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Deutsche Bundesbank
Wilhelm-Epstein-Strasse 14
60431 Frankfurt am Main
Germany

Postfach 10 06 02
60006 Frankfurt am Main
Germany

Tel.: +49 (0)69 9566 33512
Email: www.bundesbank.de/kontakt

Internet: www.bundesbank.de

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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 Data unknown, not to be published or not meaningful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

Economic output likely to contract somewhat in Q3

German economic output will probably contract somewhat in the third quarter of 2023. It is unlikely that private consumption will offer any discernible positive impetus. Households are still reluctant to spend despite the slight easing in price inflation, strong wage growth and favourable labour market. Alongside consumer restraint, economic output is also being depressed by the growing weakness in industry. The further fall in the already low level of new orders and weaker order books are having more and more of an impact on industrial output. Higher financing costs are also likely to be contributing to weak domestic and foreign demand.

Private consumption

Indicators suggest continued weakness in private consumption for time being

The recovery in private consumption is likely to be delayed. In the retail sector, price-adjusted and seasonally adjusted sales in July were down on the previous quarter,[1] with many areas affected. Moreover, according to ifo Institute surveys, the situation in the hotel and restaurant sector deteriorated significantly in July and August. The consumer climate index compiled by market research institute GfK worsened for September compared with the previous period, thus remaining at a low level. By contrast, there is a possibility that car purchases might support private consumption. This is indicated by data on new passenger car registrations (available up to August) provided by the German Association of the Automotive Industry (VDA). Weak private consumption is also having a negative impact on consumer-related areas of the services sector. Those services sectors more dependent on industry are suffering from the weakness of the manufacturing sector. According to surveys by the ifo Institute, the assessment of business conditions in the services sector therefore deteriorated significantly overall. The Purchasing Managers' Index for the services sector also dropped below the expansion threshold for the first time this year.

Industry

Industrial output down steeply in July

Seasonally adjusted industrial output fell steeply in July on both the month and the quarter. Sectors that had previously supported industrial output saw a substantial slump. This particularly affected the manufacture of motor vehicles and information processing equipment. While the VDA reported a slight increase again in the number of motor vehicles produced in August, the number of units was still below the level of the previous quarter. Energy-intensive sectors continued to suffer from high energy prices. According to survey data from the ifo Institute, the assessment of the current situation in the manufacturing sector deteriorated significantly, falling into negative territory for the first time since October 2020. This weakness in industry is likely to continue, as indicated by industrial new orders in July, for example. Demand for industrial goods from both Germany and abroad fell sharply on the quarter. Large orders, which had risen considerably in the previous quarter, were the main reason for this slump. However, even excluding large orders, there was a fall in orders compared with the previous quarter. The trend decline in demand continued in most areas. Higher financing costs are likely to be having a negative impact on demand for capital goods. Furthermore, the diminishing order backlog is less and less of a cushion against the lack of new orders. As a result, production plans for the next three

1 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			
	Total	of which: Domestic	of which: Foreign	Main construction
2022 Q4	101.4	97.1	104.6	106.8
2023 Q1	101.3	94.7	106.3	102.6
Q2	101.8	96.6	105.7	104.6
May	101.2	97.7	103.8	106.5
June	108.9	99.2	116.2	104.4
July	96.2	89.6	101.2	…

Period	Output; 2015 = 100			
	Industry			
	Total	of which: Intermediate goods	of which: Capital goods	Construction
2022 Q4	96.5	95.5	96.2	109.2
2023 Q1	97.6	96.9	97.9	114.2
Q2	97.1	95.2	97.7	111.9
May	97.5	94.9	99.5	113.2
June	96.5	95.2	96.2	109.7
July	94.8	94.5	93.4	112.6

Period	Foreign trade; € billion			Memo item:
	Exports	Imports	Balance	Current account balance in € billion
2022 Q4	400.44	370.03	30.41	47.23
2023 Q1	398.17	352.46	45.70	58.05
Q2	393.85	344.39	49.45	68.55
May	131.28	116.61	14.66	21.96
June	131.55	112.84	18.71	22.56
July	129.50	111.82	17.68	23.07

Period	Labour market			
	Employment	Vacancies[1]	Unemployment	Unemployment rate
	Number in thousands			%
2022 Q4	45,741	816	2,520	5.5
2023 Q1	45,852	802	2,527	5.5
Q2	45,918	772	2,586	5.6
June	45,925	761	2,610	5.7
July	45,940	750	2,611	5.7
Aug.	…	739	2,629	5.7

Period	Prices; 2015 = 100			
	Import prices	Producer prices of industrial products	Construction prices[2]	Harmonised consumer prices
2022 Q4	141.1	160.9	155.4	123.1
2023 Q1	132.6	152.8	159.7	124.3
Q2	126.5	149.4	161.0	125.6
June	124.8	148.5	.	125.9
July	124.2	146.9	.	126.0
Aug.	…	…	.	126.6

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

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months point to a further decline in industrial activity, according to ifo Institute surveys.

Labour market

Stable labour market: employment up marginally in June, outlook subdued

The labour market remained stable until recently despite the currently subdued economic environment. In July, employment rose marginally by 15,000 persons in seasonally adjusted terms. Prior to this, the strong employment growth recorded in the first quarter had become progressively weaker during the second quarter, before grinding to a complete halt in June. This was due, amongst other things, to the slackening growth in employment subject to social security contributions. According to the latest provisional estimates of the Federal Employment Agency up to June, employment of this kind stagnated recently. The weak economy led to slight declines in temporary employment, trade and also in the manufacturing sector. By contrast, a continued positive development in employment was seen in some services sectors which are less affected by cyclical fluctuations. This primarily concerned health and social services and the public sector, but also the IT sector and some business services. In June, the use of cyclical short-time work remained at only a slightly elevated level in economic terms. The number of short-time work notifications even declined in July and August. However, this could also be related to the fact that the last special arrangements to simplify the use of short-time work expired at the end of June. This is therefore not indicative of any economic easing. Leading indicators also suggest that there will be little change in employment in the coming months. The number of vacancies reported to the Federal Employment Agency fell further, but is still quite high.

Unemployment up slightly

After adjustment for seasonal variations, registered unemployment rose slightly by 18,000 persons to 2.63 million in August. Rounding meant that the unemployment rate remained at 5.7%. The increase affected both unemployment among those receiving insurance benefits

under the statutory unemployment insurance scheme, which predominantly reflects cyclical developments, and the number of persons receiving the basic welfare allowance. Thus, both the weak economic situation and the processes of integrating immigrants into Germany's potential labour force raised unemployment slightly. Nevertheless, in view of the current strains, unemployment is very stable at a comparatively low level. The unemployment barometer of the Institute for Employment Research deteriorated somewhat recently and points to a further slow rise in unemployment in the autumn.

Commodity prices

Commodity prices slightly higher recently

Energy and commodity prices recently picked up again somewhat overall following substantial declines in the first half of the year. In the crude oil markets, production cuts by Saudi Arabia and Russia are likely to have propped up prices, in particular. A barrel of Brent crude oil recently cost US$93, which is just under 17% more than in July. Future deliveries are being traded at significant discounts. European wholesale gas prices have also risen somewhat recently and stand at €36 per megawatt hour at the current end. This was mainly due to strikes at Australian exporters of liquefied natural gas.

Further decline in prices at upstream stages of economy

After seasonal adjustment, prices at the upstream stages of the economy fell significantly in some cases in July. This is true of both imports and domestic industrial producer prices. Import prices fell somewhat more sharply when excluding energy than overall. By contrast, the decline in domestic producer prices was mainly attributable to energy prices. Prices for intermediate goods were also appreciably lower. Import prices, in particular, fell significantly short of their previous year's level overall.

Inflation rate

Inflation rate still high

In August, the Harmonised Index of Consumer Prices (HICP) rose significantly by a seasonally adjusted 0.5% on the month, following a rise of only 0.1% in July. Whilst energy prices went up again markedly, unprocessed food saw another slight decrease. Inflation was above average for non-energy industrial goods and services, partly owing to the volatile clothing and travel components. Looking at the year-on-year figure, the annual HICP rate dropped only marginally from 6.5% to 6.4%.[2] The base effect stemming from the temporary fuel rebate and the "€9 ticket" from June to August 2022 still had a price-driving effect. The core rate excluding the volatile energy and food components went up slightly from 6.2% to 6.3%. The base effect owing to the €9 ticket is even more prominent here than for the headline rate. However, even without this one-off effect, the core rate remained at an exceptionally high level of around 5½%.

Inflation likely to decline further over course of year

In the next few months, both headline HICP inflation and the core rate are likely to come down further in Germany. In September 2023, for example, the price-driving base effects resulting from the fuel rebate and the €9 ticket will lapse. Furthermore, the significant price declines at the upstream stages are likely to be passed on gradually to consumers. Given robust wage growth, however, the inflation rate is likely to remain well above 2% in the medium term, too.

2 The national consumer price index (CPI) likewise decreased marginally in August, from 6.2% to 6.1%.

Public finances[3]

Statutory health insurance scheme

Higher deficit in Q2 2023 due to use of reserves prescribed by law

The statutory health insurance (SHI) scheme (comprising the health insurance institutions and the health fund) recorded a deficit of €2½ billion in the second quarter of 2023. This figure was €2 billion higher than in the same quarter of the previous year. The deterioration reflects the legal situation, in which there was a focus on using more reserves from the health fund and health insurance institutions to limit the increase in average supplementary contribution rates. The lion's share (€2 billion) of the deficit is attributable to the health fund.

Central government grants for non-recurring burdens largely tailed off; substantial growth in contribution receipts

SHI scheme revenue was 7% lower than in the same quarter of the previous year. The main reason for this was that central government provided significantly reduced funds to the health fund: owing to lower benefits relating to the pandemic and the energy crisis, it reimbursed only €½ billion (same quarter of the previous year: €7 billion). At €½ billion, special funds from central government to stabilise contributions were also significantly lower in the second quarter than in the previous year (€3½ billion). At 6½%, growth in contribution receipts was still substantial. Supplementary contribution rates rose by an average of just under 0.2 percentage point to 1.5%. Adjusted for this, growth in contribution receipts remained strong (+5½%). This is due mainly to high nominal increases in wages and salaries.

Expenditure down due to pandemic-related expenditure petering out, but spending on benefits up significantly

Total SHI scheme expenditure was 4% lower than in the same quarter of the previous year. This was due mainly to pandemic-related benefits petering out. Expenditure relating to the energy crisis remained tightly limited. By contrast, the health insurance institutions' actual spending on benefits rose sharply (+5%). The fact that expenditure on medical treatment remained virtually unchanged on the previous year had a dampening effect. In the previous year, it appears that large-scale obligations were booked as expenditure and did not subsequently materialise. Meanwhile, spending on hospital treatment, a particularly large expenditure item, grew by 6%.[4] Outlays on remedies and therapeutic appliances rose even more substantially (+8%). At 2%, expenditure growth for pharmaceuticals was markedly lower than previously. The measures introduced recently to curb spending appear to have had an impact here.

2023 as a whole: large SHI scheme deficit planned

The figures published by the group of SHI estimators in the fourth quarter of 2022 for 2023 as a whole suggested a large deficit in the SHI scheme that was expected to amount to around €8 billion and be financed from reserves (especially in the case of the health fund). Furthermore, central government would issue a loan of €1 billion, to be repaid by the end of 2026. The health insurance institutions were set to post a deficit of €2 billion. The higher supplementary contribution rate of 1.6% set by the Federal Ministry of Health is already taken into account here. Health insurance institutions' spending was projected to rise by 4½% compared with the then estimated result for 2022.

Result expected to be much better than forecast

Developments to date point to a much better result: the health fund's outturn in 2022 – the starting point for 2023 – was far better than expected. In addition, last year's very positive development in contribution receipts continued. In the first half of the year, the increase (adjusted for changes in supplementary contribution rates) stood at almost 6% (+2 percentage points compared with what was expected by the group of SHI estimators in the fourth quarter of 2022). No stronger slowdown is cur-

3 In the short commentaries on public finances, the emphasis is on recent outturns. The quarterly editions of the Monthly Report (published in February, May, August and November), by contrast, contain an in-depth description of public finance developments during the preceding quarter. For detailed data on budgetary developments and public debt, see the statistical section of this report.
4 Together with financial assistance from the health fund to compensate for missed treatments due to the pandemic and energy price assistance, payments to hospitals increased by 1½%.

rently expected for the remainder of the year. The health insurance institutions likewise started 2023 on a good footing after having closed 2022 with a better-than-expected result. Nevertheless, the health insurance institutions' result may be somewhat less favourable than envisaged. This is because supplementary contribution rates remained, on average, just under 0.1 percentage point below the rate needed to cover expenditure as calculated by the Federal Ministry of Health. In addition, at 5%, expenditure on benefits was around ½ percentage point higher in the first half of the year than anticipated by the group of SHI estimators.

Public long-term care insurance scheme

Close-to-balance result in Q2: deferred transfers to long-term care provident fund bring relief

The public long-term care insurance scheme's result was close to balance in the second quarter of 2023.[5] The deferral of transfers to the long-term care provident fund in the amount of €½ billion to 2024 brought relief. A surplus of €½ billion had been recorded in the same quarter of the previous year, although this was due mainly to additional central government funds that were non-recurring.

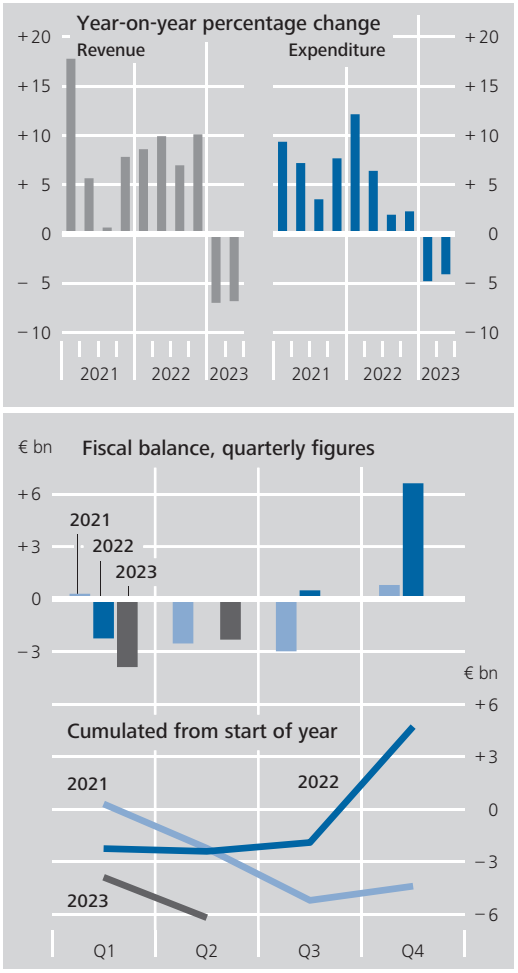
Contribution receipts saw continued substantial growth

Revenue fell by 7½%. This was driven mainly by the scheme not receiving central government funds of €2 billion as it had done in the same quarter of the previous year. After adjustment for this factor, revenue increased by 6%. Contribution receipts saw continued substantial growth of 5½%.

Expenditure declined due to decreased pandemic-related expenditure; core expenditure continued to rise sharply

Expenditure decreased by 3%. In addition to the deferred transfers to the long-term care provident fund, the sharp decline in pandemic-related expenditure (just over -€1 billion) also brought relief. Meanwhile, expenditure on regular benefits climbed by 9%. This means that core expenditure continued to rise much more sharply than contributions. Expenditure on outpatient and inpatient care, in particular, continued to grow strongly (+11%). At 7%, cash benefits went up steeply. Benefit rates remained unchanged.

Finances of the statutory health insurance scheme*



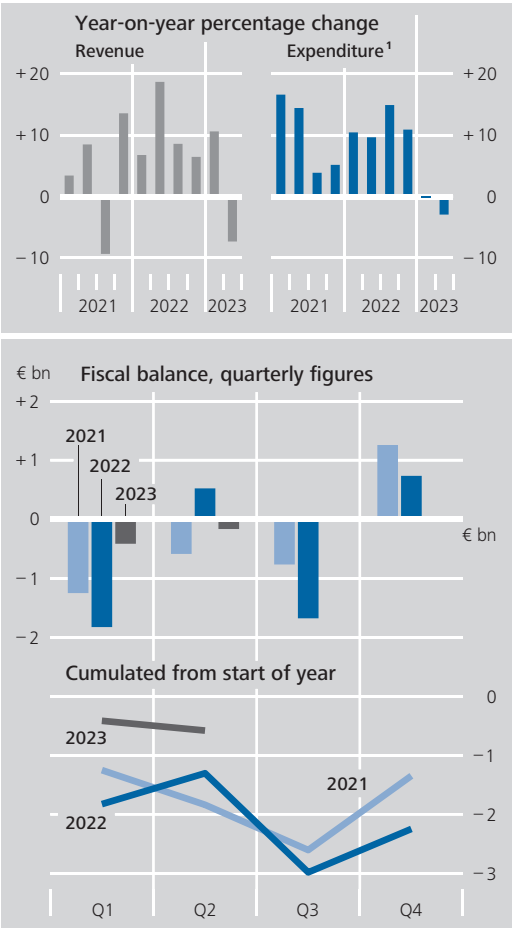
Source: Federal Ministry of Health. * Health fund and health insurance institutions (consolidated). Preliminary quarterly figures. The final annual figures differ from the total of the reported quarterly figures as the latter are not revised.
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2023: significant surplus expected due to contribution rate increase

Overall, the long-term care insurance scheme could well end up generating a significant surplus this year. It recorded a moderate deficit of €½ billion in the first half of the year. At mid-year, the contribution rate was raised by an average of 0.35 percentage point to 3.4%

5 This refers to the core area, i.e. excluding the long-term care provident fund. Since 2015, this fund has been receiving transfers from the core area corresponding to receipts of 0.1 percentage point of the contribution rate. Assets accumulated in this way are to be depleted in the 2030s to dampen the expected rise in the contribution rate.

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. **1** 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.
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(staggered by number of children; childless individuals: 4.0%).[6] This will generate additional revenue of just over €3 billion in the second half of the year. In addition, payments to the long-term care provident fund will not be made in the second half of the year either. All in all, therefore, a marked surplus is expected for the long-term care insurance scheme.

Benefit expansions and adjustments in 2024, but surplus still possible initially

The scheme's finances are expected to deteriorate next year, primarily as a result of the benefit expansions and adjustments that have already been adopted. In addition, there are plans to suspend the annual central government grant of €1 billion between 2024 and 2027. In the same period, the replenishment of the long-term care provident fund will be reduced by €1 billion. In this respect, there will be no additional burden in the core area of the long-term care insurance scheme. All in all, the additional revenue generated by the higher contribution rate is expected to exceed the additional expenditure next year. The further dynamic adjustment of benefits as well as demographic developments will put increasing pressure on the long-term care insurance scheme's finances in the years to come.

Securities markets

Bond market

Net issuance of debt securities in July 2023

At €120.5 billion, gross issuance in the German bond market in July 2023 was down on the June figure (€168.7 billion). After taking account of redemptions and changes in issuers' holdings of their own debt securities, the outstanding volume of domestic bonds increased by €28.0 billion, after having increased by €22.9 billion in June. Foreign debt securities worth €0.5 billion were redeemed in the German market. The outstanding volume of domestic and foreign debt securities in Germany thus increased by €27.5 billion on balance.

Higher public sector capital market debt

The public sector issued own bonds in the amount of €27.0 billion net in the reporting month. Central government, in particular, increased its capital market debt in net terms (+€24.2 billion). On balance, it mainly issued two-year Federal Treasury notes (Schätze: €5.8 billion) and ten-year Federal bonds (Bunds: €5.6 billion), as well as Treasury discount paper (Bubills: €4.5 billion) and five-year Federal notes (Bobls: €4.0 billion). State and local governments issued securities with a net value of €2.8 billion.

6 The contribution rate was actually lowered for insurees with a particularly large number of children. For more information on this and on other elements of the mid-year legislative amendment, see Deutsche Bundesbank (2023).

Net issuance by credit institutions

German credit institutions increased their capital market debt by €1.0 billion net in July. On balance, the main instruments issued were other bank debt securities that can be structured flexibly and mortgage Pfandbriefe (€1.1 billion and €0.7 billion, respectively). By contrast, the outstanding volume of debt securities issued by specialised credit institutions fell by €0.9 billion.

Enterprises' capital market debt unchanged on balance

On balance, domestic enterprises were hardly active in the bond market in the reporting month. Non-financial corporations issued debt securities worth €1.1 billion net, while other financial institutions redeemed bonds in the same amount.

Purchases of debt securities

In July, foreign investors were the main buyers. They added a net €26.0 billion in domestic debt securities to their portfolios. Domestic non-banks acquired debt securities with a value of €9.7 billion net, with foreign paper being the main focus of interest. By contrast, German credit institutions pared back their bond portfolios by €8.5 billion. Here, too, foreign instruments were the main area of focus.

Sales and purchases of debt securities

€ billion

Item	2022 July	2023 June	2023 July
Sales of domestic debt securities[1]	– 13.5	22.9	28.0
of which:			
Bank debt securities	– 7.5	– 6.5	1.0
Public debt securities	– 17.0	24.1	27.0
Foreign debt securities[2]	– 4.0	21.3	– 0.5
Purchases			
Residents	– 6.4	38.5	1.5
Credit institutions[3]	10.7	16.8	– 8.5
Deutsche Bundesbank	– 13.7	– 8.9	0.3
Other sectors[4]	– 3.4	30.6	9.7
of which:			
Domestic debt securities	– 0.7	19.2	2.6
Non-residents[2]	– 11.1	5.7	26.0
Total sales/purchases	– 17.5	44.2	27.5

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

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Equity market

Negligible net issuance of German equities

In the reporting month, domestic enterprises placed €0.5 billion worth of new shares in the German equity market. The volume of foreign shares in the German market rose by €4.2 billion over the same period. Foreign investors were dominant on the buyers' side of the market, adding domestic shares worth €2.9 billion net to their portfolios. Domestic non-banks acquired equities amounting to €1.9 billion net, while domestic credit institutions scaled back their equity portfolios by €0.1 billion net.

Mutual funds

Low inflows to mutual funds

In July, domestic mutual funds recorded inflows of €6.4 billion. The vast majority of these funds were channelled into specialised funds (€6.0 billion) reserved for institutional investors. Of the various asset classes, mixed securities-based funds (€5.3 billion) and open-end real estate funds (€1.2 billion) attracted the most investment. Only equity funds redeemed their own shares (€1.4 billion). Foreign mutual funds recorded inflows totalling €10.5 billion in the German market. On balance, domestic non-banks were the only purchasers of mutual fund shares in the month under review (€18.2 billion). By contrast, foreign investors and domestic credit institutions pared back their investment in funds by €0.9 billion and €0.4 billion, respectively.

German balance of payments in July 2023

Sharp decrease in current account surplus

Germany's current account posted a surplus of €18.7 billion in July 2023, down €9.7 billion on the previous month's level. This decrease was due to a narrowing of the surplus in the goods

Major items of the balance of payments

€ billion

Item	2022 July	2023 June	2023 July[p]
I. Current account	+ 7.8	+ 28.4	+ 18.7
1. Goods	+ 7.8	+ 23.8	+ 18.8
Receipts	127.2	137.2	125.4
Expenditure	119.4	113.4	106.6
Memo item:			
Foreign trade[1]	+ 4.4	+ 22.2	+ 16.4
Exports	127.6	138.9	126.9
Imports	123.2	116.6	110.5
2. Services	− 6.1	− 4.9	− 8.1
Receipts	34.1	34.2	31.4
Expenditure	40.1	39.1	39.4
3. Primary income	+ 13.0	+ 13.7	+ 13.4
Receipts	23.2	30.6	28.7
Expenditure	10.2	16.8	15.3
4. Secondary income	− 6.9	− 4.2	− 5.4
II. Capital account	− 2.3	− 1.1	− 4.2
III. Financial account (increase: +)	− 23.3	+ 59.2	+ 6.6
1. Direct investment	+ 18.1	+ 15.9	+ 3.8
Domestic investment abroad	+ 6.6	+ 31.1	− 2.4
Foreign investment in the reporting country	− 11.5	+ 15.2	− 6.2
2. Portfolio investment	+ 4.5	+ 15.0	− 15.7
Domestic investment in foreign securities	− 9.1	+ 17.0	+ 12.2
Shares[2]	− 5.3	− 4.8	+ 2.2
Investment fund shares[3]	+ 0.2	+ 0.4	+ 10.5
Short-term debt securities[4]	− 0.4	+ 0.5	− 0.6
Long-term debt securities[5]	− 3.7	+ 20.9	+ 0.1
Foreign investment in domestic securities	− 13.6	+ 2.0	+ 27.9
Shares[2]	− 0.7	− 2.4	+ 2.9
Investment fund shares	− 1.7	− 1.4	− 0.9
Short-term debt securities[4]	− 5.6	− 0.5	+ 0.4
Long-term debt securities[5]	− 5.5	+ 6.2	+ 25.5
3. Financial derivatives[6]	+ 5.1	− 3.6	− 1.2
4. Other investment[7]	− 50.6	+ 31.0	+ 19.8
Monetary financial institutions[8]	+ 6.5	+ 23.4	− 0.1
of which:			
Short-term	− 2.1	+ 23.1	− 3.9
Enterprises and households[9]	− 21.3	+ 31.1	+ 10.6
General government	+ 0.8	+ 2.7	− 1.1
Bundesbank	− 36.6	− 26.2	+ 10.5
5. Reserve assets	− 0.5	+ 1.0	− 0.1
IV. Errors and omissions[10]	− 28.9	+ 31.9	− 7.9

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

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account and a depletion of that in invisible current transactions, which comprise services as well as primary and secondary income.

Fall in goods account surplus

The surplus in the goods account fell by €5.0 billion to €18.8 billion as receipts recorded a sharper decline than expenditure.

Surplus of invisible current transactions depleted due to higher deficits for services and secondary income

Invisible current transactions shifted from a surplus of €4.6 billion in June into a slight deficit of €0.1 billion. The expansion of the deficit in the services account by €3.2 billion to €8.1 billion made a considerable contribution to this. Receipts decreased overall, mainly as a result of lower revenue from telecommunications, computer and information services as well as other business services. By contrast, expenditure increased somewhat, also owing to higher spending on charges for the use of intellectual property and, in particular, the rise in travel expenditure typical for this time of year. Moreover, the deficit in the secondary income account widened by €1.2 billion to €5.4 billion. This was mainly attributable to lower receipts, in which reduced general government revenue from current taxes on income and wealth played an essential role. By contrast, at €13.4 billion, net receipts in the primary income account almost matched the previous month's figure of €13.7 billion.

Portfolio investment sees net capital imports

In July, a foreseeable end to rising policy rates in the United States shaped sentiment in the international financial markets. Germany's cross-border portfolio investment recorded net capital imports of €15.7 billion (June: net capital exports of €15.0 billion), with non-resident investors increasing their holdings of German securities (€27.9 billion). On balance, they added bonds (€25.5 billion), shares (€2.9 billion) and a small amount of money market paper (€0.4 billion) to their portfolios, but disposed of mutual fund shares (€0.9 billion). Conversely, German investors acquired €12.2 billion net worth of foreign securities, mainly purchasing mutual fund shares (€10.5 billion), shares (€2.2 billion) and, to a very small extent, bonds (€0.1 billion). However, German invest-

ors offloaded money market paper (€0.6 billion).

Transactions in financial derivatives resulted in inflows of €1.2 billion in July (June: inflows of €3.6 billion).

Net capital exports generated for foreign direct investment and …

Foreign direct investment generated net capital exports of €3.8 billion in July, compared with €15.9 billion in June. Foreign enterprises reduced their foreign direct investment in Germany by €6.2 billion, with group parents withdrawing equity capital from domestic enterprises (€4.0 billion). They also reduced the amount of funding provided through intragroup lending (€2.2 billion). Additional funding was granted via loans. On balance, however, this was outweighed by repayments of trade credits. In the opposite direction, German enterprises likewise withdrew funds from abroad (€2.4 billion). They reduced the volume of credit to foreign business units (€4.3 billion). Here, too, repayments of trade credits outweighed the additional funds granted via loans. However, domestic enterprises stepped up the equity capital in their foreign affiliates (€1.9 billion).

… other investment

Other statistically recorded investment – which comprises loans and trade credits (where these do not constitute direct investment), bank deposits and other investments – registered net outflows of capital amounting to €19.8 billion in July (following €31.0 billion in June). Net external claims of monetary financial institutions excluding the Bundesbank declined slightly by €0.1 billion, while those of the Bundesbank rose by €10.5 billion. TARGET claims on the ECB went down by €16.5 billion. However, foreign deposits at the Bundesbank, predominantly those from non-euro area residents, fell even more significantly. Enterprises and households recorded net capital exports (€10.6 billion), while general government posted inflows (€1.1 billion).

Reserve assets

The Bundesbank's reserve assets fell – at transaction values – by €0.1 billion in July.

List of references

Deutsche Bundesbank (2023), Public finances, Monthly Report, March 2023, pp. 15 f.

Germany as a business location: selected aspects of current dependencies and medium-term challenges

The German economy is under considerable pressure to adapt. Demographic change is weighing on prospects for growth and intensifying competition for skilled workers. In foreign trade, there are significant dependencies on China. A sudden break with China would likely bring about far-reaching disruptions to supply chains and production in the short term. In order to reduce dependence on imported fossil fuels and to supply low-emission energy at reasonable costs, it will be vital to expand the supply of renewable energy and to lower energy demand by increasing efficiency. Digitalisation may provide opportunities that could significantly boost growth. What is crucial here is not only the production of digital goods, but also the diffusion of these products in the form of intermediate inputs to other areas.

