	...	97.7	p 91.2	p 91.6	

\* 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 to compute the effective exchange rates of the euro. A decline in the figures implies an increase in competitiveness. The weights are based on trade in manufactured goods and services. For more detailed information on methodology and weighting scale, see the website of the Deutsche Bundesbank (<https://www.bundesbank.de/content/796162>). 1 The calculations are based on the weighted averages of the changes in the bilateral exchange rates of the euro vis-à-vis the currencies of the following 18 countries: Australia, Bulgaria, Canada, China, Czechia, Denmark, Hong Kong, Hungary, Japan, Norway, Poland, Romania, Singapore, South Korea, Sweden, Switzerland, the United Kingdom and the United States. Where current price and wage indices were not available, estimates were used. 2 Includes countries belonging to the extended EER group of trading partners (fixed composition) and additionally the following 23 countries: Algeria, Argentina, Brazil, Chile, Colombia, Iceland, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, Peru, Philippines, the Russian Federation, Saudi Arabia, South Africa, Taiwan,

Thailand, Turkey, Ukraine and United Arab Emirates. The ECB has suspended the publication and calculation of the euro foreign exchange reference rate against Russian rouble with effect from March 2, 2022 until further notice. For the calculation of effective exchange rates, an indicative rate is used for the Russian Federation from that date. It is calculated from the daily RUB/USD rates determined by the Bank of Russia in conjunction with the respective ECB's euro foreign exchange reference rate to the US dollar. 3 Annual and quarterly averages. 4 Euro area countries (from 2001 including Greece, from 2007 including Slovenia, from 2008 including Cyprus and Malta, from 2009 including Slovakia, from 2011 including Estonia, from 2014 including Latvia, from 2015 including Lithuania, from 2023 including Croatia) as well as Canada, Denmark, Japan, Norway, Sweden, Switzerland, the United Kingdom and the United States. 5 Euro area countries (current composition) and countries belonging to the extended EER group of trading partners (fixed composition). 6 Euro area countries (current composition) and countries belonging to the broad EER group of trading partners (fixed composition).



## 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 printed publications are available free of charge to interested parties and may be obtained through the Bundesbank's order portal. Up-to-date figures for selected statistical datasets are available on the Bundesbank's website, as are also the Statistical Series, with a changed basic structure and advanced options for using data.

### ■ Annual Report

- Turning point in payments
- Sustainability risks in banking supervision

### ■ Financial Stability Review

#### May 2023

- The current economic situation in Germany

### ■ Monthly Report

A list of the articles published in the period from 2010 to 2022 is available on the Bundesbank's website.

#### June 2023

- Arduous recovery amid high and only gradually easing inflation – outlook for the German economy up to 2025
- Developments in bank interest rates in Germany during the period of monetary policy tightening
- The growing significance of central government's off-budget entities

### Monthly Report articles

#### February 2023

- The current economic situation in Germany

#### March 2023

- German balance of payments in 2022
- The impact of digitalisation on labour productivity growth
- German enterprises' profitability and financing in 2021

#### April 2023

- Money market conditions and remuneration of government deposits
- Household wealth and finances in Germany: Results of the 2021 household wealth survey

#### July 2023

- Digital money: options for the financial industry
- Cross-border liquidity flows – the role of the banking system in the German balance of payments
- Economic developments in emerging market economies: old problems and new challenges

#### August 2023

- The current economic situation in Germany

### September 2023

- Germany as a business location: selected aspects of current dependencies and medium-term challenges
- Heterogeneous impact of monetary policy in the euro area?
- Models for short-term economic forecasting during the recent crises
- Member States' financial relationships with the EU budget and the NextGenerationEU off-budget entity in 2022
- The performance of German credit institutions in 2022

### October 2023

- Is price competitiveness favourable in Germany and the euro area?
- State government finances in 2022: high surplus overall, some states still making extensive recourse to emergency borrowing

### November 2023

- The current economic situation in Germany

### December 2023

- Falling inflation, but not yet time to sound the all-clear – outlook for the German economy up to 2026
- Model-based recommendations for monetary policy decision-making
- German enterprises' profitability and financing during the 2022 energy crisis
- Tackling the challenges of crypto-assets – the state of play with regulation