Overall, the German economy still appears to be in a good position. Thus far, demographic change has been counteracted by employing immigrants, amongst other measures. German enterprises continue to make great use of the opportunities offered by international markets. All in all, industry has been able to mitigate the direct energy price shock fairly well due to its good profitability and financing as well as temporary government assistance measures. Despite coming under numerous strains, the price and cost competitiveness of the economy remains quite favourable on average. Differences between sectors are likely to be considerable, though.

Nevertheless, there is broad-based pressure to take action. The problems that must be overcome are complex and, in some cases, intertwined. For example, the supply of energy must be ensured and international dependencies need to be reduced. At the same time, in order to achieve climate targets, it is likely that substantial imports of storable energy sources and certain raw materials will still be needed. For the foreseeable future, transformation processes such as digitalisation and decarbonisation will require a large supply of skilled workers, which is diminishing due to demographic change. Amidst all of this, the scale and speed of the necessary structural change are not easy to gauge.

Central, state and local levels of government can contribute to the attractiveness of Germany as a business location by creating suitable framework conditions. These include the ability to plan ahead in the area of energy supply, such as through consistent and predictable climate policy. Transformative processes such as decarbonisation and digitalisation will be all the more manageable if the education system provides students with the right key skills and, above all, the ability to adapt to structural change. Greater diversification of suppliers in international trade – for example through regional free trade agreements – would reduce the risk of excessive dependencies on China. Improving the integration of immigrants into the labour market as well as increasing the efficiency of government administration and approval processes would likewise make Germany more attractive as a business location. Policymakers are currently taking some steps in this direction. However, these must also be implemented and pursued.

Deindustrialisation in Germany?

Germany's "business model" in danger?

For some time now, doubts have been raised concerning Germany's "business model" and its prospects for the future. The discussion has intensified in recent months in light of Russia's war of aggression against Ukraine and other geopolitical turmoil. Germany's business model is said to revolve around a relatively strong industry-based economy supported by cheap Russian gas. By all accounts, the success of foreign trade is linked to pronounced supply chain dependencies on "problematic" states and the persistently high need for skilled workers is met through immigration. This orientation of the German economy is thought to be unsustainable. As a consequence of Russia's war against Ukraine, energy costs rose massively. It is argued that it will become more difficult to cover Germany's labour shortage through immigration, partly because demographic change is impacting some neighbouring countries to even greater degrees. The stability of cross-border supply chains appears to be under threat due to the prevailing geopolitical tensions. It is for these reasons that Germany's business model is reportedly in danger. Without further – and, in some cases, substantial – economic policy intervention, Germany would be at risk of deindustrialisation.

Major challenges posed by energy crisis, international dependencies and demographic change

The energy supply, international dependencies and demographic change are undoubtedly major challenges facing the German economy. An assessment of these challenges should begin by taking stock of the German economy's critical dependencies. On this basis, it will be easier to evaluate how much action is needed. In this context, it must be kept in mind that Germany's business model is not a result of government planning and design. The structures of economies arise from complex market-based processes within a government framework. Here, enterprises are constantly adapting to a changing market environment, and appropriate government framework conditions can make this easier.

The significance of industry to the German economy

High significance of industry in Germany

Industry has a special status in Germany.[1] Last year, the manufacturing sector accounted for 18% of gross domestic product (GDP) and 16% of employment; these figures are significantly higher than in most other advanced economies. It is also noteworthy that German industry's share of value added remained stable from the 1990s up until the COVID-19 pandemic. Like in other advanced economies, it saw a marked decline during the pandemic. The shift in value added and employment towards the services sector has been slower than in other countries and can be explained, in part, by the comparatively high productivity gains in German industry.[2] Nevertheless, in Germany, as in other advanced economies, the largest share of value added by far is attributable to the services sector, standing at around 60%. A certain convergence in the size of the German industrial sector to the proportions seen in other advanced economies would not be cause for concern, per se, especially if it were to occur gradually.

Efficiency gains through digital transformation, but with diminishing effect over time

In aggregate terms, productivity growth in Germany since the 1990s has not been systematically higher or lower than in economies in which the shift towards the services sector progressed more rapidly. The digital transformation has been one contributing factor in this. Sectors of the economy that produce predominantly digital goods have recorded above-average growth in productivity over recent decades and have thus been key drivers of aggregate prod-

1 In this article, the term "industry" refers to the manufacturing sector in Germany. The remaining areas of the production sector are not the main focus here, as they include, for example, energy companies, some segments that only account for small shares of value added in GDP (such as mining) and segments that are oriented towards the domestic economy (such as construction).
2 For more information, see Deutsche Bundesbank (2021a).

uctivity growth.[3] Bundesbank analyses show that, alongside investment in digital goods, digital intermediate inputs that feed into a wide variety of goods via production linkages were also significant in this context.[4] However, much like in other advanced economies, the efficiency gains resulting from digitalisation have tended to diminish over time.[5]

Sustainable boost to digitalisation requires improved institutional conditions

Evidence from a survey conducted by the Bundesbank in 2022 suggests that digitalisation has seen a boost in some parts of the corporate sector since the pandemic.[6] However, it remains to be seen how persistent this boost and the associated changes in enterprises' work processes will be. To enhance productivity growth in the future, it will be crucial to better exploit the potential offered by the digital transformation. In this context, changes in institutional conditions to create an efficient digital infrastructure could bring about significant incentive effects.

Challenges cannot be denied

The present debate surrounding the state of German industry should, however, be viewed against the backdrop of the far-reaching, concurrent challenges posed by decarbonisation, the demographic transition and changes in the international environment. Moreover, if digitalisation is to succeed, significant further adjustments need to be made in the corporate sector. The challenges to industry arising from potentially disruptive changes in these four areas cannot be denied.

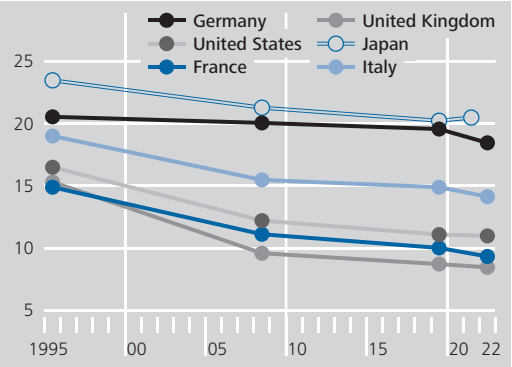
International linkages of the German economy

World trade lost momentum after global financial and economic crisis

While some of these developments are only recent, most have longer histories. The German economy has been confronted with a changing global economic environment for some time now. Following the global financial and economic crisis, world trade lost significant momentum after having grown strongly for 30 years. The driving force behind this weakness in world trade was not just the slowdown in global economic growth. Besides this, the share of world trade in global GDP did not increase further. This is, in part, a reflection of the rising significance of emerging market economies; for these countries, GDP growth was less trade-intensive.[7] In addition, the tailwinds

Gross value added in the manufacturing sector in relation to GDP*

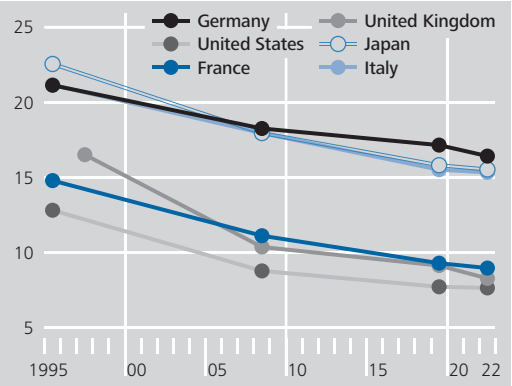
%



Sources: World Bank and Bureau of Economic Analysis. * Data between 1995, 2008, 2019 and 2021/2022 are interpolated linearly.
Deutsche Bundesbank

Employment in the manufacturing sector in relation to total employment*

%



Source: National data. * Data between 1995/1997, 2008, 2019 and 2022 are interpolated linearly.
Deutsche Bundesbank

3 The digital sectors typically comprise segments of the manufacturing sector (manufacture of computer, electronic and optical products; manufacture of electrical equipment) as well as parts of the services sector (information and communication). For more information, see Deutsche Bundesbank (2023a).
4 A detailed description of the model used can be found in Deutsche Bundesbank (2023a).
5 See Deutsche Bundesbank (2023a).
6 See Deutsche Bundesbank (2022a).
7 See Deutsche Bundesbank (2016).

Global trade in relation to global economic output



Sources: IMF, World Bank and Bundesbank calculations.
Deutsche Bundesbank

Number of new trade policy measures* worldwide



Source: Global Trade Alert. * Affecting trade in goods or services. Data excluding late reports for the respective reporting year (the cut-off date is 31 December of each year).
Deutsche Bundesbank

for trade provided by falling costs for information, communication and transport are likely to have diminished.[8] Furthermore, protectionist movements have also slowed down international trade. These were especially apparent in the trade dispute between the United States and China. However, tariffs and non-tariff barriers to trade have been on the rise in other parts of the world, too. According to the Global Trade Alert database, the number of new measures worldwide restricting trade has reached new highs in recent years.[9]

In Germany, too, foreign trade linkages developed more slowly following their recovery from the global financial and economic crisis of 2008-09.[10] In fact, like in other advanced economies, integration in global value chains declined slightly. Nevertheless, Germany's degree of openness continued to exceed those of other major advanced economies in North America, Europe, and Asia by far, with the gap even widening further in some cases. This means that German enterprises have been making greater use of the opportunities arising on international markets in the recent past. This applies to both sales prospects in foreign markets as well as opportunities for the purchase of foreign-manufactured goods or for offshore production.

Foreign trade ratio in Germany significantly higher than in other advanced economies

Closely intertwined cross-border linkages also harbour risks and dependencies, however. This was clearly demonstrated by the supply chain disruptions resulting from the COVID-19 pandemic and Russia's war of aggression against Ukraine. The geoeconomic tensions between China and the West have also highlighted the risks arising from those dependencies. A significant part of the strong growth in German exports and an even larger part of the growth in imports over the past two decades have been attributable to China.

China is an important sales market for individual categories of goods, especially for motor vehicles and machinery. It also plays an important, but not exceptional, role for the goods exported by the German economy as whole.[11] The same picture emerges even if the share of German value added consumed in China is approximated using input-output tables. Less

China is one of many customers of German industry …

8 See Antràs (2020).
9 Global Trade Alert (https://www.globaltradealert.org) is an initiative that was launched by the Centre for Economic Policy Research (CEPR). See also Deutsche Bundesbank (2020).
10 The slowdown in the pace of globalisation played a role in this. The sharp rise in the foreign trade ratio in 2022 was mainly attributable to the considerable increases in the prices of import and export goods.
11 In 2022, around 7% of Germany's total goods exports were destined for China. China was thus the fourth most important destination country for German exports.

than 3% of German value added depends on final demand in China.[12]

… but is more important as a supplier in some cases …

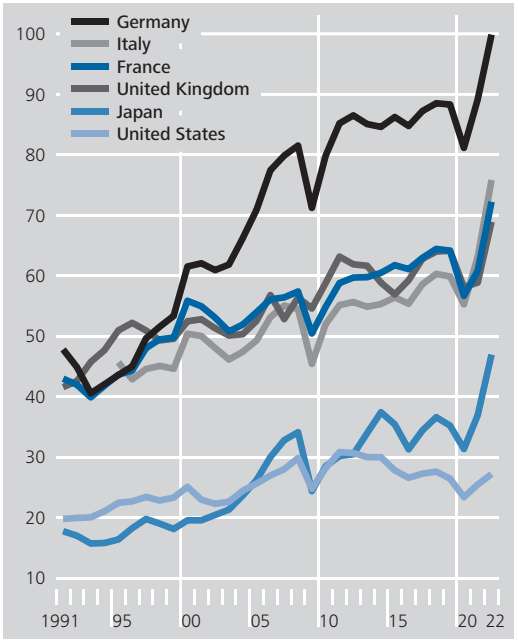
From the perspective of goods imports, however, China has much greater significance. The goods for which China accounts for a large proportion of deliveries in terms of value include certain intermediate inputs (such as batteries and electronic components) as well as final products from the capital goods sector (computer and telecommunications equipment). In addition, sizeable shares of various final products from the consumer goods sector (e.g. consumer electronics and electrical household appliances) come from China. Chinese intermediate inputs constitute a significant share of imported intermediate inputs, particularly in the production of computer, electronic and optical products as well as electrical equipment. Other segments of the manufacturing sector, such as construction and machinery, also use sizeable shares of intermediate inputs from China.

… especially for some intermediate inputs that would be difficult to replace

Whilst other imports of raw materials and intermediate inputs from China are low in terms of value, they are often difficult to replace with imports from other countries.[13] According to a survey conducted by the Bundesbank, many German firms make use of critical intermediate inputs from China in their production processes; the options for replacing these goods are often limited (for more information on dependence on China, see the box on pp. 21f.). This applies, in particular, to the manufacturing sector. German firms have already taken measures to reduce their strong focus on China with regard to their sourcing of critical intermediate inputs. In many cases, however – especially for intermediate inputs considered "very difficult" to replace – no efforts have yet been made to reduce dependencies on China. A sudden break

Foreign trade ratios* of selected advanced economies

%

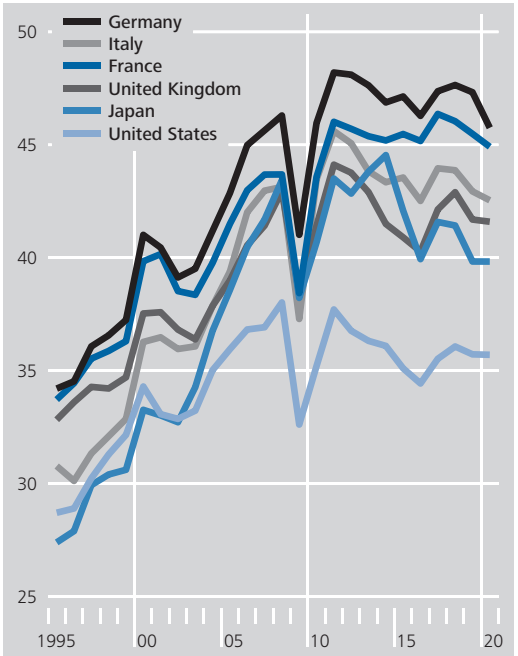


Sources: Bureau of Economic Analysis, Cabinet Office of Japan, Eurostat, Office for National Statistics, Federal Statistical Office and Bundesbank calculations. * Sum of nominal exports and imports (goods and services) in relation to gross domestic product.

Deutsche Bundesbank

Participation in global value added chains of selected advanced economies*

%



Sources: OECD (2023) TiVA database and Bundesbank calculations. * Sum of foreign value added content in a country's gross exports and its value added content in foreign gross exports in relation to said country's gross exports.

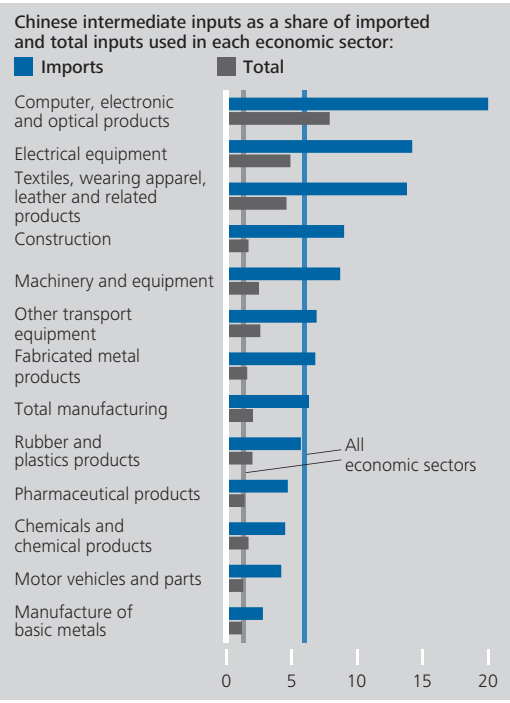
Deutsche Bundesbank

12 These calculations are based on the OECD Inter-Country Input-Output Tables (version 2022) for 2020.

13 According to the International Energy Agency (IEA), China produces 60% of the world's rare earth elements. In addition, the refining of rare earth elements (90%), lithium, and cobalt (between 60% and 70% each) was also concentrated in China. See International Energy Agency (2021).

Importance of intermediate inputs from China for German output

%

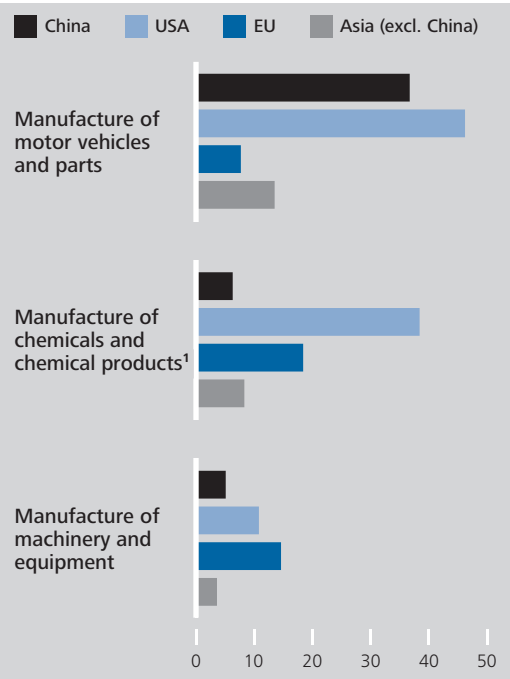


Sources: OECD (2021) ICIO database and Bundesbank calculations.

Deutsche Bundesbank

German foreign direct investment in important regions by individual sector*

€ billion, 2021



* Broken down by the sector of the German parent companies.
1 For China and Asia (excluding China), data were available only up to the end of 2019.

Deutsche Bundesbank

with China would likely bring about far-reaching disruptions to supply chains and production in Germany, at least in the short term.[14]

High turnover and investment income from foreign direct investment in China

According to the stock figures from the foreign direct investment statistics collected by the Bundesbank, the foreign direct investment stock of German enterprises is distributed widely around the world. As a location for German foreign direct investment, China was in third place behind the United States and Luxembourg, which is an important holding location. All the same, China's share of German foreign direct investment only amounted to just under 6% in 2021. By comparison, turnover and income from foreign direct investment in China are high. According to the most recent figures, Chinese affiliates of German corporate groups generated turnover of €382 billion and profits of €23 billion. This means that 22% of Germany's global turnover and 15% of Germany's global investment income were generated from foreign direct investment in China.[15]

Increasing importance of China for foreign direct investment

In the past, German corporate groups benefited greatly from internationalisation via foreign direct investment and increased their international competitiveness in this way.[16] Although the level of foreign direct investment in China is relatively low at present, China's share in Germany's total foreign direct investment has doubled since 2010. This is a reflection of China's robust and, in global terms, comparatively strong growth. China plays a prominent role in the automotive sector, in particular, accounting for 29% of German foreign direct investment. However, China is also a major location for investment in the manufacture of machinery and equipment (13%) as well as the

14 This would particularly affect the production of goods in which critical intermediate inputs play a role. Over the longer term, however, it is likely that part of the intermediate inputs from China could be replaced with intermediate inputs produced in Germany or other countries, which would mitigate losses.
15 For 2021, the data is on turnover. For 2022, the data is on investment income.
16 See Deutsche Bundesbank (2021b).

The significance of China as a supplier of critical intermediate inputs to German firms

The past few years have highlighted the risks to economic development arising from significant unilateral dependence on intermediate inputs from abroad. The COVID-19 pandemic and Russia's war of aggression against Ukraine led to disruptions in supply chains. More recently, the geopolitical and economic tensions between China and the West have made China the focus of economic policy discussion. This is because there was no other country from which German firms imported more in 2022, and this included numerous intermediate inputs. The dependence on China is not simply apparent from aggregate trade data, as this perspective underestimates existing dependencies on the import side. Even intermediate inputs with low shares of value in the total intermediate inputs used can be essential for production processes and may be difficult to source from other countries. These include, for example, commodities such as rare earths as well as lithium and cobalt, for which production and further processing is globally dominated by China.[1]

The assessment of the Bundesbank Online Panel – Firms (BOP-F) survey for the months of April to June 2023 paints a more detailed picture. It also provides information on the scope available to German firms for reducing their dependence on intermediate inputs sourced from China.

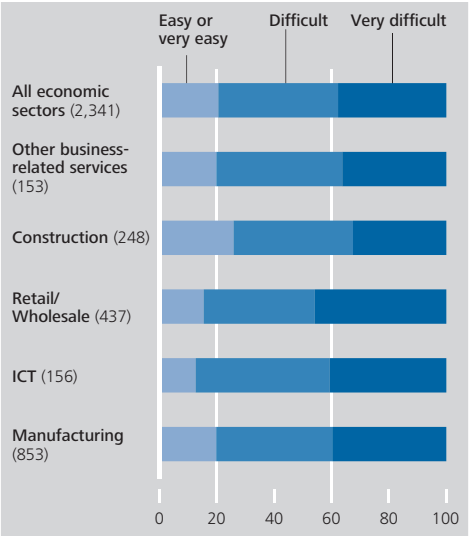
In the period covered by the survey, 29% of firms in Germany sourced critical intermediate inputs from China. "Critical intermediate inputs" are goods or services without which a relevant portion of a firm's production processes or business activities would cease or only be possible with considerable delays or at greatly reduced standards of quality.[2] It is noteworthy that the majority of these firms source critical intermediate inputs via domestic or foreign intermediaries. Many of the firms that rely on Chinese intermediate inputs therefore do not maintain direct import relations with China, but are nevertheless highly dependent on Chinese intermediate inputs.

According to the BOP-F survey, almost one-half of firms in the manufacturing sector rely on Chinese intermediate products for their production processes.[3] Furthermore, these firms largely assess the possibilities for replacing critical intermediate inputs from China with products from other countries to be limited. Among the industrial firms that are dependent on China, 80% reported that it would be "difficult" or "very difficult" to source replacement products from other countries. According to the survey, firms with higher turnover are especially dependent on intermediate inputs from China and have little scope for sourcing substitutes. Overall, firms that source critical intermediate inputs from China and consider the possibilities of sourcing substitutes to be "very difficult" generated just under one-quarter of the turnover of the German manufacturing sector in 2022.[4] In the short to medium

1 See International Energy Agency (2023).
2 See Deutsche Bundesbank (2023d).
3 This is consistent with a survey conducted by the ifo Institute, which found that 46% of firms in the manufacturing sector are dependent on critical intermediate inputs from China. See Baur and Flach (2022). According to the BOP-F survey, other sectors also source critical intermediate inputs from China. This applies, in particular, to wholesale and retail trade, as well as to construction and the information and communication services sector.
4 If industrial firms that consider the possibility of replacing intermediate inputs from China to be "difficult" were also included here, the share of turnover would increase to 57%.

Ease or difficulty of replacing critical intermediate inputs from China*

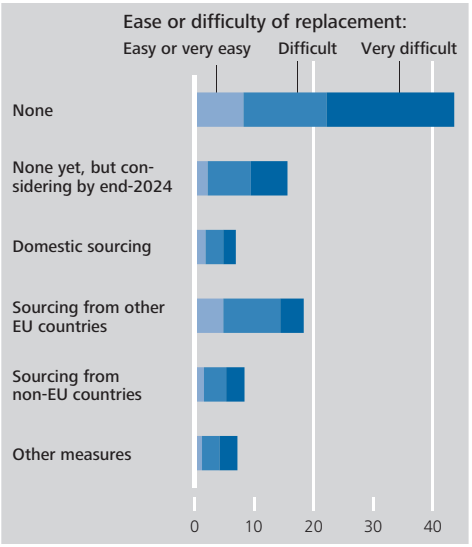
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Source: Bundesbank calculations based on Bundesbank Online Panel - Firms (BOP-F) survey conducted Q2 2023. * Weighted results based on the number of firms in each economic sector (shown in parentheses). BOP-F question: "Imagine a scenario in which intermediate inputs from China were suddenly no longer available. In such a scenario, how easy or difficult would it be for your enterprise to replace the missing products with intermediate inputs from other countries?"
Deutsche Bundesbank

Measures to reduce critical sourcing exposure from China in the manufacturing sector*

%



Source: Bundesbank calculations based on Bundesbank Online Panel Firms (BOP-F) survey conducted in Q2 2023. * Weighted results based on 853 firms from the manufacturing sector. BOP-F question: "Has your enterprise undertaken or is your enterprise currently undertaking measures to reduce purchases of Chinese intermediate inputs?"
Deutsche Bundesbank

term, the economic damage caused by an abrupt break in trade relations with China could thus be considerable.

Among the industrial firms that imported critical intermediate inputs from China in 2022 or 2023, just over two-fifths have already taken measures to reduce their dependence. In this context, these firms are mainly turning to imports of intermediate inputs from the European Union (18%), but some are also sourcing inputs from non-EU countries (8%) or domestically (7%). A further 16% of these firms are considering such measures for the near future.

However, more than two-fifths of firms that are dependent on China have taken no action so far. Within this group, the proportion of firms that consider substituting Chinese intermediate inputs to be "very difficult" is remarkably large. Accordingly, reducing dependence on China is still pending in many cases, especially for intermediate products considered "very difficult" to replace. Although some firms have already taken steps towards reducing their dependence on China, it may take some time to develop new supply capacities in other regions of the world and to build up new supplier relationships.[5]

5 According to estimates from the International Energy Agency, in the past, projects aimed at developing new mining capacity for critical minerals took an average of 16 years from discovery to first production. See International Energy Agency (2021).

manufacture of chemicals and chemical products (8%). In this case, German enterprises primarily use their Chinese affiliates to ensure their supplies of critical intermediate inputs or to gain access to the Chinese sales market.

Diversification of trading partners essential for stability of supply chains

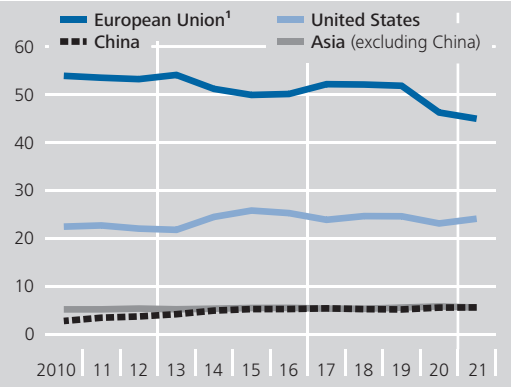
In light of the rising geopolitical tensions and the risks that these bring, it may make sense for enterprises and policymakers to rethink the established structure of supply chains and further expansion of foreign direct investment in China. Above all, this would mean adjusting the balance between efficiency and resilience to take account of the changed environment. Greater diversification of supply sources and adjusted inventory management could reduce risks.[17] Focusing more on resilience can also be justified from an efficiency standpoint. This is especially true in cases where enterprises, up until now, have not taken sufficient consideration of the economic and political risks that arise from international value chains.[18] Furthermore, current policy initiatives aim to ensure that enterprises orient their supply chains more strongly toward countries that are systemically closer to their own. Other measures, such as the US Inflation Reduction Act, even intend to relocate production sites to domestic locations, at least for strategically important goods. There are corresponding plans at the EU level, too, such as the European Chips Act, the European Critical Raw Materials Act, and the EU-funded Important Projects of Common European Interest, which include projects in the area of battery cell production.[19]

Free trade agreements useful instruments in this regard

Direct government intervention in international trade should fundamentally be restricted to establishing the general framework. This is because restrictions on international trade are usually accompanied by welfare losses, which, depending on the significance of the trading partner in question, can be considerable.[20] By contrast, regional free trade agreements make it easier for enterprises to diversify their trading partners.[21] In this way, businesses can reduce their dependencies on the policies of individual states and thus lower the risk of far-reaching disruptions to their supply chains.

Share of German foreign direct investment in important regions

%



1 Up to 2019 including the United Kingdom, from 2020 excluding the United Kingdom.

Deutsche Bundesbank

17 According to business surveys, some firms are examining ways to make their supply chains more resilient, for example by diversifying their sources of supply or by increasing their inventories. See Aksoy et al. (2022) and German Chamber of Commerce and Industry (2021).

18 This is the case, for example, if enterprises take account only of their own risk and not that of their suppliers, which are themselves reliant on other suppliers, or if short-term profits are considered more important than medium-term resilience due to performance-based remuneration. It is also possible that risks are being reassessed based on recent experiences with supply chain disruptions. A partial restructuring of value chains could therefore also be justified from an efficiency standpoint.

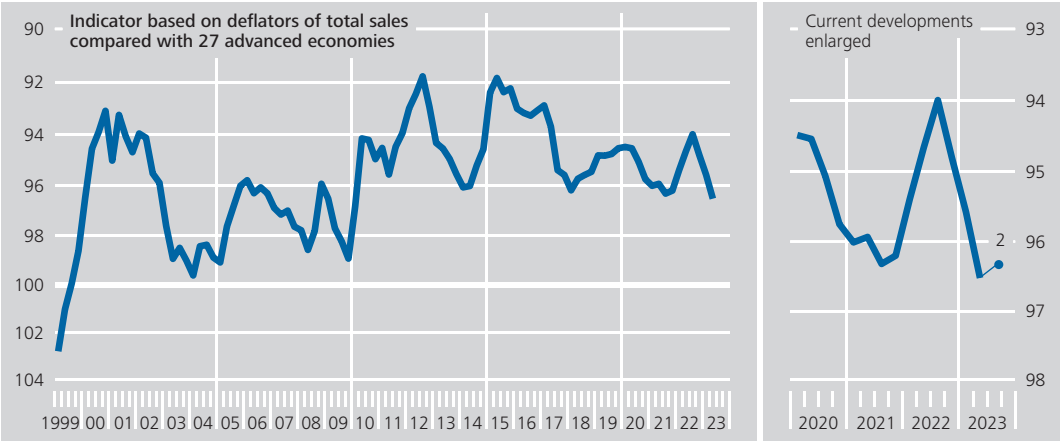
19 For more information on the European Chips Act, see European Commission (2022); for more information on the European Critical Raw Materials Act, see European Commission (2023a); and for more information on the Important Projects of Common European Interest in the production of battery cells, see European Commission (2019).

20 See Dorn et al. (2022), Felbermayr et al. (2023) and Fuest et al. (2022).

21 The Comprehensive Economic and Trade Agreement (CETA) between the European Union and Canada has been applied provisionally since 2017, as ratification is still pending in some EU Member States. The EU-Mercosur Association Agreement is still awaiting formal legal review before the process of approval and ratification by the European Union and its Member States can begin. There are also, amongst others, ongoing negotiations between the European Union and the ASEAN countries as well as Australia. Negotiations between the European Union and India had previously been suspended, but were resumed last year. By contrast, the negotiations on the Transatlantic Trade and Investment Partnership (TTIP) between the European Union and the United States have been on hold since the beginning of 2017 and are not being pursued further.

Price competitiveness of the German economy

Average since 1975=100, quarterly, log scale[1]



1 Inverted scale: a rise in the curve (fall in values) denotes an increase in price competitiveness. **2** Last data point: 12 September 2023.
Deutsche Bundesbank

Energy cost burden for German enterprises

Increased energy cost burden for the German economy …

The second major challenge relates to the higher cost of energy. The decrease in Russian gas supplies following Russia's invasion of Ukraine as well as the fundamentally high level of uncertainty surrounding the supply of energy have led to large rises in energy prices. In Germany, energy prices are likely to remain above pre-war levels in the years to come.[22] However, rising energy costs are not only a consequence of the war. Measures to limit climate change may likewise be contributing to the higher prices of fossil fuels. This trend could become stronger, primarily via rising carbon prices, as efforts towards decarbonisation intensify.

… but quite manageable so far

Initially, German industry was able to effectively cushion the energy price shock due to its favourable profitability and financing.[23] According to Bundesbank simulation results based on extrapolated corporate data for various segments of the manufacturing sector, the direct corporate profitability losses were quite manageable.[24] The temporary government support measures introduced since the start of Russia's war of aggression against Ukraine were a contributing factor here. Nevertheless, there were more significant impairments in the particularly energy-intensive segments of the manufacturing sector.[25]

Germany's price and cost competitiveness remains quite favourable

Despite the temporary sharp rise in energy prices compared with major partner countries, Germany's price and cost competitiveness, as measured by its long-term average, has remained quite favourable in recent years. For a time, this was attributable largely to the depreciation of the euro against the US dollar up until September 2022.[26] However, in sectors

22 Current forward rates indicate that the prices for gas and electricity in Germany will be higher over the coming years than the spot prices from before the outbreak of the war.
23 For more information on German enterprises' profitability and financing in 2021 – before the energy crisis – see Deutsche Bundesbank (2023b).
24 See Deutsche Bundesbank (2023c).
25 According to the Bundesbank Online Panel – Firms (BOP-F) survey conducted in the first quarter of 2023, the share of energy costs in total production costs in the manufacturing sector in 2022 was, on average, less than 10%; for the median manufacturing firm, this share was 5%. However, some enterprises in the manufacturing sector are very energy-intensive. For the enterprises among the top 5% of enterprises with the highest shares of energy costs, this share was 30% or more. In this regard, output in the energy-intensive industry segments dropped by around 17% between February 2022 and July 2023, according to the latest data available. By contrast, overall industrial output declined only by around 3% over the same period; it remained almost unchanged if the energy-intensive industry segments are factored out of the calculation.
26 Alongside the nominal effective exchange rate, the indicator for price and cost competitiveness also factors in the deflators of total domestic sales as well as a weighted average of the relevant trading partners.

with greatly above-average shares of energy costs, the burdens imposed by higher energy prices are likely to be much more significant. These include the chemical industry, the paper industry, the production of basic metals, and the glass and ceramics industry. Higher energy prices in Germany than those abroad could cause price competitiveness to deteriorate in the future due to weaker productivity growth and, in some cases, higher sales prices.

Adjustment to high energy costs already foreseeable …

According to a survey conducted by the Bundesbank, German enterprises – including those in industry – have already taken measures to adjust to higher energy prices (see the box on measures against higher energy prices on pp. 26 ff.). On the one hand, these include short-term adjustments such as saving energy or passing on costs to customers. On the other hand, they are planning to increase their energy efficiency or make greater use of renewable energy. Relocations of production abroad have so far been rather rare, even in the manufacturing sector and its energy-intensive segments. In addition, the turnover share of the enterprises planning to relocate abroad has so far been rather small. According to the survey, there are no signs of broad-based deindustrialisation in Germany.[27]

… but impairment of growth potential inevitable

Nevertheless, the surge in energy prices is hampering the medium-term growth potential of the German economy, according to Bundesbank estimates.[28] Based on these estimates, persistently higher energy prices will lead to losses in potential output, as enterprises – in the case of imperfect substitutes – tend to curb their energy use and their production. The supply-side effects of higher energy prices are likely to be significantly stronger than those of the COVID-19 pandemic.[29]

Energy supply during the transition to a low-emission economy

Far-reaching effects of climate policy on macroeconomic developments

Climate change mitigation is one of the largest challenges facing society today. The transition to a less carbon-intensive economy may place considerable burdens on enterprises, including costs arising as a result of emissions pricing, increased prices for emissions-intensive intermediate inputs, outlays to avoid emissions and losses from asset repricing. The economic consequences for enterprises are likely to depend heavily on the nature and design of the interventions as well as the characteristics of the sector, such as emission intensity,[30] which is typically relatively high in energy-intensive industries and also in the energy production sector itself.

German energy supply highly dependent on imported fossil energy, which would be reduced by expanding climate-friendly energy production

Germany's energy supply remains heavily dependent on fossil fuels, which are largely imported.[31] Its liquefied natural gas terminals, both those that have been operating since 2022 and those that are scheduled for the next few years, only reduce supply risk for natural gas. Further steps are needed to reduce the country's dependence on imported fossil energy. These are in line with Germany's necessary efforts to achieve its declared climate targets (reduction of greenhouse gas emissions by at least 65% by 2030 compared with 1990

27 In the manufacturing sector, employment subject to social security contributions has recovered only minimally since the end of 2021 following the adjustments made during the pandemic. However, there has been no indication of a reduction in employment in industry since the sharp rises in energy prices up to mid-2023. Disaggregated sectoral data on employment subject to social security contributions in the energy-intensive industry segments are available only for the period up to the end of 2022. These data likewise do not show any signs of structural shifts in employment. The same applies to gross value added in the manufacturing sector, which even grew slightly compared to its level at the end of 2021.
28 See Deutsche Bundesbank (2022b).
29 For an assessment of the damage to potential output brought about by the COVID-19 pandemic, see Deutsche Bundesbank (2021c).
30 See simulations using the environmental multi-sector DSGE model EMuSe in Deutsche Bundesbank (2022c).
31 This is still true even though only very small amounts of energy were imported directly from Russia in 2023. By contrast, imports of liquefied natural gas increased sharply.

Measures introduced or planned by German enterprises in response to rising energy costs

The sharp rises in energy prices since 2021 have had a severe impact on the German economy, especially last year. The fact that German enterprises were, on average, in favourable financial positions helped to mitigate the direct impact on their profitability and financing.[1] In future, however, how they fare will increasingly depend on how they adapt to the changed conditions regarding the supply and costs of energy. It will also hinge on the extent to which rising energy prices weaken growth potential, particularly in the manufacturing sector. An evaluation of the Bundesbank Online Panel – Firms (BOP-F) survey from the first quarter of 2023 provides detailed information on the measures that German enterprises either have recently implemented or are planning for the future. This information is not included in conventional statistics.

In 2022, an especially large number of enterprises responded to rising energy costs by saving energy, for example on heating, lighting or hot water consumption. In addition, when weighted by firm turnover, more than half of the enterprises raised the prices for their products and services in 2022. In doing so, many businesses passed on their higher energy costs – at least in part – to their customers.[2] Enterprises also took longer-term measures aimed at improving their energy efficiency or increasing their use of renewable energy. In turnover-weighted terms, one-third of enterprises invested in energy efficiency in 2022, compared with just one-fifth in 2021.[3] In 2022, a further one-quarter of firms were also planning to make this type of investment in the near future. Together with the energy savings, this is consistent with data indicating that growth in the energy productivity of the German economy almost tripled last year compared with the average of previous years.[4]

By contrast, production cuts and relocations of production abroad were relatively rare overall in 2022. Just over 6% of enterprises – measured in terms of their turnover – scaled back their production in 2022 owing to high energy costs. Less than 3% of turnover was attributable to the enterprises that moved parts of their production abroad. However, relocations of production could continue to some extent in the future. This can be explained by the fact that enterprises accounting for a total share of around 4% of turnover have been planning to move parts of their production abroad in the near future due to increased energy costs. This is also consistent with the fact that, given the rise in energy costs so far, 4% of firms – weighted by turnover – have been planning to step up their imports of energy-intensive products. Such projects could render parts of domestic production obsolete.

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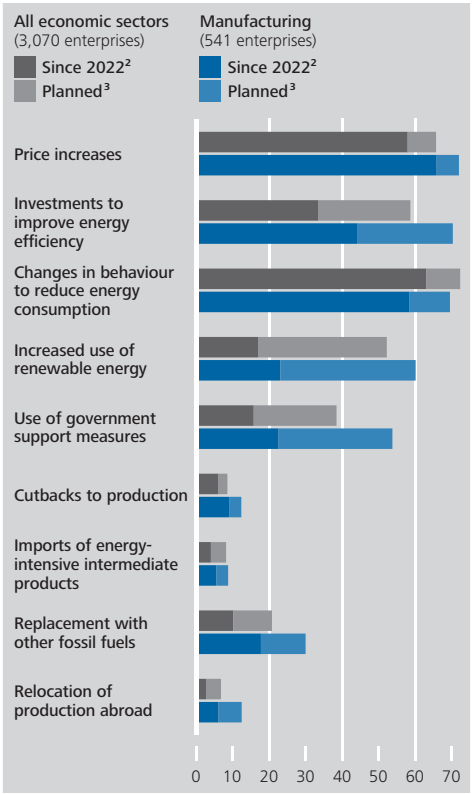
1 See Deutsche Bundesbank (2023c).
2 An economic survey conducted by the German Chamber of Industry and Commerce in the autumn of 2022 suggests that just under 60% of enterprises passed on high energy prices to their customers. See German Chamber of Industry and Commerce (2022).
3 Investments in energy efficiency are aimed at reducing energy consumption in existing buildings (e.g. energy insulation, replacement of windows, installation of a ventilation system) or in technical installations (e.g. purchase of smart meters, energy-efficient IT systems, lighting systems, production facilities, cooling systems).
4 According to data from the Working Group on Energy Balances, primary energy productivity growth (real GDP per gigajoule of energy used), adjusted for temperature effects, almost tripled last year compared with the average for the years 2011 to 2021. This was the highest growth rate in one year since 1991. See Working Group on Energy Balances (2023).

The rise in energy prices has had the hardest impact on the manufacturing sector, as this area has the highest primary energy and gas consumption within the corporate sector.[5] Accordingly, enterprises in industry have more frequently undertaken measures intended to mitigate the impact of the energy crisis compared with other sectors such as the construction or services sectors. Measured in terms of turnover, a significantly larger proportion of enterprises switched from natural gas to other fossil fuels in 2022 than in 2021. This is hardly surprising, however, as the gas consumption of some large firms could probably be replaced much more quickly with mineral oil or coal, for example, than with renewable energy. It is noteworthy that the enterprises in the manufacturing sector that either had invested or were planning to invest in energy efficiency in 2022 accounted for around two-thirds of turnover. According to the results of the BOP-F survey, the turnover share of the firms that had switched or were planning to switch to renewable energy was also considerable, at 60%. Based on these findings, the adjustment processes in industry to high energy costs and away from fossil fuels are already clearly discernible.[6] Enterprises made comparatively seldom use of government support measures in 2022.[7]

To date, relocations of production abroad have also been rather rare in the hard-hit manufacturing sector. Where mention is made of such plans, it is primarily by larger enterprises. In terms of turnover, the share of manufacturing enterprises that in 2022 either had relocated parts of their production abroad or wanted to do so in the near future was just over 6%.[8] Based on this survey, the risk posed by relocations of production abroad resulting from higher energy prices seems so far to be limited for German industry as a whole. This also holds true for energy-intensive enterprises.[9] In 2022, of the energy-intensive enterprises in the manufacturing sector, around 20% had

Measures implemented or planned by German enterprises in response to the rise in energy prices since 2021*

As a percentage, weighted answers based on enterprise turnover[1]



Source: Bundesbank calculations based on Bundesbank Online Panel – Firms (BOP-F) survey in Q1 2023. * BOP-F question: "What measures have been taken since 2021 or are planned for the near future as a result of the increased energy costs in your enterprise?" **1** Enterprise turnover figures winsorised at p95. **2** Measures have either been taken since 2022 or are also planned for the future. **3** Measures are exclusively planned for the future.

Deutsche Bundesbank

5 See Federal Statistical Office (2022a, 2022b).
6 The survey does not provide any information on the scale of investment, however.
7 Large enterprises with significant natural gas consumption made most use of the support measures. However, owing to the price brakes introduced at the start of 2023 and the extension of existing relief measures, the share of enterprises that have made or will make use of government support measures recently saw marked growth.
8 The survey does not provide any information on the scale of production relocations.
9 Energy intensity is measured as the percentage share of energy costs in total production costs. Enterprises with a share of over 10% are classified as energy-intensive.

cut their production and 11% were planning to do so in the near future (in each case measured in terms of turnover).[10] In this case as well, though, the turnover share of those enterprises that in 2022 either had relocated parts of their production abroad or were planning to do so was quite small, at just under 6%.

10 These data are subject to particular uncertainty owing to the smaller sample size used.

levels, greenhouse gas neutrality by 2045). The expansion of domestic energy production through low-emission renewable energy sources is one step along this path. Others include a reduction in energy consumption and an increase in energy efficiency. According to various studies modelling transitional paths to achieving these climate targets, Germany would still ultimately need to import energy (in this case from non-fossil energy sources) in order to meet its energy needs. However, the net import volume would be smaller than before the transition.[32]

Energy transition requires strong expansion of electricity supply and additional technologies

However, energy is likely to remain a scarce commodity on the path to transition, as demand for electricity, in particular, would rise sharply and requires a huge expansion of production capacity. This would also entail an extensive need for technologies such as storage and power grids to reconcile renewable energy production and energy needs.[33] This is one of the reasons why the shift towards low-emission energy supply requires high additional investment in the aggregate capital stock over a longer period of time.[34]

The expansion of domestic energy production from renewable energy sources could be accelerated in Germany by improving framework

32 See Boston Consulting Group (2021), Institute of Energy Economics at the University of Cologne (2021), Fraunhofer Institute for Solar Energy Systems (2021), Prognos et al. (2021) and Stolten et al. (2021).
33 Furthermore, the 65% reduction in greenhouse gas emissions by 2030 compared with 1990 levels appears ambitious, as the annual reduction in the remaining period would have to be just over twice as large as the average of the past 32 years.
34 See KfW Research (2021). Moreover, it is likely that there will be additional adjustment costs related to the impact of ongoing climate change. The effects of climate change mitigation investment on the aggregate capital stock are a priori unclear, as additional investment is offset by increased depreciation. Hence, existing fixed assets that would not have reached the end of their useful lives without decarbonisation investment would need to be replaced. It is difficult to quantify the additional depreciation, as this requires a detailed analysis of the capital replacement needed to decarbonise the economy in the various areas of the capital stock. See Joint Economic Forecast Project Group (2022).

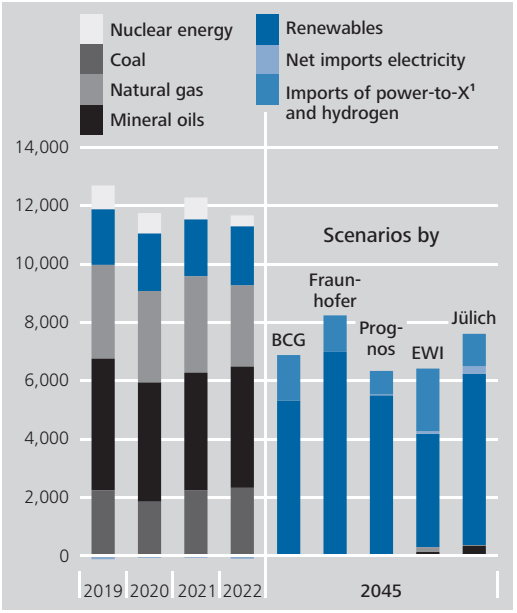
Better government framework conditions needed for expansion of renewable energy sources, as is consistent and reliable climate policy …

conditions. Greater incentives to use renewable energy could arise from the inclusion of all sectors in the EU emissions trading system.[35] A comprehensive emissions trading scheme of this kind would harmonise the costs of CO_2 emissions and would provide a transparent safeguard for existing climate targets. EU emissions trading has so far covered the energy and energy-intensive industry segments.[36] The European Union's plans to create an additional trading system covering buildings and transport are a step in the right direction.[37] For reasons of efficiency, however, it seems sensible to aim for a uniform system in the long term, setting a single carbon price for all sectors.[38] Consistent and reliable climate policy provides enterprises with the planning certainty needed for investment and reduces the macroeconomic costs of climate policy.[39]

Other approaches to accelerating the energy transition include tailored land use plans, considerably simplified approval processes and faster judicial review procedures for the expansion of production facilities and networks. In addition, it would be very important to promote research and development – especially with a view to ensuring a cost-effective balance between foreseeable strong fluctuations in supply and demand, for example for energy storage.

Energy mix in Germany*

Primary energy consumption in petajoules



Sources: AGEB (2022) and (2023), BCG (2021), Fraunhofer Institute (2021), Prognos et al. (2021), EWI (2021), Stolten et al. (2021) and Bundesbank calculations based on these. * Excluding the very small contribution of other energy sources. In line with German climate targets, scenarios feature a reduction in greenhouse gas emissions by at least 65% by 2030 and greenhouse gas neutrality by 2045. **1** X can stand for climate-neutral gases and fuels, amongst other things.

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… as well as more efficient government administration and approval processes

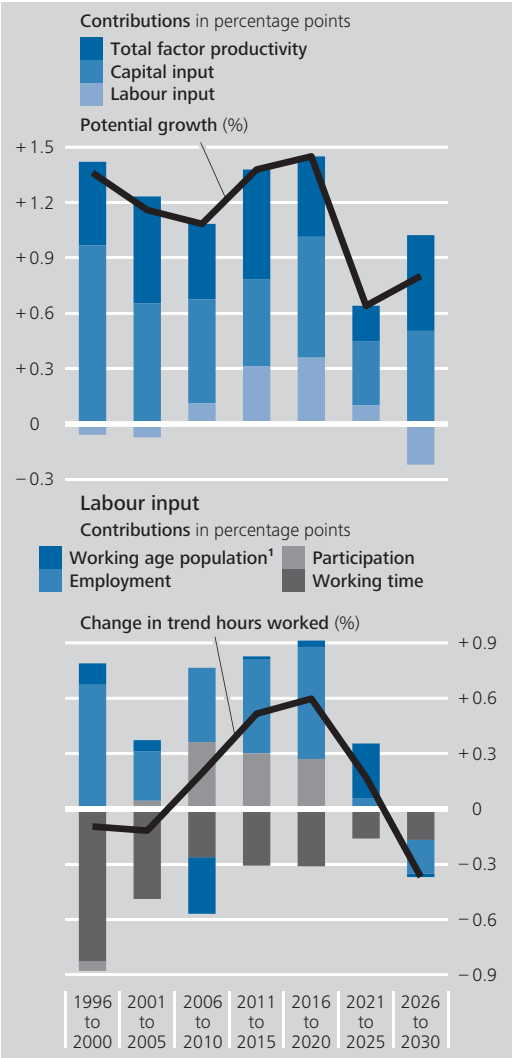
Price signals for energy are important for avoiding emissions

Energy-intensive industries, in particular, need time to adapt to higher energy prices, whether temporary or otherwise. The proposed industrial electricity price cap is intended to contribute to this. Overall, however, there is a risk that such subsidies will slow down structural change, weakening incentives to avoid emissions by also promoting electricity generated using fossil fuels.[40] It therefore seems more effective to use the available funds to improve the framework conditions for the expansion of renewable energy, including network infrastructure.[41]

35 The faster reduction in the number of emission permits issued free of charge would also contribute here. This would also require earlier implementation of the Carbon Border Adjustment Mechanism.
36 EU emissions trading currently covers just under 40% of total EU greenhouse gas emissions. In addition to the energy and energy-intensive industry segments, intra-European aviation is also included in the existing emissions trading system. These sectors account for around 5% of aggregate gross value added. Shipping is also to be included from 2024.
37 The European Union intends to create an additional, independent emissions trading system for the buildings and road transport sectors and other industrial sectors from 2027 onwards.
38 The European Commission intends to assess by 31 October 2031 whether the integration of the two trading systems should be pursued.
39 According to the Bundesbank's scenario calculations using the environmental multi-sector DSGE model EMuSe, the costs of a disorderly climate policy are higher than those of an orderly one; see Deutsche Bundesbank (2022c). Strict carbon pricing is implemented at an early stage in an orderly climate policy and the degree of intervention is gradually tightened, whereas disorderly climate policy is assumed to intervene noticeably later but commensurately more strongly.
40 See Leibniz Centre for European Economic Research (2023a).
41 On this topic, the European Commission recently presented a proposal to reform the design of the EU electricity market. The aim is to accelerate the expansion of renewable energy in Europe by increasing the use of long-term electricity contracts and other measures, whilst at the same time promoting European industry through more stable electricity prices. See European Commission (2023b).

Potential output in Germany*

Year-on-year change



***** June 2023 estimate. **1** Including migration.
Deutsche Bundesbank

Demographic change

Demographic changes weigh on labour supply …

Demographic change is another major challenge facing the German economy, reducing labour supply and increasing competition for skilled workers. From the second half of the 2020s onwards, the working age population will decline. This demographic process started among the domestic population some time ago, but was offset by immigration. As baby boomers reach retirement age over the next 15 years, even immigration is unlikely to offset this effect. A more significant factor in the reduction in labour supply is the effect of changes in the age structure. The higher share of older workers alone will cause the participation rate of 15 to 74-year-olds in Germany to fall in a few years' time, even if the participation rate continues to increase in individual age groups. The share of prime age workers, the group in which the participation rate is highest, is dwindling. This age structure effect is also likely to dampen average working hours, as older persons have a higher preference for part-time work.

… and thus German economy's potential output

The decline in labour supply will also dampen fixed capital formation in the future, as fewer workers will need to be provided with capital.[42] Productivity developments may also be dampened by the increasing pace of population ageing. There is evidence that individual labour productivity tends to decline among elderly employees and that ageing reduces the capacity to innovate and adapt to new technologies.[43] In addition, resources will tend to be increasingly diverted to areas of below-average productivity, such as services for the support and care of older generations. This resource channelling means that the demographic decline in labour supply will dampen the German economy's potential output in the medium term.

Making immigration more attractive to skilled workers could mitigate brunt of population ageing

The above dampening effects on potential output are the result of the status quo of the economic policy framework. However, the strength of these demographic developments can be mitigated by an increased influx of skilled workers from outside Germany. Third countries deserve greater attention here, as, owing to similar demographic developments, economic migration from other EU countries will no longer be able to play the dominant role it has assumed over the past decade. The various initiatives taken by the Federal Government in this

42 See Deutsche Bundesbank (2017).
43 See Deutsche Bundesbank (2021a).

area are steps in the right direction.[44] Immigrants outside the influx of skilled workers should also be quickly integrated into the labour market if they have long-term prospects of remaining in Germany.

Increase in labour force participation and working hours

In order to increase labour force participation and working hours beyond the expected trend, the institutional framework needs to be adjusted in two main ways. First, the participation rate of women, in particular, could increase if there were better childcare facilities for children (and possibly for those in need of long-term care) and if the tax and social contributions system provided greater incentives for second earners to work.[45] Second, in order to prolong working life as life expectancy increases, it seems appropriate to tie the statutory retirement age to life expectancy. This would not only bolster economic strength, but would also ensure that social contribution and tax rates do not need to rise as sharply.[46]

Education and training of employees important for transformation of economy

Enterprises can also set incentives themselves, for example through more flexible working time models. In addition to incentives for investment, skilled labour is needed to ensure that any transformation is successful and productivity potential can be tapped. This will require better digital skills training, not only for employees but also in the education system.

Summary and economic policy conclusions

German economy faces major challenges in medium term such as demographic change, supply chain dependency and low-emission energy supply …

The challenges facing the German economy are complex and often intertwined. Demographic change is weighing on growth prospects and exacerbating competition for skilled workers, who are also needed to make the energy transition and the digital transformation a reality. In foreign trade, there are considerable dependencies on China. A sudden break with China would likely cause far-reaching disruptions to supply chains and production in Germany, at least in the short term. It would also curb progress in the transition to renewable energy that is necessary to achieve climate targets, as this progress is partly dependent on technology components from China. In the medium and long term, it is important to create the conditions for ensuring that the low-emission energy supply remains reliable and that energy costs remain affordable. This will necessitate an increase in the supply of renewable energy and a reduction in energy demand. Given all of this, it is difficult to gauge the extent of both the required and the expected structural changes.

… but is generally well positioned

So far, the German economy has been in large part well positioned. German enterprises continue to make great use of the opportunities offered by international markets. With regard to the energy crisis, German enterprises appear to have mitigated the immediate effects well on average owing to their good profitability and financing alongside government assistance. Enterprises have also already taken steps to adjust in the face of higher energy prices. The price and cost competitiveness of the German economy remains favourable on average. It also has a well-trained workforce, infrastructure that remains sound, wage bargainers seeking consensus and comparatively stable underlying conditions. However, international competitiveness rankings point to the need for action.[47] The largest need to catch up is likely

44 These include the supplement to the 2020 Skilled Immigration Act (*Fachkräfteeinwanderungsgesetz*), the transposition of the EU Blue Card for highly qualified persons into national law (and opening it up to medium-skilled labour) and the indefinite extension of the Western Balkans regulation.
45 For an overview, see, for example, German Council of Economic Experts (2021), pp. 232 ff.
46 See, for example, the simulations in Deutsche Bundesbank (2022d).
47 In the World Economic Forum's global competitiveness ranking, which was updated annually before the pandemic, Germany regularly performed well, albeit with a recent declining trend (dropping four places to rank seventh out of 141 countries); see Schwab (2019). For an up-to-date ranking, see, inter alia, International Institute for Management Development (2023). This ranking shows a more unfavourable picture and further deterioration: Germany now ranks 22nd out of 64 countries (a drop of seven places).

to be in the arena of digitalisation.[48] This could provide a significant boost to growth.[49]

Government framework conditions conducive to competitiveness and transformation are important

It is the government's task to support structural change with reliable framework conditions. Policymakers could improve conditions in Germany as a business location in a number of areas that fall under government remit.[50] Reliable and consistent energy and climate policy is essential for sufficiently mobilising private investment to finance the path to transition. The pricing of greenhouse gas emissions via certificate trading is an efficient tool for this purpose. In addition, Germany would need to simplify and speed up planning and approval processes. This would also include making the administration and performance of government tasks more efficient in general. Digitalisation should contribute significantly to this. The government could support enterprises' digitalisation efforts, for example, by promoting digital skills more strongly in schools and digitalising administrative processes.[51]

Ready tax and social contributions system to withstand demographic change

If the statutory retirement age were linked to developments in the life expectancy of older people, this could support labour force participation in the face of demographic change. Later retirement would allow labour force potential to be exploited more strongly. Furthermore, a school education providing the requisite skills would need to be ensured and immigrants would need to be better supported in terms of integration into the labour market. There is also a need for a tax and social contributions system that provides performance and employment incentives, can withstand demographic change and ensures a politically acceptable distribution of wealth. Furthermore, it is important to future-proof Germany's transport infrastructure. It would be off the mark for the government to give the impression it would provide a broad economic safety net to protect against any macroeconomic slowdown or problems in the corporate sector.

Sound government finances do not contradict but instead provide a foundation for solid growth

Finally, sound government finances do not hamper economic development – they are in fact an important prerequisite for it. This applies to Germany and the euro area. Effective fiscal rules ensure sound government finances. They do not imply that important political projects should be neglected. They do, however, force priorities to be set. This means that additional needs would have to be financed directly through lower expenditure or additional revenue elsewhere. Fiscal rules have recently been interpreted very broadly by central and state governments. It is important to be able to rely on credible and binding fiscal rules again in the future. At present, the debt brake is making the borrowing framework relatively restrictive. A reform that moderately raised the regular limits of the debt brake and simultaneously increased its binding force would therefore also be justifiable in the interests of stable government finances. The Bundesbank has made proposals for a stability-oriented reform.[52] For example, the scope for deficits could be extended if the debt ratio is below 60%. If investments were to be prioritised within the limits, leeway could be reserved for net investment.

Meseberg decisions move in right direction – but not yet sufficient

In view of the improvement to government framework conditions, the ten-point plan presented by the Federal Government at the Cabinet meeting in Meseberg in August 2023 deserves support. It addresses important structural problems and weaknesses, but is not yet sufficient to truly address the challenges. Success will also depend on how the plan is implemented and pursued.