## ■ Statistical Series\*

### Banks

- Banking statistics, monthly
- Statistics on payments and securities trading, September

### Corporate financial statements

- Consolidated financial statement statistics, June/December
- Financial statement statistics (extrapolated results), December
- Financial statement statistics (ratios), May
- Financial statement statistics (ratios – provisional data), May

### Economic activity and prices

- Seasonally adjusted business statistics, monthly

### Exchange rates

- Exchange rate statistics, monthly

### External sector

- Balance of payments statistics, monthly
- Direct investment statistics, April
- International investment position and external debt, monthly

### Macroeconomic accounting systems

- Financial accounts, June

### Money and capital markets

- Capital market indicators, monthly
- Investment funds statistics, monthly
- Securities issues statistics, monthly

## ■ Special Statistical Publications

- 1 Banking statistics guidelines, January 2023<sup>1,2</sup>
- 2 Banking statistics, customer classification, January 2023<sup>2</sup>

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|---|---|---------|---|
| 3 | Aufbau der bankstatistischen Tabellen, July 2013 <sup>1,2</sup>                 | 19/2023 | The state-dependent impact of changes in bank capital requirements                                |
| 7 | Notes on the coding list for the balance of payments statistics, September 2013 | 20/2023 | Forecasting banknote circulation during the COVID-19 pandemic using structural time series models |

## ■ Special Publications

- |   |         |   |
|---|---------|---|
| Makro-ökonometrisches Mehr-Länder-Modell, November 1996 <sup>1</sup>  | 21/2023 | Effects of the ECB's communication on government bond spreads   |
| Europäische Organisationen und Gremien im Bereich von Währung und Wirtschaft, May 1997 <sup>1</sup>                         | 22/2023 | Learning monetary policy strategies at the effective lower bound with sudden surprises                |
| Die Zahlungsbilanz der ehemaligen DDR 1975 bis 1989, August 1999 <sup>1</sup>   | 23/2023 | Capital reallocation under climate policy uncertainty   |
| The market for German Federal securities, May 2000  | 24/2023 | Towards seasonal adjustment of infra-monthly time series with JDemetra+                               |
| Macro-Econometric Multi-Country Model: MEMMOD, June 2000  | 25/2023 | Precision-based sampling for state space models that have no measurement error                        |
| Bundesbank Act, September 2002  | 26/2023 | Effects of bank capital requirements on lending by banks and non-bank financial institutions          |
| Die Europäische Union: Grundlagen und Politikbereiche außerhalb der Wirtschafts- und Währungsunion, April 2005 <sup>1</sup> | 27/2023 | Forceful or persistent: How the ECB's new inflation target affects households' inflation expectations |
| Die Deutsche Bundesbank – Aufgabenfelder, rechtlicher Rahmen, Geschichte, April 2006 <sup>1</sup>                           | 28/2023 | Energy prices and inflation expectations: Evidence from households and firms                          |
| European economic and monetary union, April 2008  | 29/2023 | Effects of mergers on network models of the financial system  |
| Weltweite Organisationen und Gremien im Bereich von Währung und Wirtschaft, March 2013 <sup>1</sup>                         |         |   |

## ■ Discussion Papers<sup>o</sup>

- |         |   |
|---------|---|
| 18/2023 | Monetary policy rules under bounded rationality |
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For footnotes, see p. 88\*.

30/2023

Staggered difference-in-differences in gravity settings: Revisiting the effects of trade agreements

31/2023

Collateral scarcity and market functioning: Insights from the Eurosystem securities lending facilities

32/2023

The macroeconomic effects of inflation uncertainty

33/2023

The role of emission disclosure for the low-carbon transition

34/2023

Nowcasting consumer price inflation using high-frequency scanner data: Evidence from Germany

## ■ 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 Gesetz über das Kreditwesen, January 2008<sup>1</sup>
- 2a Solvency Regulation and Liquidity Regulation, February 2008<sup>2</sup>

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\* The Statistical Series replace the Statistical Supplements and, in part, the Special Statistical Publications; they will be provided exclusively on the Bundesbank's website under Publications/Statistics.

○ Discussion papers published from 2000 are available online.

<sup>1</sup> Publication available in German only.

<sup>2</sup> Available only as a download.