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48 See Schwab (2019).
49 For more information on the macroeconomic importance of digitalisation, see Deutsche Bundesbank (2023a).
50 The corporate tax burden in Germany is high by international standards; see Leibniz Centre for European Economic Research (2023b). This makes the other conditions making Germany favourable as a business location all the more important.
51 See German Council of Economic Experts (2021).
52 See Deutsche Bundesbank (2022e).

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Heterogeneous impact of monetary policy in the euro area?

The Eurosystem has a mandate to maintain price stability within the euro area. When making its decisions, the Governing Council of the ECB therefore looks at the inflation outlook for the euro area as a whole. To determine the monetary policy stance, the Governing Council must also evaluate the strength of monetary policy transmission. Disaggregated – i.e. also country-specific – data and analyses help to clarify and assess inflation developments and transmission mechanisms and are therefore an important factor in monetary policy decision-making.

Monetary policy transmission channels are also influenced by the structural characteristics of the euro area economies. Since these differ, in some cases significantly, the Eurosystem's single monetary policy can be assumed to have varying impacts across the Member States. There are indeed a number of empirical studies for the euro area that point to such differences. Studies also find evidence of regional differences in the impact of monetary policy for the United States.

This article presents the results of various empirical studies on possible differences in the impact of monetary policy on real gross domestic product (GDP) and consumer prices in the four major euro area countries (France, Germany, Italy and Spain). The effects of different monetary policy instruments are empirically examined. We find that the impact of changes in monetary policy rates on real GDP is stronger in Germany and weaker in Spain. This may be due to the more prominent role of interest rate-sensitive sectors in Germany, more flexible employment, greater export orientation and stronger competition in the banking system. By contrast, the price level response is strongest in Spain and weakest in Germany.

Alongside classic interest rate policy, the last few years have seen a number of unconventional monetary policy measures being taken, such as forward guidance – in other words, communication by monetary policymakers about the likely future path of their policy rates. The results for this instrument indicate that monetary policy has a stronger impact on both real GDP and consumer prices in Germany than in the other large euro area countries. The results of another study suggest that the impact of the government bond purchase programme also varied between the four major euro area countries. However, it is still too early to draw a conclusive, coherent picture of the relative strength of the effects of the different monetary policy instruments on the euro area countries under review from the available studies.

Introduction

Transmission analyses play an important role in current monetary policy tightening

The Eurosystem has responded to the high inflation of the past few years first and foremost by raising its policy rates sharply, with these hikes taking place at a scale and speed unprecedented in the history of the euro area. Through various channels, these measures influence expectations, financial variables, aggregate demand, production, and ultimately inflation. Empirical analyses of this transmission process typically look at the impact of monetary policy on the euro area as a whole.

Structural differences can lead to heterogeneous transmission of monetary policy

The aggregate, euro area-wide effects consist of the impact that monetary policy has on the individual Member States. Because there are – in some cases, significant – structural differences between the economies, monetary policy cannot be expected to have the same impact in all euro area countries.[1] These differences include, for example, the relative size of the various economic sectors and branches of activity, the degree of openness of the economy, the intensity of competition in various economic sectors, firms' funding structure, the labour market and its institutions, the structure of the financial sector, government activity, the tax and social system, and the wealth and wealth structure of households (e.g. the importance of residential property or shares). How large these differences are affects the strength, relative importance and temporal pattern of the transmission of the single monetary policy, which is geared toward the euro area as a whole, to the various euro area economies. As a result, the strength of the responses in the variables at the end of the causal chains, i.e. real gross domestic product and inflation, may differ in the individual euro area Member States.

Empirical studies find country-specific differences in monetary policy transmission

This raises the question as to whether such heterogeneous monetary policy effects do actually exist in the euro area or in other major currency areas. Empirical studies for the United States find evidence of regional differences in the impact of the Federal Reserve's monetary policy (Carlino and DeFina (1998, 1999); Owyang and Wall (2009); Pizzuto (2020)). There are already a number of empirical studies for the euro area, too, that point to the existence of country-specific differences. This article summarises the results of two new analyses on the subject of potential differences in the impact of the Eurosystem's monetary policy in the four major euro area countries of France, Germany, Italy and Spain, and examines the results in the context of the evidence already available from other studies. Both analyses use an approach that allows statistically rigorous statements to be made about the cross-country differences in monetary policy that are of interest here.[2] Ultimately, this also allows the importance of country-specific transmission analyses for the Eurosystem to be discussed.

Empirical analyses of potential heterogeneous impacts of Eurosystem monetary policy

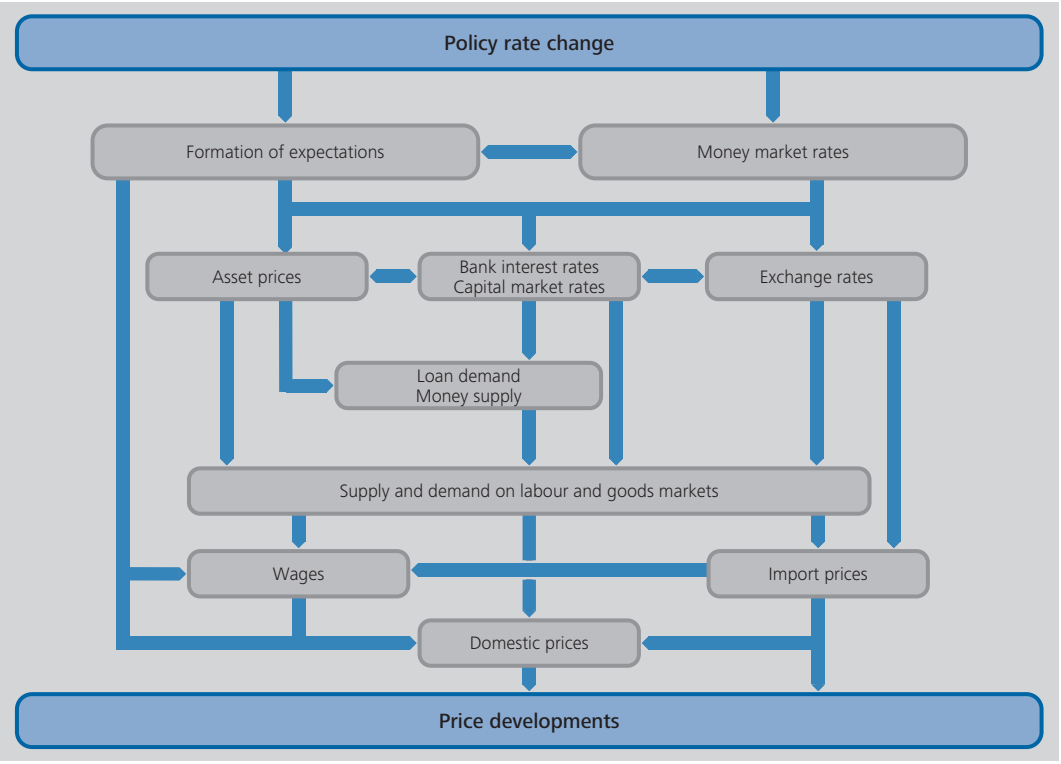
Possible factors influencing monetary policy transmission

A number of empirical studies have been carried out on the potential regional differences in the effects of monetary policy within or between countries in a monetary union, most of which focus on the effects of the central bank's interest rate policy.[3]

The chart on p. 39 shows a simple depiction of the transmission channels of a policy rate

1 For an overview of the structural differences between the euro area economies, see, for example, European Banking Federation (2022) and Sondermann et al. (2019).
2 For more information on this approach, see Mandler et al. (2022) and the remarks on pp. 44 ff.
3 Examples of this type of analysis for the United States include Carlino and DeFina (1998, 1999) and Owyang and Wall (2009) and, for Australia, Vespignani (2015). For an overview of the literature on country-specific effects of interest rate policy in the euro area, see Mandler et al. (2022), pp. 629 ff. For a broader overview of the empirical evidence on the regional effects of monetary policy, see Dominguez-Torres and Hierro (2019). This literature is also related to the body of work on the spillover effects of monetary policy in the United States or the euro area to other economies, e.g.: Benecká et al. (2020), Bluwstein and Canova (2016), Crespo Cuaresma et al. (2019) and Georgiadis (2016).

Transmission of policy rate changes



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change.[4] The strength and relative importance of the various transmission mechanisms are likely to depend on the structural features of the different economies, thus leading to differences in the impact of monetary policy across the euro area economies. For instance, if competition in the banking system becomes more intense, bank interest rates respond more strongly to changes in market interest rates influenced by monetary policy (see, for example, van Leuvensteijn et al. (2008)). The strength of monetary policy transmission via asset prices, such as those for shares or real estate, is influenced, amongst other things, by the distribution of share ownership and residential property. The strength of the exchange rate channel should increase with the degree of openness of the economy – in other words, the importance of exports and imports. How strongly changes in nominal demand for goods and services caused by monetary policy are reflected in changes in real output also depends on the structure of the labour market. If real wages become more rigid, output and employment should react more strongly to changes in nominal demand (see, for example, Abbritti and Weber (2010)). The extent to which output and inflation change in relation to one another as a result of monetary policy impulses depends largely on the slope of the Phillips curve, which also reflects structural characteristics of the economies.[5]

Widespread use of VAR models for monetary policy transmission analysis

Most analyses of potential country or region-specific differences in transmission use vector autoregressive (VAR) models for their estimations. These models look at dynamic relationships between multiple variables.[6] To estimate the impact of monetary policy, it is necessary to

4 For a schematic representation of the transmission mechanisms of the monetary policy purchase programmes, see, for example, Deutsche Bundesbank (2016), p. 35.
5 For information on estimates of the slope of the Phillips curve for the euro area countries, see, for example, Ciccarelli and Osbat (2017).
6 For an overview of VAR models, see, for example, Kilian and Lütkepohl (2017).

isolate the causal relationship between changes in monetary policy instruments, such as policy rates, and changes in the other variables. This is complicated by the fact that monetary policy, in turn, responds to changes in the other variables. Analyses using VAR models provide a number of approaches to solving this identification problem.[7] The analyses presented in the following sections use VAR models in which monetary policy impulses are identified by means of sign restrictions, i.e. by making assumptions about the direction in which a monetary policy impulse influences the other variables in the model (see the annex on pp. 54 ff.).

Using data prior to the introduction of the euro leads to problem of separating heterogeneous transmission from different monetary policy response functions

A number of studies for the euro area were conducted around the time it was created or in the first few years thereafter. These analyses were forced to rely, either to a large extent or entirely, on data from the period before the euro was launched. Only analyses carried out later on were able to rely exclusively on data from the period after the euro area was established.[8] The problem with using data from the period prior to monetary union is that any country-specific differences in the effects of monetary policy may also stem from differences in the behaviour of the individual national central banks.[9] The studies presented below only use data from 1999 onwards, meaning that any differences in the behaviour of the various central banks prior to the start of monetary union are irrelevant.

In addition to studies on country-specific effects of interest rate policy – i.e. conventional central bank monetary policy – there are also analyses of the different effects of unconventional monetary policy (see the sections on pp. 47 ff. and 51 ff.). For the euro area, these studies focus in part on the effects of unconventional monetary policy in general (e.g. Boeckx et al. (2017) or Burriel and Galesi (2018)), or on specific unconventional monetary policy measures such as the asset purchase programme (e.g. Wieladek and Pascual (2016)).

Heterogeneous impact of interest rate policy?

Multi-country BVAR model for analysing the impact of interest rate policy in France, Germany, Italy and Spain

In the current interest rate hike cycle, policy rates are once again the Eurosystem's primary instrument. This raises the question of whether policy rate changes have a different impact on the individual euro area economies. The study by Mandler et al. (2022) makes a contribution to this debate. It analyses the differences in the impact of the Eurosystem's interest rate policy between France, Germany, Italy and Spain using an empirical multi-country model. This is based on a Bayesian vector autoregressive (BVAR) model which captures the interactions between all the variables contained in the model for the various countries (see the annex on pp. 54 ff.). Including all the countries under review in a single model allows a statistically rigorous analysis of potential differences in the impact of monetary policy (see the box on pp. 44 ff.).

Cross-country differences estimated using statistical distribution of cross-country differences in the impact of monetary policy

The charts on pp. 42 ff. show the main results of this analysis. They present in graphic form the estimated statistical distributions of cross-country differences in the responses of real GDP and the Harmonised Index of Consumer Prices (HICP) to an interest rate increase of 25 basis points (bp). These distributions are calculated from the difference between the estimated impact of monetary policy on the variable in question in the first country minus the impact in the second.[10] As the model is symmetrical in terms of interest rate increases and

7 For an overview of identification approaches, see, for example, Kilian and Lütkepohl (2017), Chapters 8-15.
8 Examples include Cavallo and Ribba (2015), Ciccarelli et al. (2013) and Georgiadis (2015).
9 This problem is discussed in Guiso et al. (2000). Using data from before monetary union therefore means that monetary policy has to be modelled very carefully in order to control for the effects of possible differences in the monetary policy reaction function. Examples include Mojon and Peersman (2001) as well as Ciccarelli and Rebucci (2006).
10 Since real GDP and the HICP are fed into the estimation in log levels, the effects of monetary policy should be interpreted as percentage deviations of the variables from their long-term equilibrium. The charts therefore show the difference in these percentage deviations between the two countries.

reductions, the statements also hold for an interest rate reduction if the sign is reversed. The individual charts show these differences for different time horizons following the restrictive monetary policy stimulus for all six possible combinations of the four countries. The estimated probability distribution for a pair of countries compared with the zero line can be used to conclude whether and in what direction the effect of the interest rate change differs between the two countries. If the distribution is relatively symmetrical around zero, there is no clear indication of a difference in the effects of monetary policy. If the distribution of the difference is largely negative, an interest rate increase has a (mathematically) smaller effect on the variable in the first country than in the second. In this case, this means there is a stronger negative effect in the first country than in the second.[11] For ease of interpretation, each chart shows selected percentiles of the estimated probability distribution of the difference between the countries.[12] For more details, see the box on pp. 44 ff.

In a cross-country comparison, real GDP in Germany responds more strongly to changes in interest rates, …

The first three panels of the chart show that the cross-country differences with Germany as the first country are predominantly negative for time horizons of up to four quarters. Moreover, for a period of up to around six quarters, the probability of a negative difference is much higher than that of a positive one. All in all, these results therefore indicate that real GDP declines more sharply in Germany after an interest rate hike than in the other three countries.

The outcome of the comparison among the three other countries depends on the time horizon. The results for France and Italy relative to Spain in the last two charts point to a short-term negative difference, i.e. a stronger decline in real GDP in the first quarters in France and Italy than in Spain. After that, however, no further systematic differences can be identified.[13] Overall, the estimate suggests that monetary policy has a stronger short to medium-term impact on real GDP in Germany than in the other countries under review, whilst its impact on real GDP in Spain is the weakest in the short term.[14]

… but consumer prices respond more weakly

The first three sections of the charts for the HICP show a predominantly positive difference between Germany and the other countries. The positive difference is due to the fact that a stronger negative response in the other country is subtracted from the negative response of the HICP in Germany.[15] This means that the decline in the price level in Germany following an interest rate increase is not as pronounced as in the other countries. The last two charts showing the differences between France and Spain and between Italy and Spain point to a stronger decline in the HICP in Spain in the short term compared with Italy and France.[16] Overall, the results for consumer prices suggest that the strongest response to monetary policy takes place in Spain and the weakest response in Germany.[17]

Taken together, the results suggest that the order of the countries is reversed when it comes to the strength of the impact of interest rate policy on consumer prices rather than real

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11 The identification assumptions used in the model ensure that real GDP and the HICP only show a negative response in the impact period of the interest rate increase. The posterior distribution of the response of GDP to the interest rate increase also shows a mass above the zero line in the individual countries in later periods, meaning that a subsequent positive response of output to an interest rate increase cannot be ruled out. A negative difference in the chart therefore means, strictly speaking, that the response of output or the HICP in the first country is smaller, i.e. more strongly negative or more weakly positive, than in the second.

12 The percentile of order p of a probability distribution of a variable x is the characteristic value x_p that is not exceeded by the share p of all realisations, i.e. where $F(x)$ is the cumulative distribution function, $F(x_p) = p$.

13 The difference between France and Italy is positive at first, and then turns negative. This means that real output in France initially declines less after an interest rate increase, but then tends to decline more sharply than in Italy.

14 In the long term, the evidence for these differences disappears as real GDP returns to its long-term steady state, while, at the same time, uncertainty bands tend to widen as the horizon increases.

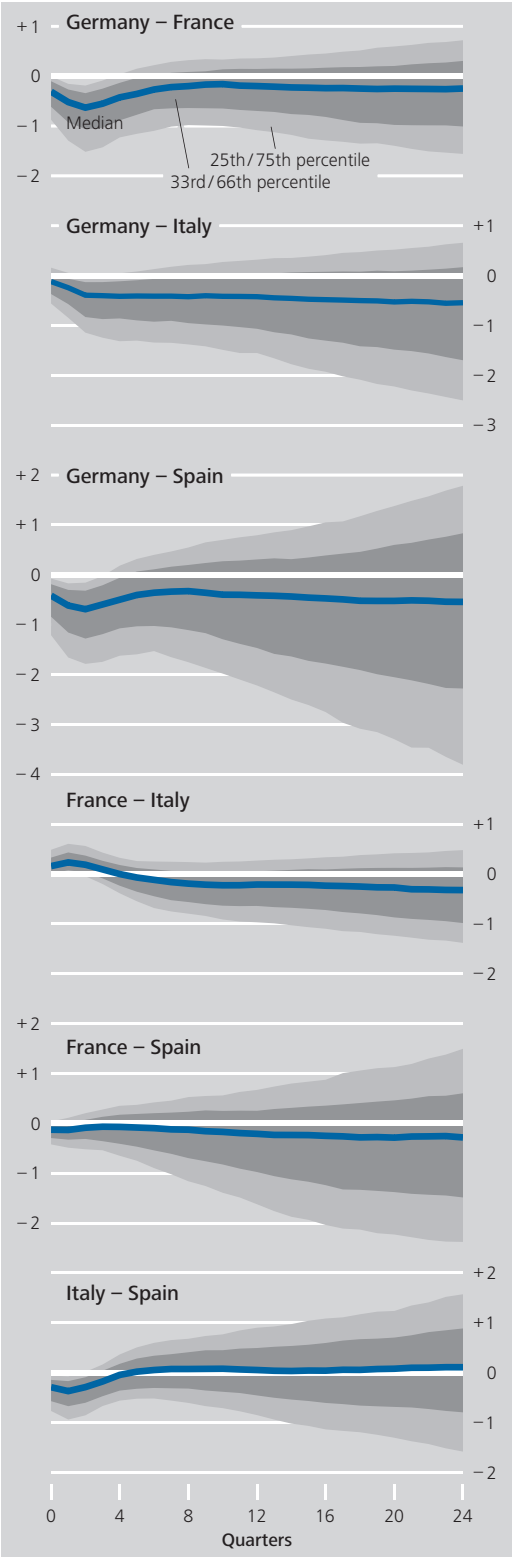
15 See also the comments in footnote 11.

16 Similarly to the GDP response, France and Italy switch places after just a few quarters compared with the previous period.

17 The rankings in terms of GDP and price effects are supported by a number of other tests in Mandler et al. (2022).

Cross-country comparison of the impact of monetary policy on real GDP* Here: 25 bp increase in short-term interest rate

%



* Estimated probability distribution of the impact in the first country less the impact in the second country.

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GDP. This is not necessarily a contradiction in terms; instead, it can be interpreted as a cross-country difference in the slope of the aggregate supply function, which describes the relationship between real GDP and the aggregate price level. The results suggest that it is flatter in Germany than in the other countries considered here.[18]

Possible structural explanations for differences in the GDP response

This raises the question as to the reasons behind the differences identified. The literature on the regional and country-specific effects of monetary policy examines the importance of various structural factors as the cause of differences in the impact of monetary policy between economies. These factors include the importance of capital-intensive sectors or sectors with interest rate-sensitive demand, such as the manufacturing sector (see, for example Carlino and DeFina (1998, 1999) and Owyang and Wall (2009)), the production of durable goods or the construction sector (Georgiadis (2015)). Differences in the flexibility of the labour market are another potential reason. For example, the regression analysis by Georgiadis (2015) shows that the strength of the impact of monetary policy on real GDP depends significantly on labour market institutions and the industry mix. Other possible explanations include differences in the importance of the export sector, and thus the exchange rate channel, or in the intensity of competition in the banking system, which in turn may have an impact on interest rate pass-through.[19]

To assess the significance of the various possible causes, Mandler et al. (2022) combine indicators for the above-mentioned factors and review the consistency of the stronger GDP response in Germany with the relative position of

18 The results referred to above apply to the relationship between output, i.e. real GDP, and the price level. They are consistent with the evidence of a relatively flat Phillips curve in Germany; see, for example, Ciccarelli and Osbat (2017) and Reichold et al. (2022). The Phillips curve describes the relationship between actual inflation, expected inflation and the output gap, i.e. the deviation of output from potential.

19 For a discussion of the various explanatory approaches, see Mandler et al. (2022) and the literature cited therein.

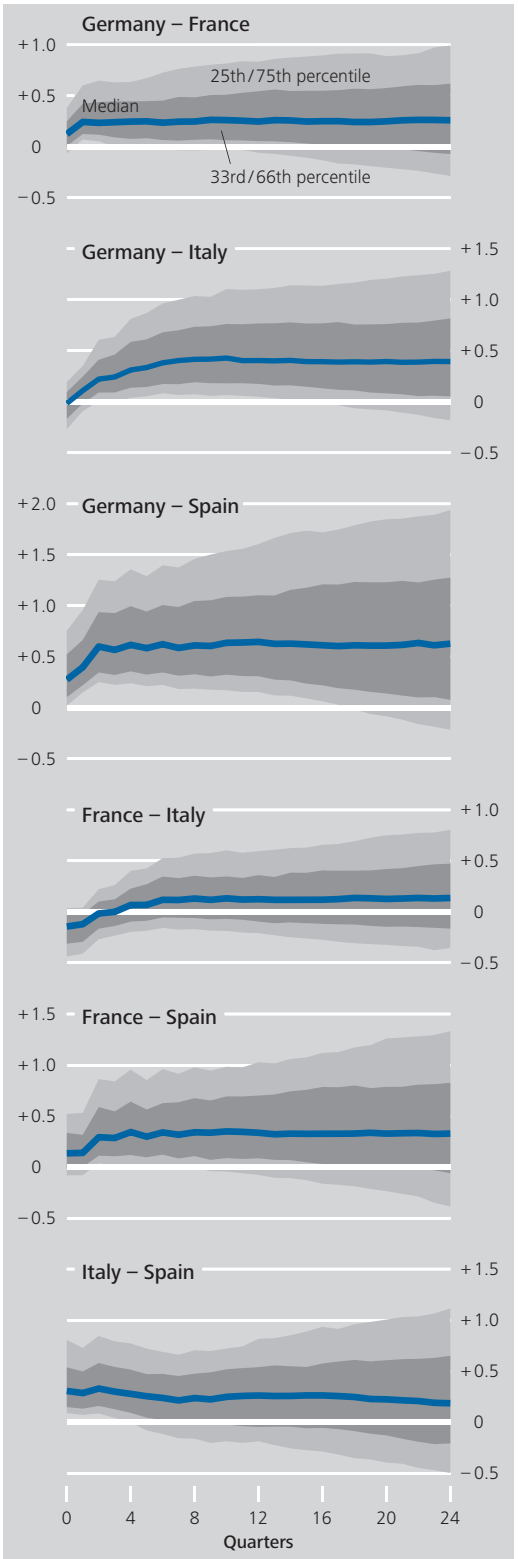
the country in relation to these indicators.[20] It turns out that the stronger GDP response in Germany to interest rate policy is consistent with the greater importance of the manufacturing sector and the production of durable goods, weaker employment protection, greater importance of exports and greater competition in the banking system than in the other countries under consideration.[21]

Differences difficult to explain for price developments

The search for what is behind the cross-country differences in the price response is a much more difficult endeavour. The analysis by Abritti and Weber (2010) of the impact of labour market institutions on the business cycle shows that a stronger response of employment – and thus also of output – to a monetary policy impulse is observed in conjunction with a weaker response of the inflation rate if the country in question exhibits a combination of relatively low real wage flexibility and high employment flexibility. While the above-mentioned indicators of employment protection legislation for Germany provide evidence of a greater degree of flexibility in the volume of employment compared with the other countries considered here, there are other indicators that do not

Cross-country comparison of the impact of monetary policy on HICP* Here: 25 bp increase in short-term interest rate

%



* Estimated probability distribution of the impact in the first country less the impact in the second country.

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20 Other studies test possible explanatory approaches by regressing the trough response of GDP (Georgiadis (2015)) or the impulse response functions cumulated over eight quarters (Carlino and DeFina (1998, 1999)) on a constant and one or more explanatory variables. However, as the analysis presented here only provides results for four countries, it is not possible to perform a similar regression analysis. If a regression were to be carried out on a constant and one explanatory variable, only one degree of freedom would remain, as the residual variance also needs to be estimated. This problem does not apply to the other studies because they include more regions or countries. In these cases, however, the estimation of the model requires greater restrictions on the interaction between countries or the inclusion of fewer variables per region.

21 However, there are also indicators for structural features of the economy whose ranking is inconsistent with the results of the empirical analysis. This approach can therefore only provide rough indications of the potential underlying causes.

The methodology for comparing monetary policy effects

The studies conducted by Mandler et al. (2022) and Mandler and Scharnagl (2023), summarised in the main body of this article, focus on a cross-country comparison of the estimated responses of various macroeconomic variables to monetary policy shocks. The dynamic effects of a monetary policy shock are typically shown as impulse response functions with uncertainty bands which provide information on the probability distribution of the estimation. Most of the studies, based on vector autoregressive (VAR) models, examine differences between countries or regions by means of a visual comparison of these impulse response functions. If the probability distributions of the impulse response functions for a variable show only very small overlap in two countries or regions, the conclusion drawn is that there is a difference in the effects of monetary policy.[1]

There are problems associated with this approach, however. The first is that it does not directly examine the variable of interest – the difference in the impulse response functions – but attempts to analyse it indirectly by looking at the distributions of the impulse response functions themselves.[2] The second problem is that it treats the two estimated impulse response functions to be compared as mutually independent. In fact, the estimation errors in the impulse response functions are likely to be correlated.[3] Third, comparing overlapping uncertainty intervals has less favourable statistical properties than directly testing for a difference.[4]

Mandler et al. (2022) propose an approach for comparing impulse response functions between regions which takes into account the correlation of the estimation errors and focuses directly on the probability distribution of the difference between the impulse responses. The approach therefore uses the information contained in the joint distribution rather than indirectly deriving conclusions from the comparison of the distributions of the two impulse responses. For their analysis, they use a multi-country model which simultaneously contains all countries examined. The correlation between the estimation errors of the countries' impulse response functions is thus captured by the model.[5] The Bayesian procedures used to estimate the model use stochastic simulations in order to generate the model parameters' probability distributions. This results in a large number of "draws", each containing a complete set of values for the model parameters. The sequence of these draws approximates the estimated joint distribution of the model

1 On the other hand, a simple comparison of the point estimators of the impulse response functions has only limited informational content as it ignores the uncertainty associated with the estimations. The greater the estimation uncertainty, the greater the distance between the point estimators has to be in order to indicate a difference between the countries.
2 The difference between the impulse response functions is a characteristic of the joint distribution of the countries' impulse response functions. However, the comparison of the impulse response functions only uses information from the marginal distribution or implicitly assumes that the impulse response functions are mutually independent. Under this assumption, the marginal distributions would contain the same information as the joint distribution.
3 Even if the impulse response functions have been calculated from separately estimated models for the individual countries, the estimation errors may nevertheless be correlated if, in some cases, the same data are inputted into the individual models or the data content of the models is correlated.
4 See Schenker and Gentleman (2001).
5 This is not the case if the impulse response functions are generated from individual, independently estimated models for the various regions. It is not absolutely necessary to use a model such as that described here to incorporate the correlation of the estimation errors. The approach to comparing impulse response functions can also be applied to other approaches for multi-country models, such as factor-augmented VAR (FAVAR) or panel VAR models.

parameters.[6] Impulse responses to a monetary policy shock can be calculated for all variables from each draw for the model parameters. All of these draws taken together thus approximate the joint distribution of the impulse response functions of all variables, and this joint distribution also reflects the correlation between the various countries' impulse responses.

The research question is aimed at possible differences between various countries' impulse response functions. Mandler et al. (2022) therefore suggest that, for one specific variable, such as gross domestic product or the Harmonised Index of Consumer Prices, the difference between the impulse response functions of two countries should be calculated from each draw in the estimation. The sequence of draws thus results in the probability distribution of the difference in the impact of monetary policy on this variable between the two countries examined, from which, as is shown in the main text, conclusions about potential heterogeneity in the transmission of monetary policy can be drawn.

The advantage of this test strategy can be illustrated by an example. Assume that two countries' impulse response functions differ by a constant but very small amount relative to the estimation uncertainty of the impulse response functions. Also, let the estimation error of the impulse response functions in the two countries be perfectly positively correlated. In this example, the calculation of the differences described above results in a constant and non-zero value, which clearly indicates a difference in the impact of monetary policy. In this example, however, the uncertainty bands of the impulse response functions overlap almost completely, which means that a visual comparison of the two does not provide any discernible evidence of differences.

The basic idea of this approach can be expanded from analysing country-specific differences between impulse response functions to cover differences in other variables (functions) derived from multi-country models, such as shock decompositions, forecasts or simulations. In that vein, Mandler and Scharnagl (2020) examine differences between the simulated effects of the Eurosystem's asset purchase programme (APP) on the large euro area countries. The applicability of the approach also goes beyond analyses of heterogeneous effects of common (monetary, fiscal policy or other) shocks in a monetary union or regions of a country. The approach is generally applicable to the question of heterogeneous effects of a common shock across entities such as countries, economic sectors, etc.[7]

The question of the different effects of various shocks on a given variable can be examined in a similar manner. The comparison of the impact of a conventional monetary policy shock with that of a shock to expected monetary policy interest rates in Mandler and Scharnagl (2023) is one example. For this purpose, however, the two shocks need to be suitably normalised in order to be made comparable.

For greater ease of interpretation, each diagram of the estimated probability distribution of the country differences on pp. 43 f. and pp. 50 f. in the main text shows five percentiles: the 25th, 33rd, 50th (median),

6 The sequence of draws approximates what is known as the posterior distribution of the model parameters. This is a combination of the prior distribution, i.e. ex ante assumptions about the distribution of the parameters, and the likelihood function that contains the data's information on the parameters. For an introduction to Bayesian estimation approaches, see, e.g., Koop (2003) and, for more information on Bayesian VAR models, e.g. Kilian and Lütkepohl (2017), chapter 5.
7 The studies of spillover effects mentioned in footnote 3 in the main text are one example.

66th and 75th percentile. As an example, let us explain the interpretation of the differences in the responses of real GDP between Germany and France and Germany and Italy on p. 42.

A comparison of the median and the zero line can provide an initial indication: if the median is below (above) zero, the probability of the actual difference between the two countries being negative (positive) is greater than the probability of a positive (negative) difference. In the quarter in which the shock occurs (quarter zero) and the subsequent three quarters, the 75th percentile is below the zero line for the difference in the GDP response between Germany and France. What that means is that the probability of a negative difference is at least three times as large as the probability of a positive difference (more than 75% to less than 25%). The 66th percentile then is near the zero line until around two years after the shock, which shows a probability ratio of around two to one for a negative versus a positive difference (around 66% to around 33%). Since the interest rate increase impacts negatively on real GDP in both countries, a negative difference means that, as a consequence of the interest rate increase, real GDP in Germany declines more sharply than in France.[8] Apart from the period in which the shock occurs, the 75th percentile of the difference is near zero until around four quarters after the shock for the comparison between Germany and Italy, which means that the probability ratio between a negative difference and a positive difference is around three to one. Beyond the subsequent horizon of up to around three years, the 66th percentile is close to the zero line, indicating a probability ratio of about two to one for a negative versus a positive difference. These results collectively indicate a negative difference and thus a stronger decline in real GDP in Germany. The other country differences shown can be interpreted accordingly by using the information contained in the percentiles.

8 For more, see footnote 11 on p. 41 of the main article.

support the notion of greater real wage rigidity.[22]

Existing body of studies for euro area countries with inconsistent findings

The finding in the analysis presented here – that real GDP shows a stronger response in Germany – can also be found in a number of other studies, such as that of Georgiadis (2015), which also only uses data since the euro was introduced. However, the findings for the relative ranking of the euro area countries are inconsistent across the existing body of empirical studies as a whole, both in terms of GDP and price effects.[23] The existing empirical analyses vary in terms of their estimation periods, model structures, the variables they contain and the methods they use to identify monetary policy impulses, which makes it difficult to compare the results. In addition, many of the studies – unlike the analyses presented here – do not use a rigorous statistical test strategy and are largely confined to a visual or tabular comparison of the estimated effects of monetary policy, which means it is unclear how these findings can be assessed from a statistical perspective.[24] Further research will be needed to reach a consensus on the differences and their determinants.

Heterogeneous impact of changes in interest rate expectations?

Forward guidance impacts through changes in interest rate expectations

Besides changes in key monetary policy interest rates, there are other instruments that central banks can use to exert an influence on consumer price developments. In the euro area, these instruments were deployed notably in the wake of the global financial crisis and the European sovereign debt crisis, when the ECB Governing Council reduced its policy rates to close to the effective lower bound, leaving only little room for further expansionary impulses by means of conventional monetary policy. These instruments include forward guidance, an explicit communication on the future path of monetary policy rates aimed at influencing interest rate expectations. According to the expectations hypothesis of the term structure of interest rates, changes in expectations about the future path of short-term interest rates affect medium to long-term capital market rates. In addition, communicating this information can reduce uncertainty about future policy rates and can also influence long-term interest rates via this channel.[25]

Basically, central banks can use forward guidance to influence interest rate expectations in one direction or another. Even before the financial crisis, central banks were using communications to influence interest rate expectations – but their statements were, at the time, less explicit about the future path of monetary policy rates.[26] During the negative interest rate policy period, the ECB Governing Council used forward guidance to provide additional expansionary monetary policy impulses, even though the short-term money market rate had reached the effective lower bound.[27]

Transmission of impulses to interest rate expectations may differ from that of changes in policy rates

Since conventional policy rate changes also have an effect to a large extent through changes in expectations (see the chart on p. 39), it would be fair to assume that the effects of forward guidance on euro area economies are

22 Such indicators include, for example, the degree of unionisation or coverage by collective wage agreements; see, for example, Babecky et al. (2010). These indicators do not suggest that real wage rigidity is stronger in Germany, however. Georgiadis (2015) regresses the trough response of the price level on possible explanatory variables, such as industry mix and labour market institutions, and finds that only the regression coefficient of the industry mix shows a value that is significantly different from zero at the 10% level.

23 See Mandler et al. (2022). A comprehensive overview of the empirical analyses on differences in the impact of monetary policy on economic activity can be found in Dominguez-Torres and Hierro (2019).

24 Excluded here is Ciccarelli and Rebucci (2006), in which the authors use the Kolmogorov-Smirnov test to examine the statistical significance of cross-country differences.

25 For an explanation of forward guidance, see Deutsche Bundesbank (2013). A number of analyses of the effects of forward guidance, carried out using various models, are summarised in Taskforce on Rate Forward Guidance and Reinvestment (2022).

26 Nelson (2021) describes the emergence of forward guidance as a policy tool using the Federal Reserve as an example.

27 For an overview of the Eurosystem's forward guidance and how it has changed over time, see Hartmann and Smets (2018) and Rostagno et al. (2019).

quite similar to those of policy rate changes. However, one major difference is that forward guidance has a stronger impact on the middle part of the yield curve, while changes in policy rates have a more pronounced effect at the short end.[28] It therefore makes sense to examine whether there are any country-specific differences in the impact of monetary policy as regards forward guidance, too. For example, Mandler and Scharnagl (2023) analyse whether changes in expectations about the future short-term money market rate have different effects on the four large euro area economies. This analysis can be interpreted as an approximation of the effects of forward guidance (see the annex on pp. 54 ff.).

BVAR model augmented by expectations variables

The model used for the study is based on the one from the previous section but differs in that it contains expectations variables in an effort to capture the effects of changes in interest rate expectations. The three-month interest rate is used as a policy indicator because expectations from the consensus forecasts are available for this rate. The model is outlined briefly on pp. 54 ff.

Real GDP in Germany shows stronger response to change in expected monetary policy interest rate

The charts on pp. 49 f. show the results of the cross-country comparison of the responses of real GDP and the HICP to an increase of 25 bp in the three-month interest rate expected in one year.[29] As regards the response of real GDP to the expected rise in interest rates, the estimated probability distributions of the differences between Germany and the three other countries for the first four to six quarters are predominantly in negative territory. This means that, following the restrictive interest rate expectations impulse, GDP falls more strongly in Germany than it does in the other three countries – that is, it shows a stronger response to the monetary policy impulse.[30] The chart also indicates that real GDP in Italy is least sensitive to the change in expectations, with France and Spain lying between the two extremes.[31] The differences between Germany, on the one hand, and France and Spain, on the other, subside over time, while the deviation of the effect in Italy shows a degree of persistence.

Differences in the response of consumer prices less clear-cut

The differences in HICP responses across countries are less clearly pronounced. The estimated probability distributions for the comparison of Germany with the other three countries point to a stronger negative effect of the expected interest rate hike on consumer prices in Germany. For the other countries, the differences are weaker and do not allow any clear conclusions to be drawn. As the model used here is symmetrical, the corresponding effects in the opposite direction on real GDP and consumer prices are to be expected in the event of a decline in expectations for the future monetary policy interest rate.

Just like a conventional interest rate shock, a change in interest rate expectations (given a constant actual interest rate) likewise leads to a stronger change in real GDP in Germany. However, the price level in Germany shows a stronger response to the expectations shock than it does in the other countries, while its response to the conventional interest rate im-

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28 See Taskforce on Rate Forward Guidance and Reinvestment (2022), pp. 26 ff., and Altavilla et al. (2019). Mandler and Scharnagl (2023) compare the effects of policy rate changes with those of changes in interest rate expectations induced by monetary policy and find that the latter tend to impact more strongly on output and prices in some euro area countries. One reason for this is that expectations shocks induce a short-term interest rate response that is more persistent than conventional monetary policy impulses.

29 The findings in Mandler and Scharnagl (2023) relate to an expected -10 bp shock to the three-month interest rate. To make them comparable with those from the analysis presented above, the results were recalculated for an expected +25 bp shock to the three-month interest rate.

30 More precisely, a negative difference means that real GDP in the first country falls more sharply or rises less sharply than in the second. As the sign restriction in this model refers only to the average across countries, part of the probability mass of the impulse response functions of real GDP is also in the positive range.

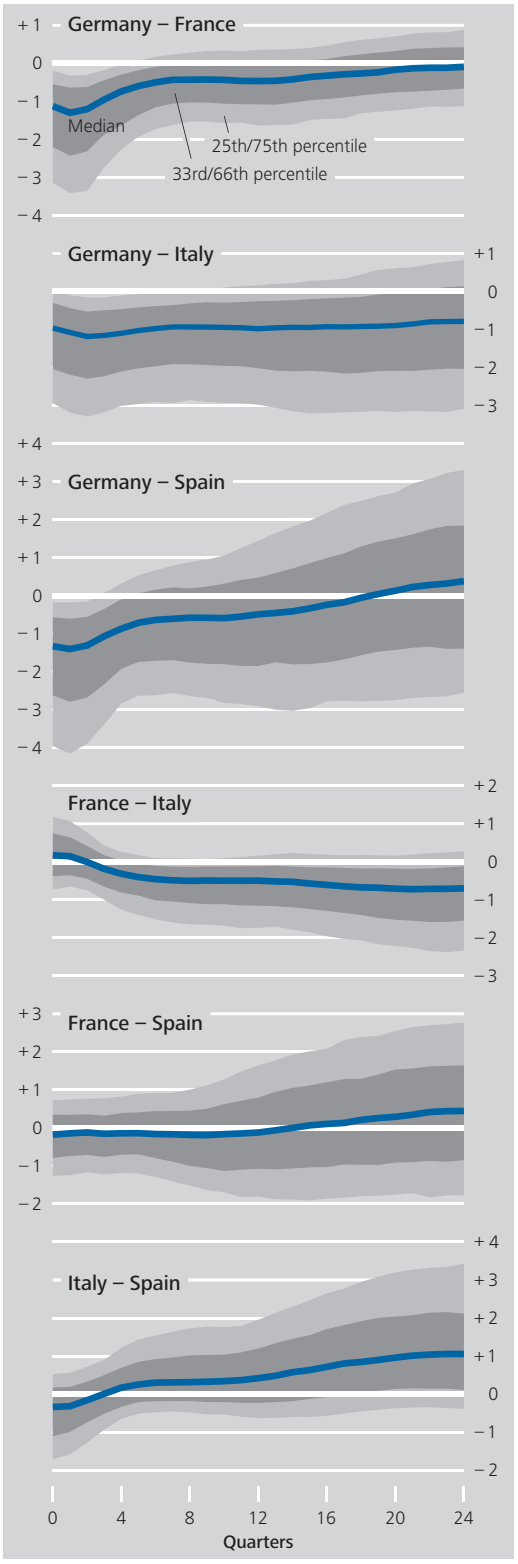
31 The distribution of the difference between France and Spain does not point in any clear direction. By contrast, the difference between France and Italy is mostly negative from around four quarters onwards, and in the positive range between Italy and Spain.

pulse is smaller.[32] This need not necessarily be a contradiction in terms but could be because a monetary policy impulse in the form of forward guidance in Germany impacts more strongly on producers' price expectations than a change in the policy rate. This effect would, ceteris paribus, amplify the effect of forward guidance on consumer prices (relative to a change in the key interest rate). To the extent that this effect does not materialise in other countries or does so only in a weakened form, this may change the order of the countries.[33]

Model extensions suggest that effects on financing conditions in Germany are more persistent

Mandler and Scharnagl (2023) investigate possible reasons for the stronger GDP response in Germany to the change in expectations by incorporating additional variables into the model. This approach is useful at this juncture, unlike in the analysis presented in the previous section, as the benchmark version of the model contains fewer variables, which means additional variables can be more readily included. They repeat the estimation using model vari-

Cross-country comparison of the impact of monetary policy on real GDP* Here: expected 25 bp increase in 3-month interest rate



* Estimated probability distribution of the impact in the first country less the impact in the second country.

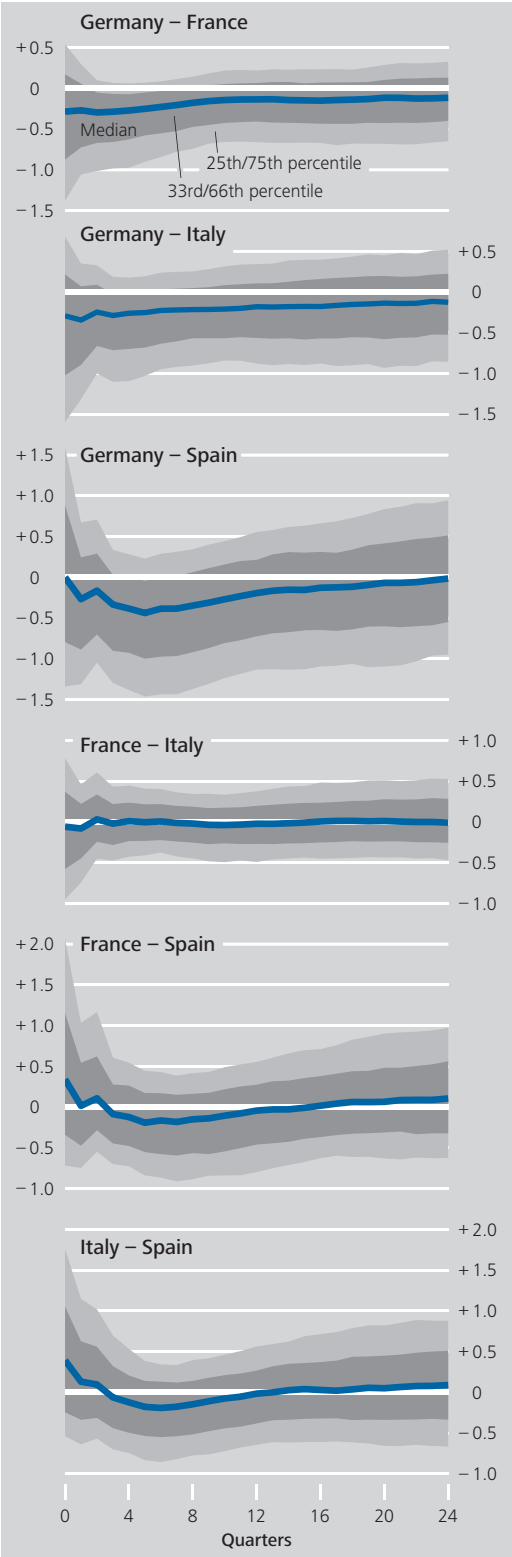
Deutsche Bundesbank

32 In addition to the interest rate expectations shock, Mandler and Scharnagl (2023) also identify a conventional monetary policy interest rate shock – albeit one in which the three-month interest rate is used as the policy indicator. The cross-country comparison of the effects of this interest rate shock shows that real GDP in Germany exhibits a stronger response to conventional interest rate policy than it does in other countries, as in Mandler et al. (2022). Again, the HICP response is strongest in Spain. This would suggest the findings are robust for conventional monetary policy. The order of each of the other countries changes, in some cases, from Mandler et al. (2022) and depends on the response horizon under analysis. The two models differ, amongst other things, in terms of the estimation period, the variables they contain and the assumptions they make when identifying monetary policy impulses. The model was tested for robustness in Mandler et al. (2022) by newly estimating the data subject to the restrictions described on p. 55 being imposed on the country averages of output and price responses, which thus brought it closer to the identification assumptions used in the later model. This exercise leads to a weakening of the country differences in the GDP response, though that response remains the strongest in Germany. By contrast, the price response continues to be strongest in Spain. This suggests that this identification approach is not driving the differences in the results.

33 In terms of model theory, this argument aims to ensure that the equilibrium in an economy, given a monetary policy impulse, not only moves along a given aggregate supply function, but that it also shifts vertically if price expectations change. Hence, price level responses of different strengths for the two different monetary policy impulses can be consistent with the same slope in the aggregate supply function, provided that price expectations react with different strengths to the two impulses.

Cross-country comparison of the impact of monetary policy on HICP*
Here: expected 25 bp increase in 3-month interest rate

%



* Estimated probability distribution of the impact in the first country less the impact in the second country.

Deutsche Bundesbank

ants which, for each of the countries, contain either the two-year government bond yield, the spread between corporate and government bonds (the "excess bond premium" – see Gilchrist and Mojon (2018)), real investment or loans to non-financial corporations along with the corresponding lending rate. The results indicate that the change in the expected short-term interest rate in Germany leads to a more persistent change in financing costs than it does in other countries and has a stronger impact on loans and investment.

Another important non-standard monetary policy instrument used by the Eurosystem was the asset purchase programme (APP). Mandler and Scharnagl (2020) analyse possible differences in the effects of the APP on the four large euro area countries, again using a multi-country BVAR model (see the box on pp. 51 f.). Instead of investigating the effect of a one-off monetary policy impulse, they compare the simulated effects of the APP over the period from the beginning of 2015 to the end of 2018. Their findings suggest that the APP has had a weaker impact on GDP in France compared with other countries. The differences between Germany, Italy and Spain are not strong enough to allow any conclusions to be drawn. The estimated impact on the HICP is strongest in Spain and weakest in Italy, with Germany and France lying between the two with similar effects. However, different studies also come to different conclusions on the effects of the APP.[34]

34 The estimations by Boeckx et al. (2017) and by Burriel and Galesi (2018) likewise show that, out of the four countries, the strongest impact on prices can be found in Spain. Unlike Mandler and Scharnagl (2020), however, they estimate a stronger GDP effect in Germany than in other countries. Wieladek and Pascual (2016) estimate the strongest price effect in Germany and the strongest GDP effect in Spain. However, these studies compare the effect of a one-off unconventional monetary policy impulse, while the analysis on pp. 51 f. compares simulated aggregate effects of the APP over multiple years.

Has the asset purchase programme (APP) affected euro area countries differently?

Mandler and Scharnagl (2020) use a BVAR model to examine whether the Eurosystem's APP has had differing impacts on the four major euro area economies. The purchase programme was intended to provide expansionary monetary policy stimuli at a time when conventional monetary policy had little remaining scope for further interest rate cuts.[1] The empirical analysis estimates and compares the effects of the purchase programme from the beginning of 2015, when it was adopted, up to the end of 2018, when net purchases were ended for the first time. Unlike the two papers in the main text, however, it does not compare impulse responses to a monetary policy shock; instead, simulated effects of the APP on the four countries are compared.

The model consists of a block of euro area variables and blocks of country-specific variables.[2] The country-specific blocks – for France, Germany, Italy and Spain – contain real gross domestic product (GDP), the Harmonised Index of Consumer Prices (HICP), bank loans to non-financial corporations, the lending rate and the yield on government bonds with a maturity of five years. The euro area block comprises financial variables for the euro area as a whole: the euro overnight index average (EONIA), a stock price index, the nominal effective exchange rate, the composite indicator of systemic stress (CISS),[3] the yield spread of corporate over government bonds (excess bond premium), the average yield on government bonds with a maturity of five and ten years, and the spread between government bond yields in Germany and the euro area average with a maturity of five years.

The simulation of APP effects is calculated as the result of a sequence of monetary policy shocks. To this end, two monetary policy shocks are identified using sign restrictions: a conventional monetary policy shock, i.e. an interest rate policy shock, and an unconventional monetary policy shock. For the conventional monetary policy shock, it is assumed that a decline in the EONIA lowers government bond yields in the euro area and in the individual countries and that real GDP and the HICP increase on average across the four countries.[4] Identification of the unconventional monetary policy shock is based on the documented financial market effects of monetary policy purchase programmes (e.g. Altavilla et al. (2021)). The shock leads to an increase in the stock price index, a depreciation of the euro and a decline in government bond yields. In addition, it is assumed that the CISS and the excess bond premium decrease, i.e. that asset purchases reduce risk premia, and the yield spread between German government bonds and the euro area average declines, i.e. the German government bond yield falls less sharply than the euro area average. Furthermore, the unconventional monetary policy shock leads to an increase in GDP and the HICP on average across the countries. The difference between the uncon-

1 For more information on the transmission mechanisms of monetary policy purchase programmes, see, for example, Deutsche Bundesbank (2016).
2 For details about the model, see Mandler and Scharnagl (2020).
3 The CISS is an indicator of stress in the financial system. It consolidates the importance of frictions and tensions in the financial system in one indicator; see Holló et al. (2012).
4 When calculating the averages, the country-specific variables are weighted by the relevant GDP. This sign restriction is less restrictive than the assumption that the monetary policy shock will lead to an increase in GDP and the HICP in each country.

ventional and conventional monetary policy shocks is that the former has no effect on the EONIA.[5] All of these restrictions apply in the period in which the shocks occur.

The simulation of the effects of the APP is based on a series of expansionary unconventional monetary policy impulses. These impulses are calibrated such that their effects on the ten-year government bond yield correspond to the revisions to the assumptions about this yield in the Eurosystem's macroeconomic projections over the analysis period. These assumptions reflect market expectations at the time of the relevant projection. The simulation thus assumes that these revisions to expectations were driven primarily by unconventional monetary policy and, above all, by the APP.[6] Taken in isolation, the expansionary effects of the unconventional monetary policy shocks would lead to an increase in the EONIA in line with the monetary policy response function estimated in the model. In order to avoid this effect, which counteracts unconventional monetary policy measures, unconventional monetary policy shocks are combined with conventional ones to keep the EONIA at its baseline.[7]

The comparative approach described on pp. 44 ff. is applied to the simulated effects of the APP. Overall, the results indicate that the APP had a weaker impact on real GDP in France than in the other countries. The differences between Germany, Italy and Spain are not pronounced enough to discern a clear ranking. According to the estimates, the impact on consumer prices was strongest in Spain and weakest in Italy, with Germany and France between the two extremes. Overall, the analysis shows that Germany, too, benefited from the APP and that the programme's effects in Germany were by no means the weakest among the countries under analysis.

5 The identification of an unconventional monetary policy shock via the term structure with the central assumption that an unconventional monetary policy shock affects the long-term interest rate but not the short-term money market rate follows Baumeister and Benati (2013).

6 Unconventional monetary policy shocks encompass all monetary policy measures that affect the term structure of interest rates according to the assumptions made during their identification. This also includes forward guidance, for example. Strictly speaking, the simulations therefore estimate the combined effects of various unconventional monetary policy measures. When interpreting the results, it is assumed that the greatest share of these is attributable to the APP.

7 For details about the simulation, see Mandler and Scharnagl (2020). This approach is based on the fact that the Eurosystem's scope for further interest rate cuts was limited by the effective lower bound and the APP was intended to provide expansionary monetary policy stimulus. Conventional monetary policy, which would counteract these expansionary monetary policy impulses, was therefore unlikely.

Importance of regional differences in monetary policy transmission for monetary policy

Literature provides evidence for heterogeneous effects of Eurosystem monetary policy

The current studies on country-specific differences in the effects of monetary policy in the euro area, together with the analyses presented here, suggest that the Eurosystem's single monetary policy has varying impacts across the euro area economies. This is true not only of the Eurosystem's conventional interest rate policy but also of non-standard monetary policy measures such as forward guidance. Some of the analyses point to the structural differences between the economies that might play a role in this. However, the available studies typically only take into account a limited number of structural factors, and it remains unclear how important they are, including relative to one other, when it comes to explaining the differences.

Ranking of countries is not robust across the existing studies

The results of the studies which document indications of varying impacts of monetary policy on the euro area countries differ, however, in terms of the relative ranking of the countries examined.[35] Looking at the literature as a whole, it seems the results possess a certain degree of sensitivity as regards the estimation period, the model structure and the identification assumptions, amongst other factors. The importance of the specific ranking of countries therefore should not be overstated until a consensus has been reached on this. What is more, it is possible this ranking could also change over time, for example owing to structural reforms. The following section therefore does not deal with the results for individual countries, but with the more fundamental implications of regional differences in monetary policy transmission for the Eurosystem's monetary policy.

Disaggregated analyses provide important information for monetary policy decision-making

The Eurosystem's mandate is to maintain price stability within the euro area. Consequently, the Governing Council of the ECB has defined the price stability objective for the euro area as a whole on the basis of the HICP. This means that country-specific developments cannot play a role at the target level of monetary policy. However, this need not necessarily apply to the level below that at which the use of monetary policy instruments is calibrated (see Angelini et al. (2008)). This is not to be confused with a monetary policy geared primarily to national circumstances, though. The mandate of the Eurosystem's monetary policy relates to price stability in the euro area as a whole, and in this context country-specific factors only matter to the extent that they are relevant to inflation developments in the euro area. Thus, although the Governing Council of the ECB makes its decisions based on economic developments in the euro area as a whole, disaggregated data, which include country-specific data, provide important information for monetary policy decision-making. These data help to improve the understanding and assessment of aggregate inflation developments and the transmission mechanisms of monetary policy in the euro area (see Issing (2004)). Since the start of monetary union, both country-specific data and microdata, for example about banks, have become more important for the analysis of monetary policy transmission.[36]

ECB Governing Council uses all relevant information

When preparing monetary policy decisions, the Eurosystem uses not only models at the aggregate euro area level but also various multi-country models that capture differences in the interrelationships.[37] This category also includes the models presented in this article. The key

35 See the discussion on p. 47. For example, in the analysis by Georgiadis (2015), the output response to an interest rate shock is weakest in France out of the four countries considered here, whereas the analysis in the section entitled "Heterogeneous impact of interest rate policy?" indicates a stronger reaction in France than in Italy and Spain. While the output response is strongest in Germany in the analysis contained in the same section, Ciccarelli et al. (2013), for example, estimate that monetary policy has greater effects on the real GDP of euro area countries more affected by the financial and sovereign debt crisis.
36 See the overview of developments in monetary and financial analysis in Deutsche Bundesbank (2023). For an overview of the information about the inflation process and transmission at the euro area level contained in microdata on price-setting behaviour, see Dedola et al. (2023).
37 One example is the ECB staff's BASE model; see Angelini et al. (2019).

macroeconomic projections are based on forecasts for the individual euro area countries, which are aggregated at the euro area level.[38]

Structural and institutional determinants of heterogeneous transmission are the responsibility of other policy areas

Finally, it should be stressed that it is not the task of monetary policy to smooth out differences in the transmission of monetary policy across countries. Empirical evidence suggests that these differences are driven by structural and institutional factors that fall within the responsibility of other policy areas, particularly national ones. Moreover, differences in the regional effects of monetary policy are not a problem specific to a monetary union such as the euro area. Empirical analyses for the United States, for instance, also indicate that the Federal Reserve's monetary policy does not have a homogeneous effect throughout the entire country (e.g. Carlino and DeFina (1998, 1999) and Pizzuto (2020)).

38 For an overview of the projections, see European Central Bank (2016). This approach draws on the expertise available at the national level and allows for the inclusion of different national data sources and institutions.

Annex: Brief outline of the models used

The analysis of differences in the impact of interest rate policy across the four major euro area countries in Mandler et al. (2022) uses a Bayesian vector autoregressive (BVAR) multi-country model.[39] This flexible approach captures possible interactions between all variables contained in the model for the different countries. Including all the countries in the empirical model is also a condition for the statistical analysis of differences in the impact of monetary policy (see the box on pp. 44 ff.).

The model is estimated based on quarterly data from the first quarter of 1999 to the third quarter of 2014. This excludes the subsequent period in which the Eurosystem steered the monetary policy stance mainly using the asset purchase programmes. For each of the four countries, the model contains real GDP, the HICP, the broad monetary aggregate M3, loans to the non-financial private sector and the yield on government bonds with a maturity of five years. The yield on US government bonds with a maturity of five years and a US shadow interest rate are included as additional variables to capture possible effects of the Federal Reserve's monetary policy or the international capital markets.[40]

The shadow interest rate of Wu and Xia (2016) serves as an indicator of monetary policy for the euro area. The results are qualitatively very similar when using the money market interest rate for overnight loans (EONIA). Eurosystem monetary policy responds to economic developments in the euro area as a whole. While the model does not cover all euro area economies, the four countries it contains account for more than three-quarters of euro area real GDP over the estimation period. This should enable sufficiently sound empirical modelling of the Eurosystem's monetary policy response to economic developments in the euro area.

Estimating the effects of interest rate policy requires separating the causal effects of monetary policy on the other variables from the endogenous response of monetary policy to changes in the macroeconomic environment. To this end, "monetary policy shocks" are identified using sign restrictions: the analysis assumes that an increase in the monetary policy interest rate leads to a decline in real GDP and the HICP in all countries within the same quarter.[41] Under this assumption, the estimated model can be used to calculate the responses of all variables to an interest rate rise in the Eurosystem, known as impulse response functions.

39 For a precise description of the model and the estimation approach, see Mandler et al. (2022). Mandler et al. (2016, 2017) represent earlier versions of this analysis, which was further developed into the version summarised here during the publication process.
40 A shadow interest rate is a hypothetical overnight money market rate that would have arisen in the absence of a binding effective lower bound. It is estimated using interest rates of different maturities from a term structure model. The shadow interest rate responds to changes in short-term interest rates, i.e. to the central bank's conventional monetary policy, as well as to non-standard monetary policy measures that affect medium and longer-term interest rates. For an overview of the construction and interpretation of the shadow interest rate, see Deutsche Bundesbank (2017).
41 Another assumption is that an increase in real GDP or in the price level in a given country, taken in isolation, leads to an increase in the monetary policy interest rate in the same quarter, i.e. the coefficients of current output and price levels are assumed to be positive in the monetary policy response function; see Arias et al. (2019).

The analysis of the effects of changes in interest rate expectations is taken from the study by Mandler and Scharnagl (2023). The model used in that study is similar to the one used to analyse actual interest rate changes. Compared with the model described above, however, it contains fewer country-specific variables and has instead been expanded to include expectations variables, based on D'Amico and King (2023), which allow the effects of expectations shocks to be captured.

The model contains real GDP and the HICP for each country. For the euro area as a whole, it contains real GDP, the HICP, the average yield on government bonds with a maturity of five years, a stock price index and the three-month money market interest rate as a monetary policy indicator. Additional variables are the oil price and the yield on US government bonds with a maturity of five years. These variables are supplemented by consensus expectations for the euro area as a whole on future real GDP, the future HICP and the future three-month interest rate.[42] The three-month interest rate is used as a monetary policy indicator because consensus expectations are available for the three-month interest rate, but not for the overnight interest rate or a shadow interest rate in the euro area. Mandler and Scharnagl (2023) estimate three model variants which differ in terms of the time horizon of the expectations variables – two, four or six quarters ahead. The results summarised in the main text relate to the model which includes expectations variables with a four-quarter horizon. The analyses for the other expectations horizons result in the same ranking of countries in terms of the effects of monetary policy.[43]

This analysis focuses on the causal effects of a change in interest rate expectations. The required identification of an interest rate expectations shock is accomplished using sign and zero restrictions:[44] under these assumptions, an increase in the expected three-month interest rate leads to a decline in both current and expected real GDP and the HICP in the euro area. In addition, the stock price index falls and the government bond yield rises. The interest rate expectations shock is assumed to have no effect on the current three-month interest rate (zero restriction). This requirement separates the effects of a change in the expected three-month interest rate from those of a change in the current three-month interest rate. All of these restrictions apply to the quarter in which the shock occurs. As in D'Amico and King (2017), consistency between changes in the expected three-month interest rate and the subsequent actual change in the rate is also required (forecast consistency). If the three-month interest rate expected in a given year decreases by a certain number of basis points, the actual three-month interest rate four quarters after the stimulus must also have fallen by this number of basis points. Similar consistency assumptions are made for the actual and expected changes in real GDP and the HICP. For country-specific real GDP and consumer prices, Mandler and Scharnagl (2023) assume that an increase in the expected three-month interest rate leads, in the same quarter, to a decline in the averages of GDP and the HICP weighted by the real GDP of the respective countries. These assumptions are less restrictive than requiring a negative response of real GDP and the HICP in each individual country.

In this analysis, too, the estimation period starts in the first quarter of 1999, but ends in the fourth quarter of 2018. The Governing Council of the ECB used forward guidance mainly in the negative interest rate period that began in 2014, to provide additional expansionary monetary policy stimuli. Nevertheless, interest rate expectations were already influenced before that by the Eurosystem's communication, even in cases where the actual policy rates did not change. Assuming that the effects of these changes in expectations are similar to those of more explicit forward guidance on interest rates, the pre-2013 data are therefore also informative in this respect.

The effects of forward guidance are also analysed in structural macroeconomic models.[45] In the BVAR model used here, the short-term interest rate expected for a given future date changes, and the actual value of this interest rate at that later date must

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42 The growth and inflation expectations from the consensus survey are converted into expectations about output and the price level for the analysis. Real GDP and the HICP for the euro area are included in the model in order to establish a link between the realised and expected variables.
43 For the other results, see Mandler and Scharnagl (2023) and the online appendix.
44 The published study refers to an expansionary expectations shock, i.e. an expected decline in the three-month interest rate. In order to make the results more comparable with those of the other study, the main text and these explanatory notes describe an expected interest rate rise. As the model is symmetrical, these results are obtained simply by reversing the signs accordingly.
45 For an overview, see Taskforce on Rate Forward Guidance and Reinvestment (2022), Section 3.

be consistent with this change in expectations, i.e. must differ by the same amount from the original baseline. Before and after that, however, the path of the short-term interest rate is unrestricted, aside from the fact that it may not respond immediately to the change in expectations. This is comparable to the modelling of forward guidance in the structural model of Giannoni et al. (2015). They also allow the short-term interest rate to react endogenously to the impact of the announced and expected future change in the monetary policy rate.[46] However, the modelling approach presented here is less comparable to a number of other structural models, which model forward guidance in such a way that, after the announcement of future interest rate policy, the monetary policy interest rate remains on its starting path and does not deviate from the original interest rate path, i.e. the one expected prior to the announcement, until the time to which the announcement referred (e.g. Levin et al. (2010) and McKay et al. (2016)).

46 However, unlike the analysis presented here, their model allows them to ensure that the actual path of the monetary policy interest rate is fully anticipated by agents after the central bank announces a future change.

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Models for short-term economic forecasting during the recent crises

Short-term business cycle analysis at the Bundesbank is designed to obtain a robust assessment of the economic situation and the immediate outlook. The focus is on the quarterly growth rate of seasonally and calendar-adjusted gross domestic product (GDP). A key role is played here by econometric forecasting models, which are augmented by the economic forecasters' expert knowledge. This combination yields the Bundesbank's final assessment of the economic situation.

The COVID-19 pandemic and the Russian war of aggression against Ukraine have presented considerable challenges for business cycle analysis and forecasting. The repeated containment measures during the pandemic and their subsequent easing led to massive swings in economic activity and high uncertainty about the economic situation and outlook. This uncertainty was heightened by the Russian war of aggression against Ukraine. Both events entailed economic burdens that were not adequately reflected by the conventional models in the Bundesbank's and other forecasters' toolboxes. The timely provision of robust model-based forecasts was thus not possible. This gave the expertise of business cycle experts a position of prominence.

Against this background, the toolbox for short-term forecasting has been modified and augmented. In addition, new methods and models that model economic activity at a higher frequency than quarterly have been introduced. Examples include the estimation of monthly GDP, a weekly activity index and the development of a weekly GDP indicator.

On average, the accuracy of the revised and new GDP forecasting models for the current quarter and the quarter just ended is higher than that of a simple comparison model in which the GDP rate is extrapolated using the historical average. The bridge equation model, which has the highest overall accuracy, also achieves this for forecasts one quarter ahead. The model forecast accuracy, which deteriorated massively following the outbreak of the pandemic, has improved again considerably since the end of 2020. However, it has not yet returned to its pre-pandemic level. Therefore, the knowledge and judgement of business cycle experts is likely to remain of prominent importance for the foreseeable future.

Challenges in post-pandemic economic forecasting for models and experts

Business cycle analysis important for monetary policy decisions

A timely and accurate assessment of the current economic situation and outlook plays an important role for monetary policy decisions. The Bundesbank's short-term business cycle analysis is intended to reliably assess macroeconomic activity and its determinants. It is centred on the growth rate of real GDP in the current quarter and one to two quarters ahead.[1] The Bundesbank regularly communicates its qualitative assessment of the German economy to the public in its Monthly Reports. The short-term forecast is also included as a quantitative benchmark in the semi-annual macroeconomic projections for the German economy.[2]

Using expert knowledge to augment econometric methods

Ongoing business cycle analysis at the Bundesbank is based on combining quantitative methods with qualitative approaches. This means that econometric models form the basis for short-term economic forecasting, which is then rounded off with the expertise and experience of economic experts. In this manner, the various model results are classified and merged, and information that cannot be fully captured by the pure model forecasts can be incorporated into the business cycle assessment.

Three forecasting models prior to the COVID-19 pandemic

Before the COVID-19 pandemic, there were three established forecasting models in the Bundesbank's business cycle analysis and forecast: a bridge equation model, a dynamic factor model and a vector autoregressive (VAR) model. While these models follow different approaches, what they have in common is that they contain different economic indicators in order to cover as many areas of economic activity as possible. In addition, they can process data that are available at different frequencies and for which observations are missing at the current end due to publication delays.[3]

The crises of the past three years have posed considerable challenges to forecasting models and business cycle analysis. The COVID-19 pandemic and the measures taken to contain it led to historically unprecedented interventions in economic processes. From March 2020 onwards, they caused sudden and very strong fluctuations in economic activity. In Germany, GDP fluctuations of this magnitude were previously unknown.[4] In addition, economic uncertainty increased considerably. As pandemic-related uncertainties were gradually subsiding in early 2022, the Russian war of aggression against Ukraine and its impact on the economy introduced a new set of substantial imponderables. For instance, the energy markets were, at times, in danger of sliding into considerable turmoil. Traditional models were not prepared for these circumstances, and there were considerable doubts about the reliability of their results. One outcome was that economic experts' know-how took on a stronger role in applied business cycle analysis. Another was that the abrupt changes in the economic framework required rapid and significant modifications to the forecasting models and to the entire business cycle analysis toolbox.[5]

Major challenges for forecasting models and business cycle analysis due to the COVID-19 pandemic and the Ukraine war

The difficulties of the models were, amongst other things, due to the delay in the publication of most monthly economic indicators. As a result, information on the possible effects on the economy could be incorporated into the models only with a time lag. Some effects,

1 Until the Federal Statistical Office publishes GDP and the detailed results of the national accounts for the past quarter, the ongoing business cycle analysis also includes this quarter.
2 The projection horizon is roughly three years. They are prepared every six months as part of the Eurosystem staff projections and enter into the euro area projections; see Deutsche Bundesbank (2023a).
3 For more information on these aspects and for detailed information on the short-term forecasting models used at the Bundesbank, see Deutsche Bundesbank (2018a).
4 The decline in GDP in the second quarter of 2020 was approximately eleven times the average fluctuations in GDP, measured by the standard deviation between 1991 and 2019. No such movements had hitherto been seen either in Germany since 1991, or in the available quarterly GDP rates for West Germany between 1970 and 1990.
5 The toolbox for short-term economic forecasts is generally continuously evolving. Therefore, the models used are reviewed at regular intervals. The last scheduled update took place in 2018; see Deutsche Bundesbank (2018a). The modifications since then have focused on the consequences of the crises.

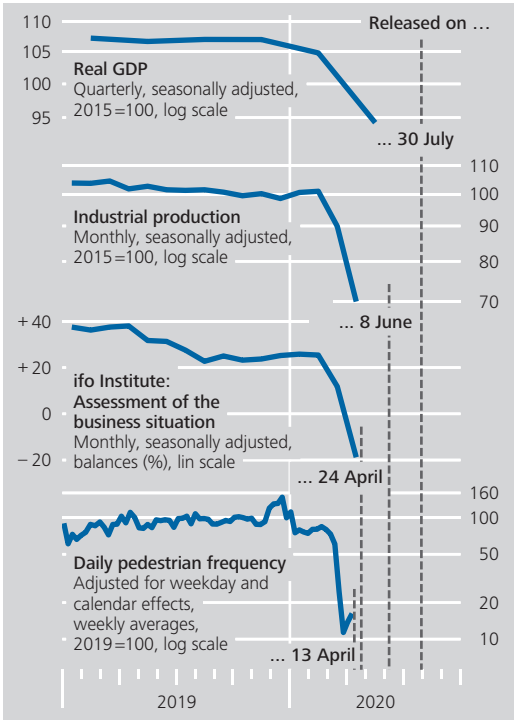
Fluctuations in activity sometimes captured by models only with a significant time lag, and sometimes not at all; forecasts also complicated by high volatility in the data

such as the mandatory business closures to avoid contact and contagion, were also virtually impossible to model. Traditional data did not reflect those effects at all, or not in full, or not in a timely manner.[6] In addition, the fluctuations in activity increased the uncertainty of the model estimates and thus diminished the robustness of the forecasts. Moreover, the usual forecasting models were not suited to adequately take into account the measures to contain the pandemic and the massive disruptions in the energy markets resulting from the Russian war of aggression against Ukraine. All of this increased forecast uncertainty and thus weakened the reliability of the model results.

Stochastic volatility and high-frequency economic indicators are particularly promising solution approaches in the literature

Uncertainty and how to deal with it, as well as major swings in economic activity, are not fundamentally new to forecasters. There are various approaches to dealing with such challenges. With regard to the econometric model estimation, for example, one possible approach lies in removing from the estimation the pandemic-induced outliers in the data.[7] Although that would make it possible to avoid the undesirable impact of large fluctuations in the data on the model estimation, this approach would not be able to adequately capture the unusually sharp increase in uncertainty about economic developments as a result of the pandemic and the historically unprecedented intervention measures. Another proposal is therefore to model time-varying residual volatility adapted to the data outliers (stochastic volatility).[8] This can improve the model estimation and the forecast. In addition, the uncertainty surrounding economic forecasts can also be taken into account. Lastly, in order to receive timely economic signals in times of very rapid economic fluctuations, collective high-frequency economic indicators were also developed in the early phase of the COVID-19 pandemic based, amongst other things, on daily or weekly indicators that are available in a timely manner.[9]

Time lags of data releases, using Q2 2020 as an example



Sources: Federal Statistical Office, ifo Institute and Hystreet.
Deutsche Bundesbank

Modifications to the model toolbox

Modifications to the Bundesbank's short-term forecasting models

The short-term forecasting models at the Bundesbank have been revised in line with the foregoing proposals from the academic literature. The main focus was on making the forecasting models more robust to large fluctuations in data and an economic environment with a high degree of uncertainty. This was intended to enable them to provide robust forecasts in times of economic tranquillity and turbulence alike. The revisions to the Bundes-

6 Some containment measures, for example, hit the parts of the services sector with frequent interpersonal contact, such as the hairdressing industry or the event sector, particularly massively. In Germany, the usual economic indicators capture such services neither in a timely manner nor completely.
7 See, inter alia, Schorfheide and Song (2021).
8 See, inter alia, Carriero et al. (2022) and Lenza and Primiceri (2022).
9 See, inter alia, Lewis et al. (2020) and Woloszko (2020).

bank's established forecasting models will be presented below.

Pandemic necessitated modifications to bridge equation model

The Bundesbank's bridge equation model consists of a system of individual forecast equations. This system is based on the structure of the national accounts. The GDP aggregate can thus be forecast directly. In addition, a GDP forecast can also be calculated by aggregating the forecasts of the production-side and demand-side components developed on the basis of monthly economic indicators.[10] Despite their sophisticated structure, the bridge equations were unable to adequately capture the impact on economic activity of the pandemic and the measures taken to contain it. The relatively rapid and strong fluctuations in economic activity caused forecasts to overshoot in both directions after the pandemic situation had already reversed itself. To make the model more robust to such strong fluctuations in activity, various modifications were examined to see whether they improve forecast quality during the pandemic without significantly worsening it in the pre-pandemic period.[11]

Lagged endogenous variables omitted from the model equations …

Reducing the use of lagged variables in the model equations has proved useful. In normal times, to be sure, lagged variables improve the adaptation of the estimation equations to the data and thus, on average, also the forecast quality. However, in times of high and unsystematic volatility, they often lead to false signals. Therefore, lagged endogenous and exogenous variables have been omitted from the quarterly bridge equations. Lagged endogenous variables are no longer used in the upstream equations for extrapolating monthly-frequency indicators, either.[12]

… and naive forecast modified for some GDP components

A further modification relates to the GDP components that were – in the absence of suitable leading indicators – previously extrapolated using naive forecasts.[13,14] These components are now extrapolated at the same growth rate as the superordinated areas for which reliable indicators are generally available. The modification rests on the assumption that similar sectors of the economy are driven by similar determinants.[15]

VAR model also facing particular challenges following onset of pandemic

The VAR model is designed as a Bayesian, mixed-frequency model, with a quarterly variable – GDP – and a dataset of monthly indicators.[16] These include hard indicators such as industrial production, production in the main construction sector and real retail sales, as well as soft survey-based indicators such as the ifo business climate index.[17] The sharp fluctuations in the data at the start of the pandemic distorted parameter estimation. These distortions were then extrapolated via the extensive feedback effects; this had an adverse impact on forecast quality.

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10 For both the production and demand sides, a direct GDP forecast and two forecasts using variants disaggregated to different depths are prepared. The forecasts on both sides are averaged. The two (production and demand-side) forecasts calculated in this way are then weighted and merged to form a final GDP forecast. For a detailed description of the bridge equation model used at the Bundesbank, see Pinkwart (2018) and Deutsche Bundesbank (2018a).

11 Further changes have been made compared to the bridge equation model described in Deutsche Bundesbank (2018a). For example, the underlying dataset was expanded by 100 time series, which mainly contain additional details from the ifo Institute's and S&P Global's business surveys, to a total of 233 monthly indicators. Specifications of the forecast of individual GDP components were also modified and the error correction mechanisms used in some equations were deactivated. Although, in some cases, the error correction mechanism makes theoretical sense, empirical evidence has shown that it does not contribute to an improvement in the forecast quality.

12 However, lagged exogenous variables are still included owing to the leading properties of the leading indicators used.

13 Naive forecasts are those according to historical averages or on the basis of autoregressive processes.

14 See Deutsche Bundesbank (2018a), p. 22.

15 For example, mean forecasting was previously used for the following areas of gross value added in the services sector: transportation, finance and insurance services, public services, education and healthcare, and other services. Assume now that these sectors follow the same dynamics as services excluding these sectors. The components of government demand (consumption and investment) are excluded from this modification and continue to be extrapolated using mean forecasting. Procyclical behaviour would not be economically plausible here – especially in times of economic crises.

16 See Deutsche Bundesbank (2018a), p. 22 and Götz and Hauzenberger (2021).

17 The monthly set of indicators is augmented by the number of persons in employment, new orders in industry and real exports and imports.

Time-varying residual variance stabilises the VAR model in times of high volatility

In the version of the VAR model used in short-term forecasting practice prior to the outbreak of the pandemic, all model parameters were considered to be time-invariant.[18] The revision allowed for time variation in volatility. It can help to incorporate large fluctuations in the data and thus mitigate distortion in the parameter estimation.[19] This makes forecasts more robust in the event of large fluctuations, without sacrificing forecast quality in normal times.

Data-based determination of the dynamics of time-varying volatility significantly improves the forecast quality of the VAR model

A further improvement in the VAR model was achieved in the area of Bayesian model estimation. In VAR models with time-varying volatility, parameters that determine the dynamics of time-varying volatility are often given values derived from the literature.[20] Under the modified variant of the model, these parameters are determined based on data instead.[21] This allows the parameters to be estimated more precisely and the forecast quality to be significantly improved.[22]

Factor model redesigned and, in particular, extended to include stochastic volatility

The factor model was replaced with a revamped model of the same category.[23] This is a dynamic factor model that is capable of processing indicators with different publication frequencies and lags. It also takes into account stochastic volatility in the residuals. This allows large fluctuations in the data to be captured in the time-varying residuals in part and a potential distortion of the parameter estimation to be mitigated.

Numerous model specifications produce empirical forecast distribution

The new factor model estimates a large number of model specifications[24] which result from all possible combinations of GDP and a set of monthly indicators.[25] GDP growth shows up as the target in each specification of the factor model. The number of factors is re-estimated for each model specification before each model run.[26] For each model run, the 32,767 point forecasts of GDP growth (one per model specification) form an empirical forecast distribution. This distribution is then used to generate two combined point forecasts for GDP growth: an unweighted median forecast and a forecast weighted by past quality.[27]

New methods and models in the toolbox

Transition from conventional models to innovative methods …

Although the Bundesbank's traditional short-term forecasting models are also based on modelling quarterly GDP, estimation methods with conventional monthly economic indicators and survey-based sentiment indicators are applied for the most part. While the latter are at least available at the end of the reporting month, the economic indicators in the official statistics are released with a lag of one to two

18 This version of the VAR model essentially borrows from the model of Schorfheide and Song (2015); see Deutsche Bundesbank (2018a).
19 For methodological details, see Götz and Hauzenberger (2021).
20 See, in particular, Schorfheide and Song (2015) as well as Götz and Hauzenberger (2021).
21 See Chan (2023).
22 In addition, the monthly set of indicators is augmented by a "weather variable": the ifo indicator of weather-related constraints to construction. In the VAR model, this indicator is entered into the equation of production in the main construction sector – exogenously with a current and a lagged value. The weather channel then unfolds across all other variables via interdependencies with the main construction sector. For exogenous indicators, the extrapolation is carried out outside the model. The long-term averages of the individual months are used for the weather-related constraints to construction. This extension reflects the growing importance of weather-related fluctuations in activity as a result of climate change.
23 For a comprehensive overview of the model, the estimation procedure and the technical details, see Eraslan and Schröder (2023).
24 The model estimation is based on a new and fast algorithm that is based on the algorithm of Koop and Korobilis (2014), extended for a mixed-frequency model. The estimation method makes it possible to estimate a large number of model specifications more quickly than with Bayesian or frequency estimation methods.
25 In addition to quarterly GDP, the dataset contains 15 monthly indicators: industrial production, new orders received by industry, production in the main construction sector, exports and imports of goods, number of persons in employment, sales in industry, hotels and restaurants and in the retail trade, consumer price index, HWWI commodity price index, DAX, three-month EURIBOR rate and ifo business situation and expectations in manufacturing. The indicators are adjusted for calendar, seasonal and price variations, where appropriate. This results in 2^{15} -1 = 32,767 different model specifications with 2 to 16 indicators.
26 The number of factors for each model specification is estimated using the statistical criterion of Bai and Ng (2002).
27 The weighted point forecast is calculated using dynamic model averaging; see Raftery et al. (2010). In this method, the model specifications, which have led to smaller forecast errors in the recent past, are given a higher weight. These weights are updated after each new GDP release. The weighted forecasts are the focus of applied business cycle analysis and this article.

months. During the pandemic, however, there were some phases where economic activity changed significantly within a quarter or even within a month. Quarterly and even monthly indicators only capture these fluctuations inadequately or with a time lag. Following the outbreak of the COVID-19 pandemic, the Bundesbank therefore used a number of methods which were unconventional at the time, modelling economic activity at a higher frequency than quarterly. To a degree, these approaches also take into account innovative indicators that are recorded on a weekly or daily basis and are therefore available more quickly.

… such as the estimate of monthly GDP

In one such approach, monthly GDP is estimated using a regression-based interpolation.[28] Five monthly economic indicators are included in the estimate: industrial production, real retail sales, real exports of goods, production in the main construction sector and real turnover in the hotel and restaurant industry.[29] For the estimate, an unobservable monthly GDP series is regressed on monthly indicator variables, ensuring that the quarterly average of the estimated monthly GDP corresponds to the published quarterly GDP.

Monthly GDP is extrapolated beyond the current end for the short-term forecast

For the short-term forecast, quarterly GDP is interpolated using the method described above and extrapolated beyond the current end. In a first step, indicators for the months with data that have not yet been published are extrapolated. The respective forecasts from the bridge equation model are used for this purpose. In a second step, a calculation is then made of monthly GDP – including the forecast for quarterly GDP. This approach, referred to hereinafter as the MGDP model, thus paints a picture of changes in economic activity within a quarter. This is particularly advantageous if the activity is clearly moving in one direction and thus creates a positive or negative carry-over effect for the following quarter. The MGDP model also provided a useful tool for economic experts to harness non-model-based information on the pandemic in a transparent and model-based way for their expert assessment. For instance, it allowed markdowns to the model-based extrapolations of turnover in the hotel and restaurant sector or in retail to be made based on expert knowledge, for instance, when measures to contain the COVID-19 pandemic were tightened. The auxiliary forecasts produced in this manner were thus improved considerably in these phases, as such abrupt adjustments are not captured promptly in the pure model forecasts.

Weekly activity index

The Bundesbank's weekly activity index (WAI) was developed in the early phase of the COVID-19 pandemic.[30] In addition to GDP and industrial production, it is composed of indicators that are recorded weekly or even daily and are available in a very timely manner. These indicators, which were unconventional back then, were selected according to two criteria: they should, first, cover different sectors of the economy and, second, contain relevant information for real economic activity. This includes, for example, pedestrian frequency figures in inner-city shopping streets and credit card payments, which partly capture consumer behaviour, or indicators based on Google search queries for unemployment and short-time work, which relate to the labour market.[31]

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28 The interpolation method is based on an approach by Chow and Lin (1971). For application of the procedure to Germany, see Deutsche Bundesbank (2021); for application of the procedure to the euro area, see Mönch and Uhlig (2005) and Deutsche Bundesbank (2020a).

29 When selecting monthly indicators, the explanatory power with regard to the estimation of monthly GDP as well as the sign and stability of the estimated parameters was investigated for various model constellations. As in Mönch and Uhlig (2005), the ratio of the variance of the change in estimated monthly GDP to the sum of the variance of the change in estimated monthly GDP and the variance of the residual is used as a measure for the explanatory power.

30 See Deutsche Bundesbank (2020b) and Eraslan and Götz (2021). Since June 2020, weekly WAI updates are published on the www.bundesbank.en/wai website. The WAI is similar to the weekly economic index (WEI) for the US economy published by the Federal Reserve Bank of New York, see Lewis et al. (2020).

31 Source of unadjusted figures for the Google search queries: Google Trends; for the pedestrian frequency indicator: Hystreet sourced from the Federal Statistical Office; for the credit card payments indicator: Fable Data. For the current indicators in the WAI and their sources, see methodology at www.bundesbank.en/wai

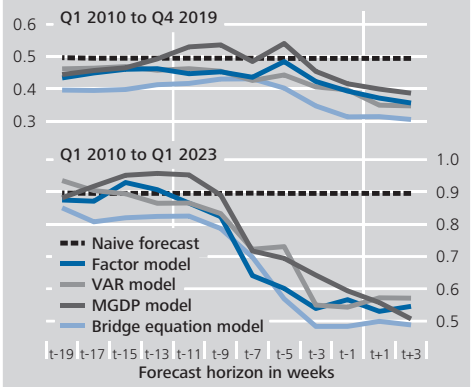
Evaluation of forecast quality: cross-comparison between models and comparison over time

This box uses historical forecast quality to evaluate the short-term forecasting models for gross domestic product (GDP) used in business cycle analysis.[1] To this end, the models' past forecast errors are calculated. The target against which forecasts are evaluated is the quarterly growth rate of seasonally and calendar-adjusted real GDP. Forecast quality is measured based on the mean absolute error (MAE). For each forecast horizon, the MAE is calculated as the arithmetic average of the difference in size between the forecast and the realised figures.[2]

The evaluation period runs from the first quarter of 2010 to the first quarter of 2023. Forecast quality based on the MAE is illustrated for two periods. The first period from the first quarter of 2010 to the fourth quarter of 2019 includes the relatively calm periods for the German economy following the financial crisis and before the COVID-19 pandemic. The second period covers the entire evaluation period. It thus also includes the exceptionally strong fluctuations in activity and the heightened uncertainty in the period following the onset of the COVID-19 pandemic and the start of Russia's war of aggression against Ukraine. In both periods, the MAE of the short-term forecasting models is compared with the MAE of a simple ("naive") comparison model. In the comparison model, the GDP growth rate is extrapolated using its historical mean. Over time, short-term forecasting models can take more and more information into account. Their forecast errors can therefore be expected to decrease as the forecast horizon shrinks.[3]

Mean absolute forecast errors*

Percentage points



* Depending on the forecast horizon, estimated based on quarterly GDP growth rates.

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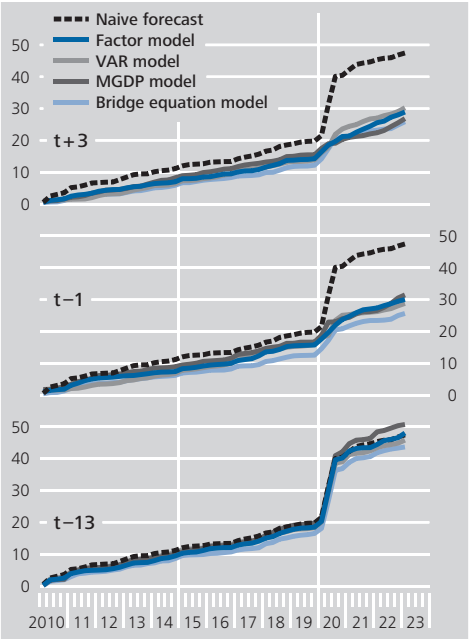
1 The forecast evaluation is based on data as at 25 May 2023. Since the historical forecasts are calculated on the basis of final data, this exercise takes place in "pseudo real time". Although this replicated the respective data availability, it was not possible to take into account historical data revisions. Two forecasts per month are calculated for each target quarter. The first forecast for a target quarter is calculated approximately one week after the release of the flash estimate for the quarter two quarters earlier, i.e. 19 weeks before the end of the forecast quarter. Forecasts for the target quarter are then calculated every two weeks until the target figure is published. Accordingly, the forecast horizon is given in weeks relative to the forecast quarter and ranges from t–19 to t+3, where t denotes the end of the quarter. For example, the horizons from t–19 to t–13 indicate the forecasts one quarter ahead, and the horizons t–11 to t–1 cover the forecasts for the current quarter. Since GDP is not published until around four weeks after the end of the reference quarter, forecasts for the previous quarter are also prepared up to this point in time (t+1 and t+3).

2 For example, an MAE of 0.2 means that the forecast fluctuates 0.2 percentage point around the actual values on average.

3 The factor model calculates weighted forecasts for GDP growth based on past forecast quality. In business cycle analysis as practised by the Bundesbank, this weighting takes forecast quality into account using real-time data. However, complete real-time data records are not available for all models under consideration. For this reason, weighting for the factor model was also calculated using the final data in this evaluation. This ensures better comparability with the other models.

Cumulative absolute forecast errors*

Percentage points



* Estimated based on quarterly GDP growth rates, for three forecast horizons: the last forecast for the past quarter in t+3, the last forecast for the current quarter in t–1, and the last forecast for one quarter ahead in t–13.

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In the evaluation period ending in 2019, the short-term forecasting models produce better predictions than the naive forecast over almost the entire forecast horizon. The MGDP model is an exception in some instances. The models' accuracy tends to increase as the publication date approaches, as more information is available. A cross-comparison of the models shows that the bridge equation model has the highest accuracy on average over almost all forecast horizons. The VAR and factor models perform somewhat worse. The MGDP model has the lowest accuracy.

Looking at the entire evaluation period up to the beginning of 2023, the average forecast errors are significantly higher for all models. This reflects the deterioration in forecasting capacity in the period from 2020 onwards, which is now also considered, as a result of the impact of the pandemic and the Ukraine war.[4] For the longer forecast horizons, the models are now not always superior to a naive forecast. This does not apply to the bridge equation model, which at the same time also proves more accurate in a cross-comparison with the other models across almost all forecast horizons.

In addition, the cumulative absolute error (CAE) is calculated. This metric sums together the absolute forecast errors over time for a given forecast horizon. It thus summarises developments in forecast errors over the evaluation period. This has the advantage of making it easy to spot periods with particularly high forecast errors. They are characterised by a steeper slope or a sharp rise in the CAE. By way of example, three specific horizons are considered: the last forecast for the previous quarter produced shortly before publication of the flash estimate (t+3), the last forecast for the current quarter (t–1), and the last forecast calculated one quarter ahead (t–13).

According to the CAE, as for the MAE, the short-term forecasting models perform better than the comparison model for the shorter forecast periods t+3 and t–1. The differences in the accuracy between the models is also similar: the bridge equation model cumulates the smallest errors, the factor and VAR models somewhat more and close to one other, and the MGDP model somewhat higher still.

The exceptionally large forecast errors for the first three quarters of 2020 due to the COVID-19 pandemic are clearly reflected in the CAEs: they spike higher for all models.

4 As the forecasting models used here derive their forecast quality from identifying historical relationships between variables, and the fluctuations during the COVID-19 pandemic, in particular, were historically unique, the deterioration in accuracy comes as no great surprise.

For the horizons $t+3$ and $t-1$, it is evident that the errors of the forecasting models increase significantly less than those of the comparison model. The forecasting models therefore performed better than the comparison forecast during this period. Errors increase least in the MGDP model; it was thus best able to anticipate the strong fluctuations in activity at that time. For $t-13$, however, the forecasting models show no advantage over the comparison model during the same period. For all models, CAEs rise by a similar magnitude. In general, the accuracy of the forecasts is lower on average for longer horizons. However, this shows, above all, that the forecasting models were simply unable to identify the COVID-19 pandemic and its effects so far in advance.

From the fourth quarter of 2020 onwards, the forecast quality for all three horizons improved considerably again as compared with the beginning of 2020 but it is still noticeably impaired.[5] The accuracy of the short-term forecasting models is not yet back to where it was before the COVID-19 pandemic. However, this is not surprising given the volatile economic environment of the past three years.

5 This is reflected in the somewhat steeper slope of the CAE compared with the slope before 2020.

High correlation with GDP growth, but no model-based forecasts; hence …

The WAI[32] is calculated as the common factor driving the underlying indicators.[33] It provides a timely assessment of current real economic activity and also exhibits a high correlation with quarterly GDP growth. However, the WAI data are not easy to interpret as the indicator looks at moving 13-week periods within a quarter. Moreover, the WAI does not provide forecasts for quarterly GDP growth rates either.

… a weekly GDP indicator has been developed

Given the limitations of the WAI, a dynamic factor model has been developed to estimate a weekly GDP indicator (WGDP indicator).[34] The WGDP indicator is calculated as a common factor driving the indicators available at different frequencies[35]. The model is based on weekly growth rates and can approximate latent weekly GDP growth rates. In addition, observed data from monthly and quarterly indicators are taken into account. In terms of both growth rates and its level, the WGDP indicator roughly adds up to the observed quarterly GDP.

Weekly forecasts for GDP growth

The WGDP indicator has some advantages over the WAI when it comes to the ongoing observation of the business cycle. Above all, a clear interpretation can be made within one quarter. A calculation can be made every week of the quarter-on-quarter (rate of) change in GDP, for example. In addition, the model can generate purely data-based forecasts for quarterly GDP growth (and the level of GDP) on a weekly basis.

32 The WAI is based on 13-week moving averages of the indicators and their 13-week growth rates. It fluctuates around its mean, which is zero by construction, and therefore provides the trend-adjusted growth rate of real economic activity. For the methodology and the technical details of the WAI, see Eraslan and Götz (2021).
33 Indicators that are originally available on a daily basis feed into the calculation as weekly averages. The indicators are adjusted for calendar, seasonal and price variations, where appropriate. See Ollech (2023) for details on the seasonal adjustment of high-frequency indicators.
34 See Eraslan and Reif (2023).
35 Similar to the WAI, the WGDP indicator is based on a dataset consisting of weekly, monthly and quarterly indicators with different release patterns. However, in order to improve the explanatory power of the WGDP indicator in relation to quarterly GDP, the dataset has been expanded compared with the WAI to include other conventional economic indicators.

The short-term economic forecast for GDP growth from 2018 to 2023 in practice

Short-term forecasts and expert assessments in real time

The use of forecasting models and expert assessments in the practice of economic analysis is investigated using the example of the short-term forecasts for German GDP that were issued twice a month between the first quarter of 2018 and the second quarter of 2023. The second quarter of 2023, for which the GDP growth rate was recently published, is discussed in greater detail in the box on pp. 72 ff. These illustrations offer a glimpse behind the scenes of the Bundesbank's applied business cycle analysis and forecasting. They highlight, in particular, the problems faced by business cycle analysis during the COVID-19 pandemic. The forecasts are presented in the same way as they were actually produced, amidst a continuous influx of new information – i.e. in real time. Forecasts by economic experts are also shown alongside the model-based forecasts.[36] The former notably incorporate expert knowledge gained through experience, and also information on special factors that models do not capture sufficiently, or at all. This allows us to illustrate the composition of model-based forecasts and expert assessments under different economic conditions.

Cyclical slowdown in 2018-19 flagged by models and correctly assessed by experts

After the German economy boomed with strong growth rates in 2017, GDP growth slowed significantly in 2018 and 2019. This weakening of growth was generally well predicted by the models. However, special factors caused some fluctuations, creating difficulties for both model-based forecasting and the experts' business cycle analysis. These notably included the difficulties faced by the German automotive industry with the changeover to a new EU-wide standard for measuring exhaust emissions in the summer of 2018.[37] Over the course of 2019, however, the models then overstated the slowdown, producing significantly negative growth rates pointing to economic warning signs. Although the economic experts considered a technical recession, meaning two consecutive quarters with negative GDP growth rates, to be possible in the course of the economic slowdown, they did not expect a recession in the sense of a significant, broad-based and persistent decline in economic output with underutilised aggregate capacity.[38] On the whole, the experts' assessments of economic developments in the years 2018-19 were good, albeit a little too optimistic at times.

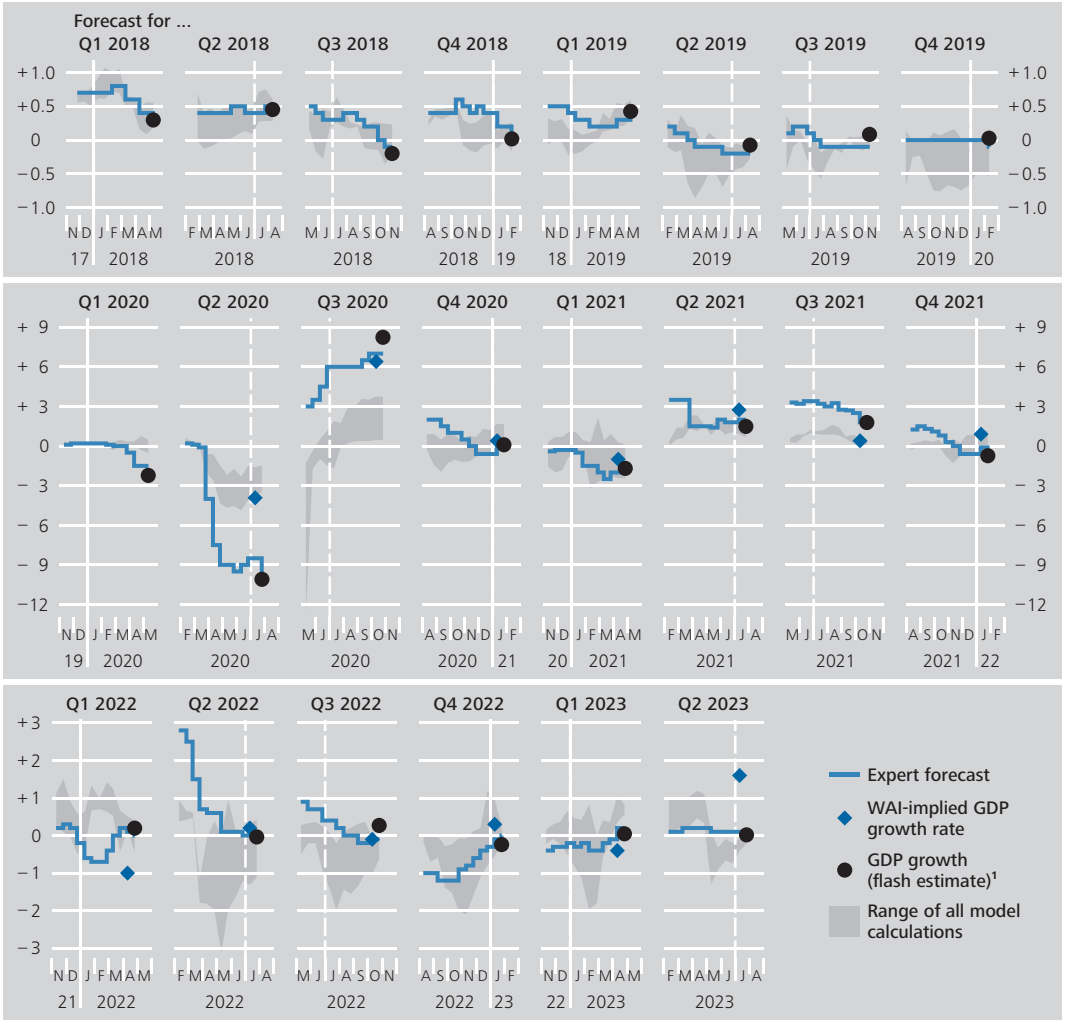
Economic experts were significantly better than models at predicting the huge economic slump after the outbreak of the pandemic …

When the COVID-19 pandemic reached Germany in March 2020, it caused massive difficulties for the forecasting models. The models only identified the very sharp drop in economic output with a significant lag, and even then they fell far short of capturing the actual magnitude of the decline in GDP. In this situation, economists' expert knowledge gained substantially in importance. The experts responded more quickly to the possible economic impact of the COVID-19 pandemic, performing a swift and substantial downward revision to their forecast for the first two quarters of 2020. Ultimately, they were remarkably successful at predicting the reported declines in GDP given their size and the high uncertainty. Information that was not included sufficiently, or at all, in classic forecasting models played an essential part in these assessments. This was particularly true of the pandemic situation and evaluations of the economic impact of containment measures. Here, estimates using heavily disaggre-

36 Both the revised models and the new methods were integrated into applied business cycle analysis at varying points in time. For example, the WAI was developed shortly after the outbreak of the COVID-19 pandemic and was already put into operation in the second quarter of 2020. Between the third quarter of 2020 and the first quarter of 2022, the bridge equation model was revised successively and integrated into day-to-day operations. The MGDP model has been in use since the beginning of 2022, while the revised VAR model has been in operation since the third quarter of 2022. The new factor model did not replace its predecessor in day-to-day business until the first quarter of 2023. For this reason, the model-based forecasts are derived partly from model variants that pre-date the changes and partly from those after them, i.e. each forecast is as it was actually calculated at the time.
37 See Deutsche Bundesbank (2018b).
38 See Deutsche Bundesbank (2019).

Short-term forecasts of GDP growth in real time

Percentage quarter-on-quarter change



Sources: Federal Statistical Office and Bundesbank calculations. **1** Since July 2020, the GDP flash estimate has been based on information available around 30 days after the end of the target quarter. Until then, GDP estimates became available for the first time around 45 days after quarter-end.

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gated sectoral analyses of the relevant sectors became important, for example. Amongst other things, real-time high-frequency data, such as the truck toll index, were used for this purpose.[39] The WAI also provided timely, fairly accurate signals about the current economic situation.[40] Finally, the Bundesbank's macroeconometric model[41] was used to create alternative macroeconomic scenarios regarding the pandemic, which also included an estimation of their GDP effects via the expenditure components.[42]

After the pandemic containment measures were eased, there were signs of a strong countermovement in the third quarter of 2020. Here, too, the models identified the recovery only slowly and on a smaller scale. By contrast, at an early stage, the experts already foresaw a sharp rise in GDP, aided, in particular, by the relevant signal from the WAI. As the pandemic continued, GDP growth no longer fluctuated quite so strongly. In the winter of 2020-21, the model forecasts diverged greatly. On the whole, however, their forecasts were much closer to

… but underestimated the impact of supply bottlenecks in 2021

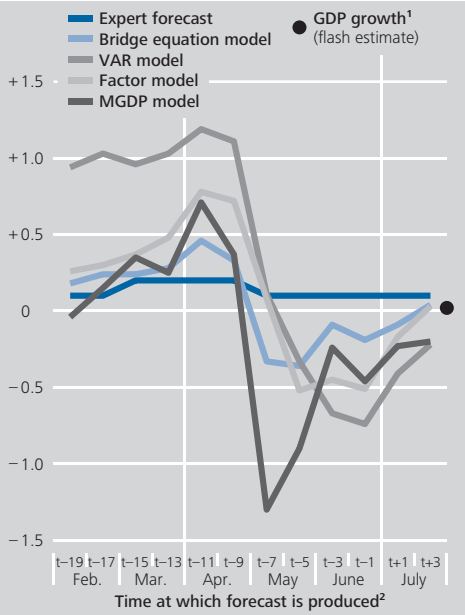
39 See Deutsche Bundesbank (2020c).
40 See Deutsche Bundesbank (2020d).
41 See Haertel et al. (2022) for an overview of the Bundesbank's macroeconometric model.
42 See Deutsche Bundesbank (2020e) and Work stream on Eurosystem modelling (2021).

Business cycle analysis: an illustration based on the second quarter of 2023

In practice, the Bundesbank's business cycle analysis for Germany is guided by the publication calendar for key indicators of economic activity and sentiment. While hard economic indicators in the form of official statistics (mainly industrial data) are usually released in the second week of each month, soft indicators such as the ifo business climate index are generally published in the fourth week of every month. Accordingly, model forecasts and experts' economic assessments are updated twice a month.[1] This box gives a detailed explanation of applied business cycle analysis based on the real-time forecasts produced by the revised short-term forecasting models and the expert assessment for the second quarter of 2023.[2]

Short-term forecasts for Q2 2023

Quarter-on-quarter percentage change, data as at reference date



Source of GDP flash estimate: Federal Statistical Office. **1** Price, seasonally and calendar adjusted. **2** t refers to the end of the forecast quarter. The first forecast is produced 19 weeks before the end of the quarter, i.e. t – 19.

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At the beginning of February 2023, the underlying dynamics of the German economy were more robust than had been anticipated in the Bundesbank's December 2022 projection.[3] As a result, the Bundesbank's economic experts initially forecasted a slightly positive growth rate (0.1%), positioning themselves still at the lower end of the spectrum in terms of the model forecasts. Two weeks later, with the publication of the national accounts details for the fourth quarter of 2022 by the Federal Statistical Office, the corresponding GDP rate was also revised – to a more pronounced than previously reported decline, which almost matched the figure from the December projection.[4] On the other hand, surveys conducted by the ifo Institute showed a further improvement in enterprises' business expectations. Moreover, uncertainty about the energy supply declined steadily, and energy prices fell significantly.

In addition, at the beginning of March it became apparent that there had been a strong countermovement in the manufacturing sector in January following the setback seen

1 In addition, the weekly activity index for the German economy (WAI) is updated weekly on the Bundesbank's website.
2 Following publication of the flash estimate for the fourth quarter of 2022 at the beginning of February 2023, the short-term forecast horizon was extended to include the second quarter of 2023. Until the publication of the corresponding GDP flash estimate at the end of July, forecasts for the second quarter were thereafter prepared on a twice-monthly basis.
3 In the projection, a slight decline had been expected for the second quarter of 2023; see Deutsche Bundesbank (2022d).
4 However, this decline was driven by a broad-based, strong setback in many economic indicators in December. This was due not only to cyclical effects but also to temporary effects such as an exceptionally high level of sickness and unseasonably cold weather in the two weeks leading up to Christmas 2022.

in December.[5] This suggested that the German economy might be recovering somewhat faster than previously expected. In this environment, the model forecasts for the second quarter increased. In line with this, the expert assessment was also revised up somewhat (to 0.2%).[6]

In April, it even looked as though German economic activity had not contracted again at the start of 2023, as previously expected, but could actually have grown somewhat. Industrial production, in particular, continued to rise steeply in February, and the decline in demand appeared to have been overcome as new orders rose strongly. Against the backdrop of well-filled order books and easing supply bottlenecks, a temporary boost for industry was even conceivable. At the time, however, the Bank's economic experts did not yet react by revising up their forecast for the second quarter.[7]

The Federal Statistical Office's flash estimate for GDP growth in the first quarter of 2023, which was published at the end of April, showed stagnating GDP and consequently fell slightly short of experts' expectations. However, the exceptionally weak industrial data for March, which were published shortly afterwards, were much more surprising. In particular, the sharp decline in new orders cast doubt on whether industrial demand had, in fact, already bottomed out.[8] In addition, ifo surveys showed a deterioration in the business climate. These new data caused a downright collapse in some model forecasts. By contrast, the WAI, which continued to indicate an expansion during this period, sent the opposite signal.

The expert assessment was also downgraded at the beginning of May, but the forecast was lowered only slightly to 0.1%. One factor was that it was thought that the high order backlog and the easing of supply bottlenecks would further cushion the effects of weak demand on production.[9] Moreover, it still appeared likely that private consumption had bottomed out, as real disposable incomes were probably no longer declining thanks to easing inflation and markedly rising wages. This appears also to have buoyed the services sector, for which survey results among businesses and purchasing managers tended to be positive at the end of May. The fact that indicators relating to the services sector tend to be underrepresented in the short-term forecasting models was another reason why a more positive view than that taken by the models seemed appropriate.[10] The Bundesbank's new macroeconomic projections, which

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5 The temporary factors that were likewise responsible for the setback in December evidently carried greater weight than initially thought. It is possible that firms in the manufacturing sector halted their production sooner or for longer than usual in response to the high levels of sickness and high energy prices as well as the way the calendar fell with an unusually large number of working days around the holidays. In addition, the weather in January proved unusually mild, after much of December had been characterised by exceptionally unfavourable weather conditions. As a consequence, construction could have experienced catch-up effects as activity recovered and made up for lost time.

6 Given weak demand from abroad, ongoing high inflation and further monetary policy tightening, a significant improvement was not yet in sight, however. See Deutsche Bundesbank (2023b).

7 One reason for the experts' cautious attitude was that the ifo business climate index improved only slightly as the assessment of the current situation had deteriorated somewhat.

8 As a result, GDP growth for the first quarter of 2023 was revised down noticeably (to -0.3%) with the publication of the national accounts details on 24 May.

9 According to data published at the beginning of June, industrial production in April remained almost unchanged from its March level, which had been revised up, but was still depressed. In addition, industrial new orders continued to decline slightly. However, according to non-official data from the German Association of the Automotive Industry, car production rose sharply in May.

10 The same applies to government consumption, which is barely captured in short-term forecasting models. Following the decline in the first quarter, which was unexpectedly strong based on the data available at the time, a certain countermovement was expected in the second quarter.

were finalised on 31 May, were also based on slight GDP growth for the second quarter of 2023.[11]

Nor did this assessment for the second quarter change when a significantly gloomier business climate indicator was published at the end of June, as this was driven first and foremost by business expectations relating mainly to the third quarter. Surveys also signalled a further easing of supply bottlenecks both in industry and construction. Following the publication of the hard data at the beginning of July, most model forecasts improved somewhat. Industrial new orders rose sharply again, although the underlying trend was still downward-directed. Moreover, the labour market remained stable. Therefore, the assessment that real GDP was likely to have risen slightly in the second quarter remained unchanged, with growth still at 0.1%. It was thus still somewhat above the range of the model forecasts.

At the end of July, the Federal Statistical Office reported in its flash estimate that GDP had stagnated in the second quarter of 2023. This was slightly less than had previously been expected by economic experts. For the period from the beginning of February to the end of July as a whole, their assessment was fairly stable, but somewhat too optimistic. By contrast, the models were initially significantly too optimistic and then much too pessimistic for a long time. These fluctuations were least pronounced in the bridge equation model.

11 See Deutsche Bundesbank (2023a).

the realised GDP growth rates than at the start of the pandemic. The expert forecast was again quite accurate in that same period. In the spring of 2021, however, the economic experts somewhat overestimated the strength of the recovery after containment measures were eased, while the models tended to underestimate it. One factor in the experts' overestimation was that they underestimated the sharp increase in supply bottlenecks for intermediate goods in many sectors at the time. At the end of 2021, by contrast, models and experts correctly gauged the impact of the renewed intensification of the pandemic on the economy. In the first quarter of 2022, however, the experts remained overly pessimistic for a long time in view of ongoing restrictions, while the models overestimated the strength of the recovery.

The outbreak of Russia's war of aggression against Ukraine in February 2022 led to a very high degree of uncertainty about economic developments. The range of the model forecasts increased again sharply. Owing to the substantial deterioration in business expectations, some models predicted a sharp economic downturn. Behind this lay concerns that, in particular, a halt in Russian gas supplies to Germany could trigger massive disruptions in the energy markets, and possibly even mandated rationing. The Bundesbank initially took these risks into account by simulating adverse risk scenarios.[43] At the same time, the experts' baseline scenario remained fairly optimistic regarding the 2022 summer half-year, thus predicting the relatively robust development of the German economy rather well.

Strongly elevated forecast uncertainty with the outbreak of Russia's war of aggression against Ukraine

However, when it became apparent in the summer that Germany would need to get through the coming winter largely without Russian gas supplies, the outlook for the 2022-2023 winter half-year deteriorated. The

43 See Deutsche Bundesbank (2022a, 2022b).

Following the halt in Russian gas deliveries to Germany, models and experts predicted a gloomier outlook for 2022-2023 winter half-year

models showed a considerable decline in economic output, and the experts performed a large downward revision on their assessment. In the September Monthly Report, the experts warned of a heightened risk of recession.[44] In the following months, however, it became increasingly clear that the German economy would be better able to cope with the changed underlying conditions than initially feared. Nevertheless, the energy crisis constituted a substantial burden. The December projection therefore predicted a 0.6% decline in GDP in the fourth quarter of 2022. A further decline (of 0.3%) was expected for the first quarter of 2023.[45] In fact, the German economy performed somewhat better in the winter than was assumed in December.[46] The industrial sector withstood the energy crisis and the weakening of demand thanks to diminishing supply bottlenecks and well-filled order books. Gas shortages became increasingly unlikely because of partly weather-related energy savings that were partly due to mild weather conditions, and increased (liquefied) gas deliveries. According to survey indicators, there was a widespread decline in corporate pessimism about the future.

Conclusion: Forecasting models remain the most important tool for business cycle analysis

Accuracy of the model forecasts deteriorated massively with the onset of the pandemic and is still not as good as beforehand

An evaluation of the short-term forecasting models based on their forecast quality shows that, on average, the adjusted models provide informative forecasts of economic growth for the current quarter and, as the case may be, the quarter just ended (see the box on pp. 67 ff.). This applies both in the period from 2010 to 2019 and in the period from 2010 to the first quarter of 2023. The adapted bridge equation model, which has the highest overall accuracy, also manages to achieve this for forecasts one quarter ahead. Moreover, having deteriorated massively with the onset of the pandemic, the accuracy of the model forecasts has improved again considerably since the end of 2020. The evaluation results thus underline the key role of the forecasting models as a valuable tool for applied business cycle analysis. At the same time, however, their accuracy has not yet returned to its pre-pandemic level. Consequently, the expertise of the economists will probably continue to play a vital role for the foreseeable future.

Regular reviews of models still necessary

As soon as the German economy enters a lasting calmer phase, the accuracy of the forecasting models is likely to improve further. At the same time, the latest revisions do not mark the end of work on the short-term forecasting toolbox. Regular reviews and adjustments of the models are necessary in order to maintain their ability to perform under changing economic conditions.

Inclusion of new data and methods in economic forecasting

Technological progress also permits new data and methods to be utilised. For example, in the future, computer-based text analysis could make it possible to use media information to generate high-frequency economic indicators, which enable timely model-based recording of cyclical fluctuations.[47] Newly available methods, e.g. in the field of machine learning and artificial intelligence, can also be incorporated into business cycle analysis and forecasting.[48] Reviewing the suitability of these and other new data and methods for forecasting Germany's GDP will remain an ongoing task.

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44 See Deutsche Bundesbank (2022c).
45 The direct effects of the energy crisis played a key role in the expectation of weakening economic activity, particularly the loss of household purchasing power due to high inflation and the burden placed by high energy prices on the industrial sector. However, additional factors included braking effects from weak foreign demand for the export sector, dampened investment due to high uncertainty and increased financing costs, and a decline in government consumption as pandemic-related expenditure came to an end. See Deutsche Bundesbank (2022d).
46 The Federal Statistical Office initially reported a 0.2% decline in GDP for the fourth quarter of 2022 and stagnation for the first quarter of 2023. The figures for both quarters were later revised markedly; recent data show a fall in GDP for both quarters. The decline is still milder than was expected in the December projection, however.
47 See, inter alia, Thorsrud (2020) and Barbaglia et al. (2023).
48 See, inter alia, Babii et al. (2022) and Coulombe et al. (2022).

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Member States' financial relationships with the EU budget and the NextGenerationEU off-budget entity in 2022

Last year, the EU budget amounted to €168 billion, or just over 1% of the European Union's gross national income (EU GNI). Dedicated grants made up the bulk of this amount. For a time, the NextGenerationEU (NGEU) off-budget entity is also providing grants to Member States. These amounted to €62 billion, or just under ½% of EU GNI, in 2022.

The EU budget and NGEU fund a variety of expenditure items, the result being that financial resources are redistributed to lower-performing Member States (in terms of per capita GNI), which receive relatively large grants. At the same time, all Member States fund the EU roughly in proportion to the size of their economies, with each making regular national contributions of just under 1% of their GNI to the EU budget. The NGEU grants, by contrast, are funded initially using loans taken out jointly. The plan is for these debts to be repaid out of the EU budget starting in 2028, which is why the Member States are also financing NGEU roughly in line with their GNI shares.

Counting the EU budget and NGEU together, nine of the 27 Member States were net contributors in 2022, meaning that they paid in more than they received in grants. Relative to its GNI, Germany's net contribution was the highest, at just under 1%, followed by the net contributions made by the Netherlands and Sweden. Croatia (4% of national GNI) and Bulgaria (3½%) received the highest net grants. NGEU played a considerable part in the redistribution of financial resources. Excluding NGEU, the net contribution of Germany, say, would be just ½% of GNI.

The funds of the Recovery and Resilience Facility (RRF), which forms part of NGEU, are flowing to Member States at different speeds. Across all countries, the European Commission disbursed just over one-quarter of the RRF grants planned up to 2026 in the first two years (2021 and 2022). While some countries have not yet requested any RRF funds, Spain, Croatia and Italy, for example, have already received 40% of the grants intended for them. Germany requested 8%, but no funds in 2022.

Introduction

Article outlines financial relationships between Member States and EU

A regular overview of the financial relationships between Member States and the EU forms part of the Bundesbank's reporting on public finances.[1] The European Commission usually reports on the financial flows of the previous year in the second half of each year. In addition to the EU budget, these include the financial flows of the temporary NGEU off-budget entity. Amongst other things, this article presents the Member States' resulting net contributions last year.[2]

Net contributions resulting from Member States' financial relationships with the EU budget and NGEU

Net contributions show redistribution within the EU

Each Member State's net contribution is determined by the EU budget and NGEU. A positive net contribution means that the Member State is a net recipient – that is, it gets more out of the budget than it pays in. A negative one means that the Member State is a net contributor.

EU budget

Lower-performing countries generally receive more funds out of the EU budget

Annual expenditure under the EU budget is agreed by Member States in a multiannual financial framework (MFF) covering a period of seven years. The current MFF runs from 2021 to 2027, with the bulk of the expenditure going to Member States. Countries with a lower economic performance (in terms of their per capita GNI) generally receive disproportionately high grants out of the EU budget. In addition, the EU budget covers administrative expenditure as well as grants to non-EU countries for development or humanitarian aid, for example. Administrative expenditure is not included in the calculation of net contributions.

Strength of economy determines size of payments into EU budget

Alongside customs duties, national contributions by Member States, also known as GNI-based own resources, are by far the largest revenue source for the EU budget. In addition, a smaller share comes from receipts collected by the European competition authority in the form of antitrust penalties or fines paid by Member States. Only Member States' national contributions feed into the calculation of net contributions. Overall, they are very much based on the strength of each country's economy, meaning that Member States pay roughly the same, relative to their GNI, into the EU budget.

NGEU

NGEU grants financed by borrowing initially and later via EU budget

Member States agreed in 2020 to establish NGEU, an off-budget entity, as a response to the economic challenges presented by the coronavirus pandemic. It will see grants totalling approximately €420 billion being disbursed to Member States between 2021 and 2026,[3] and also comprises loans of up to €390 billion to Member States. Unlike the EU budget, NGEU is initially being financed through joint borrowing, rather than via national contributions. The borrowing Member States themselves are servicing the debt taken out for NGEU loans (interest and principal payments). The debt taken out for the grants will have to be jointly repaid over time by all the Member States via the regular EU budget between 2028 and 2058. Member States have committed to making sufficient funds available to the EU budget for this purpose. It is currently envisaged that Member States will continue to finance the EU budget largely in line with their GNI shares. For this reason, it makes sense to estimate Member States' NGEU financing burdens and net contributions based on their respective GNI shares, too. The net contribution calculated in this way

1 The reporting focuses on grants paid out of the EU budget and the NGEU off-budget entity. The EU's lending programmes, such as its macro-financial assistance or NGEU loans, are disregarded.
2 The Bundesbank first reported in October 2022 on financial relationships between Member States and the EU budget, including NGEU. A detailed description of the methodology can be found in Deutsche Bundesbank (2022).
3 All NGEU figures are shown in current prices.

is the amount that would be payable if Member States were already financing NGEU grants today out of national contributions to the regular EU budget.

The next section presents the net contributions to the EU budget and to NGEU calculated in this manner for 2022.

Developments in 2022

Total net contributions

Nine countries net contributors, 18 net recipients

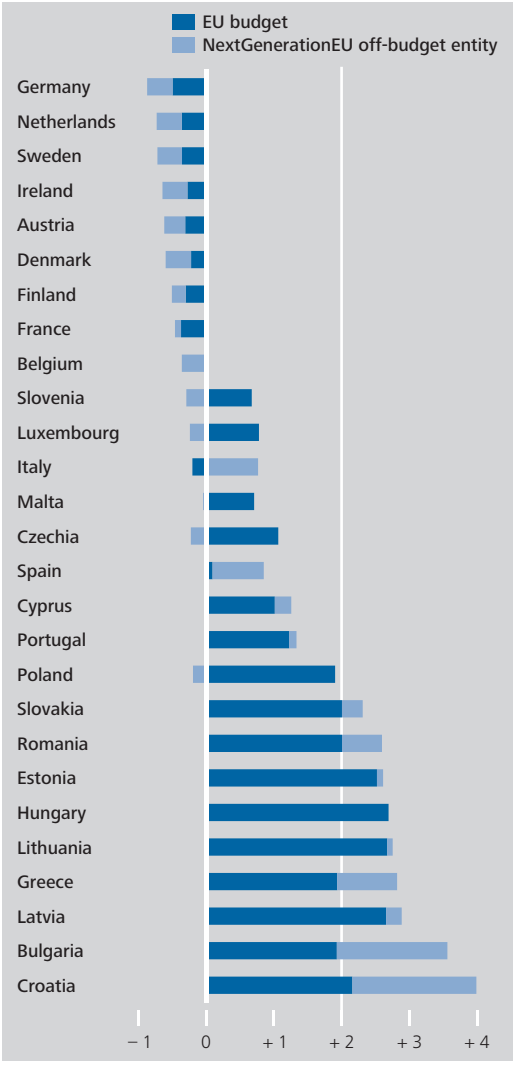
Just like the EU budget, NGEU benefits lower-performing Member States. However, Member States do not request the funds allocated to them evenly over the years, which is why, at times, the NGEU net contributions fluctuate considerably from one year to the next. Looking at the EU budget and NGEU together, nine of the 27 EU Member States were net contributors in 2022 (see the adjacent chart).[4] Germany paid the most in net terms, at just under 1% of national GNI, followed by the Netherlands, Sweden, Ireland, Austria, Denmark, Finland, France and Belgium. In all these countries, NGEU added significantly to net payments. In most of the net contributor Member States (including Germany), NGEU made up around half of the net contribution, even though NGEU was only half the size of the EU budget. This is because two large Member States – Italy and Spain – requested a particularly large portion of their allocated NGEU funds. In France, the increase in the net contribution due to NGEU was less sizeable, while Belgium only became a net contributor as a result of NGEU.

Impact of NGEU on net contribution particularly large in Spain and Italy

The other 18 Member States were net recipients. Croatia and Bulgaria received the highest net grants relative to their national GNI, at 4% and just over 3½%, respectively. They were followed by Latvia, Greece, Lithuania, Hungary, Estonia, Romania and Slovakia, which each received more than 2% of GNI. In the large economies of Italy and Spain, NGEU accounted for a particularly large share of net grants. Italy would have been a net contributor were it not for NGEU, while Spain received significantly higher net grants from NGEU than from the EU budget. In Slovenia, Luxembourg, Malta, Czechia, Poland and Hungary, net inflows from the EU budget contrasted with a (significantly smaller) net burden from NGEU.

Net contributions in 2022

As a percentage of each country's gross national income

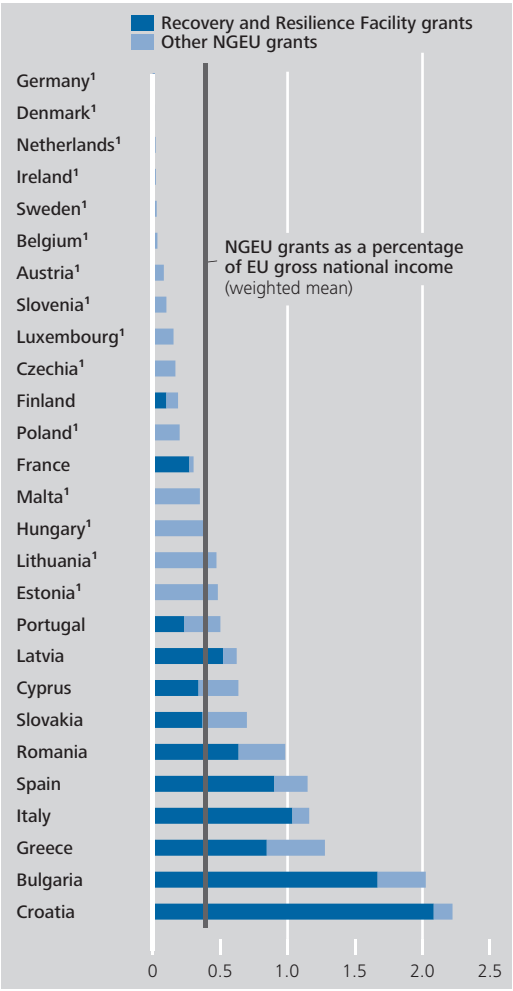


Sources: European Commission and Bundesbank calculations.
Deutsche Bundesbank

4 Figures are based on payment flows into the EU budget, which the European Commission publishes on its website. See https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2021-2027/spending-and-revenue_en. Current data from the AMECO database were used for GNI.

NextGenerationEU (NGEU) grants to Member States in 2022

As a percentage of each country's gross national income



Sources: European Commission and Bundesbank calculations. **1** No Recovery and Resilience Facility grants went to these countries in 2022.

Deutsche Bundesbank

NGEU: grants disbursed at different speeds

RRF subject to special requirements

The Recovery and Resilience Facility is the centrepiece of NGEU, accounting for 80% of total grants. The remaining 20% of NGEU grants are being used to reinforce existing programmes funded by the EU budget. Viewed cumulatively over the entire horizon, RRF funds are disproportionately allocated, by agreement, to lower-performing Member States. However, Member States need to satisfy certain requirements to obtain the RRF funds allocated to them. To this end, they have each agreed national Recovery and Resilience Plans (RRPs) with the European Commission, which set out the milestones each country has to achieve. Countries can request up to 13% of their allocated grants and loans as pre-financing without monitoring to begin with. If a Member State requests additional funds, it must demonstrate that it has achieved the agreed milestones. Only then can the European Commission disburse the funds.

European Commission paid out €62bn in NGEU grants in 2022

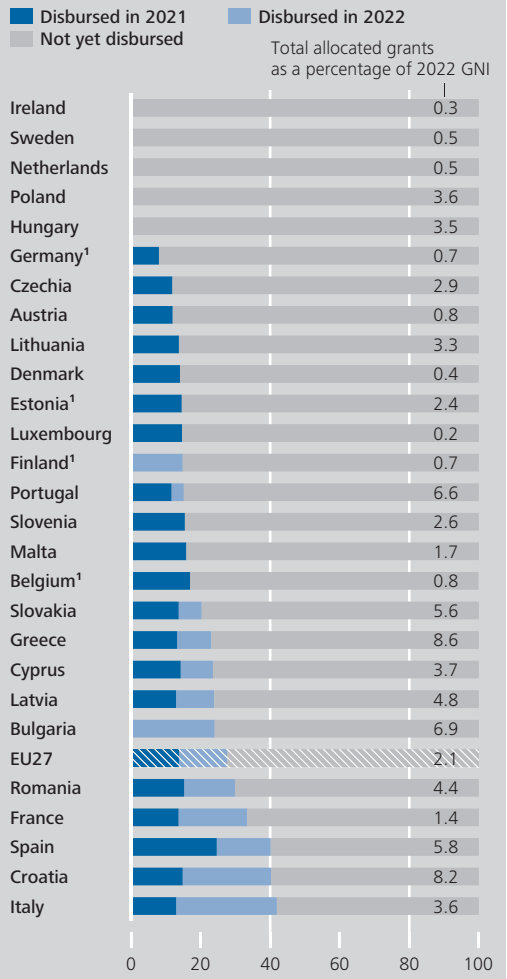
The year 2022 saw NGEU grants worth €62 billion in total being disbursed to Member States (€47 billion thereof out of the RRF). That equates to just under ½% of EU GNI and was €8 billion up on the previous year. NGEU grants differed significantly across Member States (see the adjacent chart). Only 12 of the 27 Member States received RRF grants, with Croatia and Bulgaria obtaining the most, in relative terms, at 2% and 1.7% of GNI, respectively. They were followed by Italy, Spain and Greece at between 0.8% and 1.0% of GNI. Finland requested only the pre-financing, at 0.1% of GNI.

RRF grants being disbursed at different speeds

Cross-country divergences in the disbursement of RRF grants widened again in 2022 (see the left-hand chart on p. 83). In total, the European Commission disbursed 28% of the total funds in the first two years of the six-year RRF term. Romania, France, Spain, Croatia and Italy have already had between 30% and just over 40% of their funds disbursed to them. With the exception of France, these countries are entitled to a disproportionately large share of RRF funds relative to GNI. To date, five countries have received no RRF grants whatsoever, including Hungary and Poland, which have likewise been assigned a disproportionately large volume of RRF funds. Hitherto, payment of their funds has been suspended by the European Commission owing to breaches of the principles of the rule of law. By the end of 2022, four countries, including Germany, had only requested the pre-financing.

Recovery and Resilience Facility grants to Member States

As a percentage of each country's gross national income

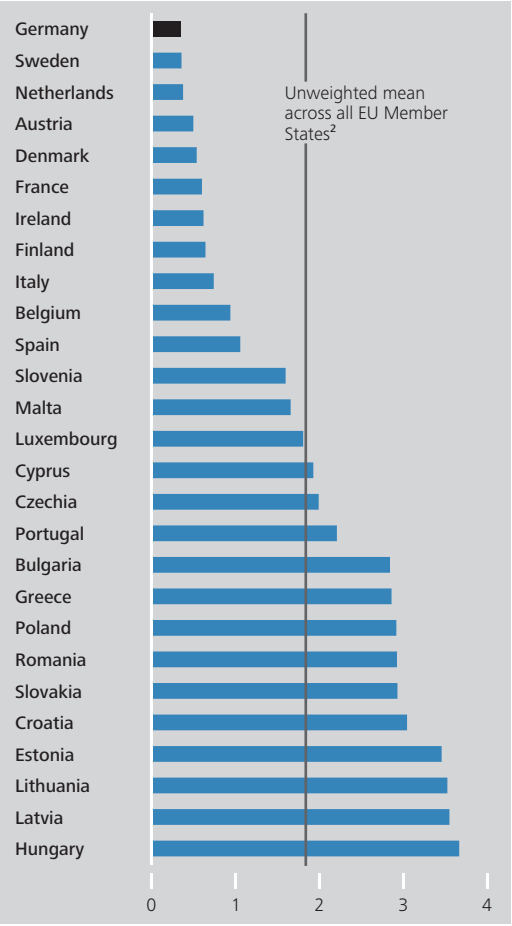


Sources: European Commission and Bundesbank calculations. **1** By the end of 2022, these countries had only received the pre-financing.

Deutsche Bundesbank

Grants from the EU budget to Member States in 2022

As a percentage of each country's gross national income, operating expenditure[1]



Sources: European Commission and Bundesbank calculations. **1** Expenditure excluding administrative spending and debt service for the NextGenerationEU off-budget entity. **2** Factoring in the different sizes of the Member States, the weighted mean was just under 0.9% of EU GNI.

Deutsche Bundesbank

EU budget: development steady

EU budget of €168bn in 2022

The EU budget for 2022 comprised expenditure of around €168 billion,[5] which equates to just over 1% of EU GNI. Of this, just over €10 billion was accounted for by administrative expenditure, which is not factored into the calculation of net contributions. This item's share remained unchanged at 6% of total expenditure. Another item that is disregarded is expenditure on servicing NGEU debt. This has only comprised interest payments to date and was still negligible, at €6 million. Expenditure of €24 billion was covered by customs revenue, which is likewise excluded from the calculation of net contributions. The recovery in the economy meant that this item was €3 billion higher than in 2021.

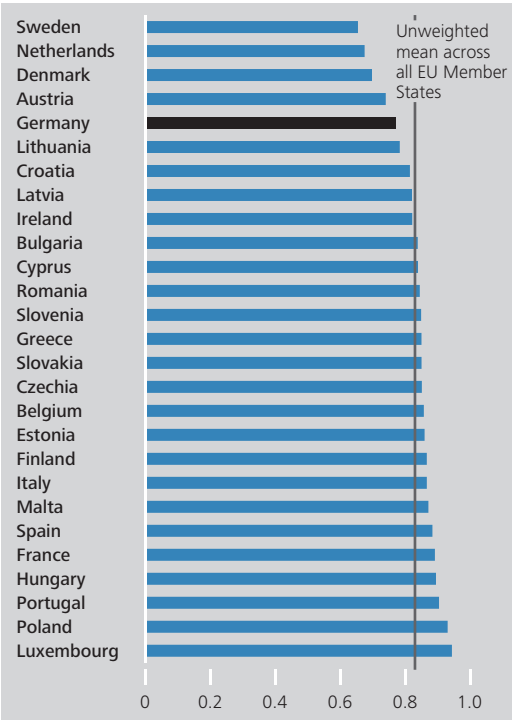
Broad variation in grants out of the EU budget

Operating expenditure (expenditure net of administration and NGEU debt service) came to €157 billion in 2022. As usual, cohesion policy expenditure made up the largest share, followed by agricultural policy expenditure. These two categories combined accounted for more than two-thirds of expenditure. The remaining €38 billion was distributed across the areas of

5 See European Commission (2023).

Member States' payments into the EU budget in 2022

As a percentage of each country's gross national income



Sources: European Commission and Bundesbank calculations.
Deutsche Bundesbank

research and infrastructure, external action, and security and citizenship. As in previous years, there was significant variation in the level of grants paid to Member States out of the EU budget (see the right-hand chart on p. 83). Hungary received the highest relative amount, at just over 3½% of GNI, while Germany, Sweden and the Netherlands had the lowest, at just under ½%.

Much less variation in payments by Member States

As usual, Member States' payments into the EU budget, measured in terms of 2022 GNI, were much closer to each other than the grants they received (see the above chart). These payments covered €130 billion of expenditure. Expressed as an (unweighted) average, Member States paid just over 0.8% of their GNI into the EU budget. The range between the countries with the lowest and highest payments (relative to GNI) was 0.3 percentage point.

Redistribution via EU budget and NGEU following similar pattern

Net contributions still correlate with economic performance

Via the EU budget, Member States typically redistribute financial resources from higher-performing countries to lower-performing ones. This tendency is also evident in the current MFF and in the total assigned NGEU grants (see the charts on p. 85). On average over the first two years, all net contributors to the EU budget, with the exception of Italy, had a higher per capita GNI than the EU average. Conversely, the per capita GNI of the net recipients, with the exception of Luxembourg,[6] was below the EU average in the same period.

Conclusion

NGEU increases scale of redistribution

The EU budget redistributes financial resources from higher-performing EU Member States to lower-performing ones primarily on the expenditure side. That is also the declared objective of the EU's cohesion policy, for example. NGEU follows the same principle of redistribution and increases its scale.

Also consider NGEU grants in fiscal analysis and fiscal rules

Because Member States are funding NGEU grants by borrowing via an off-budget entity, they are shifting their respective financing burdens into the future. Neither their deficits nor their general government debt levels (as defined by Maastricht in each case) reflect these burdens. However, any analysis of public finances should already take these future burdens into account today – for example, when calculating fiscal sustainability. It would be logical to also give timely consideration to these financing burdens as part of the reform of the

6 Luxembourg receives comparatively high payments, relative to the strength of its economy, as part of the Horizon Europe research programme. In 2022, payments under this programme amounted to just under 1% of GNI, which was almost as high as Luxembourg's total payments into the EU budget. In 2021, the inflow came to 0.5% of Luxembourg's GNI, which was likewise well above the European average. By comparison, the other Member States receive less than 0.1% of their GNI on average under this programme.

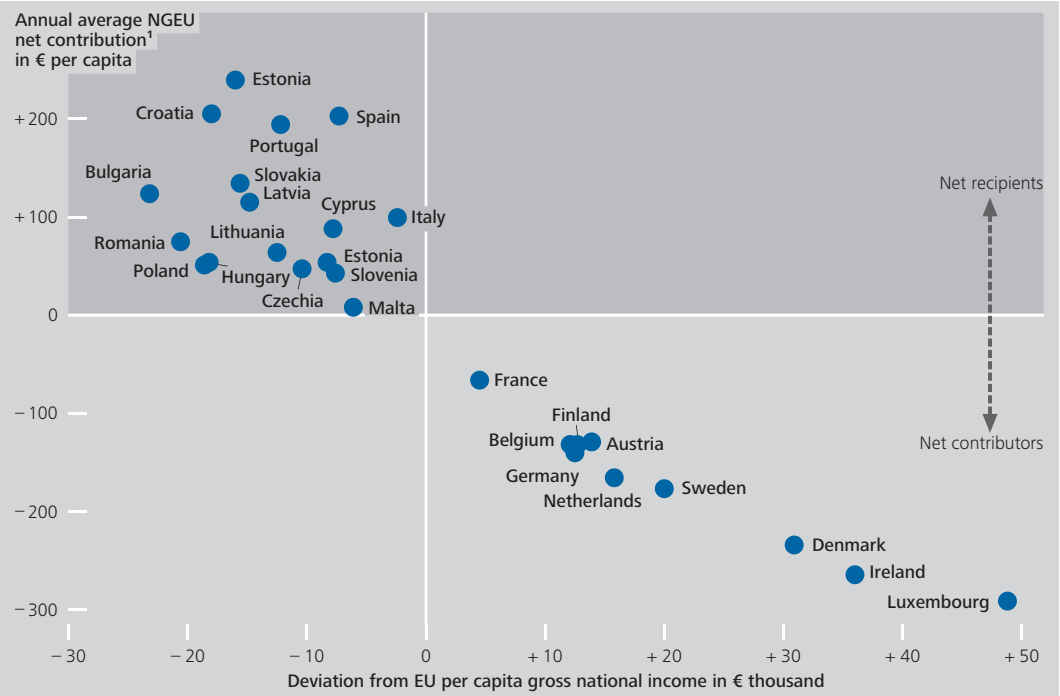
Net contributions to the EU budget and economic performance of the EU Member States

Average 2021-22



Sources: European Commission and Bundesbank calculations. **1** Administration expenditure and customs duties are not included.
Deutsche Bundesbank

Planned grants from the NextGenerationEU (NGEU) off-budget entity and economic performance



Sources: European Commission and Bundesbank calculations. **1** One-sixth of the difference between the total NGEU grants pre-allocated to a Member State and that Member State's share in financing the total pre-allocated NGEU grants.
Deutsche Bundesbank

European fiscal rules. Under national budgetary rules like Germany's debt brake, it would make sense to count annual NGEU borrowing on a pro rata basis towards the Federal Government's scope for borrowing.

List of references

Deutsche Bundesbank (2022), Member States' financial relationships with the EU budget and the Next Generation EU off-budget entity in 2021, Monthly Report, October 2022, pp. 35-46.

European Commission (2023), European Commission, Directorate-General for Budget, Consolidated annual accounts of the European Union: Integrated financial and accountability reporting 2022, Publications Office of the European Union, 2023.

The performance of German credit institutions in 2022

German credit institutions' performance tended to deteriorate over the course of 2022. Profit for the financial year before tax did manage to creep up on aggregate (+1.4%) and, at €27.4 billion, it remained well above the long-term average. This was, however, largely due to a one-off effect at one institution belonging to the category of big banks which clearly improved the other and extraordinary result. Without this one-off effect, aggregate profit for the financial year before tax would have been down on 2021. The rise in interest rates had a rather mixed impact on the individual categories of banks, with the majority recording lower profit for the 2022 financial year than in 2021.

Overall, the interest rate hikes in 2022 had both a positive and a negative impact on earnings. On the one hand, these hikes were instrumental in improving the net interest income of German banks as a whole in the reporting year. The exceptionally steep increase of 11.4% chiefly came about on the back of lending rates rising at a faster and stronger pace than deposit rates. Net interest income thus proved to be the main force behind the considerable rise in operating income (+11.8%). By contrast, net commission income remained at the previous year's level and, unlike in 2021, played no part in boosting operating income.

On the other hand, interest rate hikes in 2022 caused net valuation charges to shoot up to almost four and a half times the previous year's figure; at €16.2 billion, they were also well above the long-term average. This was mainly due to high write-downs on fixed-income securities and increased risk provisioning in lending business. In addition, general administrative spending also went up by 3.3% compared with 2021. Together with higher net valuation charges, this more than offset the increase in operating income.

In the current year, high inflation rates, the tightening of monetary policy and elevated uncertainty about economic developments continue to shape German credit institutions' business environment. Against this background, it remains to be seen to what extent the continued rise in interest rates will bolster the performance of German institutions in the medium term. Overall, risks that drag on earnings are on the rise: the increase in the interest margin in lending and deposit business, which played a major role in improving net interest income in 2022, is unlikely to be sustainable if the expected competitive pressure pushes up interest rates on customer deposits. A decline in new lending business and an increase in credit defaults are expected to weigh on banks' performance in the next few years.

Business environment and structural developments in the German banking sector

2022 proved another challenging year for German credit institutions. While the coronavirus pandemic eased its hold on the macroeconomic environment as the year progressed, Russia's war of aggression against Ukraine, supply bottlenecks, energy supply risks and high inflation took their toll on the German economy.[1] With consumer prices soaring, the Eurosystem also ended the eight-year period of negative interest rates in the summer of 2022.

For the German banking sector, it was the low interest rate period coming to an end that had the greatest positive effect on earnings. However, the changed business environment also affected vulnerabilities that had been building up in recent years in the context of low interest rates and low inflation.[2] Interest rate risk, in particular, materialised to a significant extent over the course of 2022, with a negative impact on performance. By contrast, credit risk initially did not emerge across the board. As was the case during the coronavirus pandemic, German fiscal policy again made a vital contribution to stabilisation in the challenging business environment of 2022. Overall, the German banking system remained robust and continued to perform its functions unimpaired in the reporting year.[3]

Macroeconomic setting

Effects of coronavirus pandemic and war in Ukraine weigh on German economic activity

Real growth of gross domestic product (GDP) in Germany, at a calendar-adjusted 1.9%, was considerably weaker than expected at the beginning of the year.[4] After the coronavirus restrictions were lifted, 2022 saw German economic output rise above its pre-COVID level for the first time. Russia's war of aggression against Ukraine, however, hit the Germany economy hard. In particular, uncertainty about the energy supply and its costs, increased supply bottlenecks and consumer prices, which saw their fastest rise in 70 years, weighed on industry and consumers. This ultimately also had a knock-on effect on the macroeconomic environment in Germany's banking sector.

Extensive fiscal policy assistance and …

Against the background of uncertainty regarding the energy supply and high inflation, the Bundestag adopted government support measures for enterprises and households. These included payments to gas trading companies, the electricity and gas price brakes and the exemption of employers' "inflation compensation bonuses" from taxes and social contributions. This bolstered economic developments in 2022 despite the simultaneous phasing-out of government support measures from the coronavirus pandemic.

… BaFin's package of macroprudential measures had stabilising effects

Overall, the fiscal policy measures are also likely to have helped keep the non-performing loan ratio at an unremarkable level.[5] Against this backdrop, the assumptions underlying banks' risk assessments may have been overly optimistic, a concern recently expressed in the Bundesbank's 2022 Financial Stability Review.[6] As a result, banks could underestimate the risks of credit defaults and interest rate changes, and overestimate the value of loan collateral such as real estate. This could give rise to an unexpected strain on performance in the future. In order to strengthen the resilience of the German banking sector, the Federal Financial Supervisory Authority (BaFin) therefore announced a package of macroprudential measures as early as January 2022.[7]

The rapid rise in inflation over the course of 2022 prompted the Eurosystem to adjust its

1 See Deutsche Bundesbank (2023a), p. 12.
2 See Deutsche Bundesbank (2022a), pp. 44 ff.
3 See Deutsche Bundesbank (2023a), p. 20 and Deutsche Bundesbank (2022a), p. 15.
4 See Deutsche Bundesbank (2023a), p. 9.
5 See Deutsche Bundesbank (2023a), p. 20.
6 See Deutsche Bundesbank (2022a), pp. 10 f.
7 The package of macroprudential measures envisages raising the countercyclical capital buffer (CCyB) to 0.75% of risk-weighted assets on domestic exposures and introducing a sectoral systemic risk buffer (sSyRB) of 2% of risk-weighted assets on loans secured by residential real estate. See Deutsche Bundesbank (2023a), p. 21.

Monetary policy ended expansion course of recent years and raised key interest rates significantly

monetary policy. In order to bring inflation rates back down to the medium-term target, net asset purchases under the pandemic emergency purchase programme (PEPP) were discontinued in March 2022 as planned. Net asset purchases under the asset purchase programme (APP) followed suit at the beginning of July 2022. In addition, key interest rates were raised significantly by a total of 2.5 percentage points in several steps up to the close of the year. This also ended the eight-year period of negative interest rates. The deposit facility rate was put up from -0.5% to 2.0% in the period from July to December 2022, returning it to its level from the end of 2008. In addition, in October 2022, as part of monetary policy normalisation, interest rates and other conditions for the third series of targeted longer-term refinancing operations (TLTRO III) were also adjusted.[8]

High inflation expectations and monetary policy tightening put pressure on equity and bond markets

International equity markets have declined significantly since the beginning of 2022. Rising long-term interest rates in many countries and uncertainties about economic developments, which intensified up to the third quarter, weighed on prices. Falling prices immediately after war broke out in Ukraine hit stock exchanges in Europe – including in Germany – the hardest. This reflected European countries' dependency on Russian commodities, in particular natural gas. However, since the end of the third quarter of 2022, both the international and the European equity markets have recorded some significant gains. This was due, in particular, to better-than-expected economic developments. In the euro area, reports of sizeable deliveries of liquid gas and high gas storage levels also eased uncertainty about the energy supply. As a result, European equity indices rose substantially more strongly than, for example, equity prices in the United States.[9]

Nominal government bond yields rose very significantly in the bond markets of major currency areas over the course of the year. This was also true of yields on ten-year Federal securities which, at more than 2.6% at the end of December 2022, reached their highest level in more than ten years.[10] This development is likely to have been driven mainly by two factors. First, given the persistently high inflation rates, market participants expected a further tightening of monetary policy. Second, there was an increase in the term premia that investors demanded as compensation for assuming price risks when purchasing long-term bonds. The termination of the Eurosystem's net purchases is likely to have contributed to this.[11]

Balance sheet and structural developments in the German banking sector

Consolidation in German banking sector continued

The consolidation process in the German banking sector continued in 2022. Over the course of the year, the overall number of credit institutions fell by 61 to 1,395. The decline was thus somewhat higher than in the previous year and was mainly attributable to mergers, largely among credit cooperatives.[12]

The number of domestic branches also continued to fall significantly. At around 6%, however, the decline was somewhat smaller than in the previous year (2021: around -10%). Once again, this development is likely to reflect both the impact of digitalisation as online banking becomes more prevalent and cost-cutting measures in an environment of intense competition.[13]

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8 As of 23 November 2022 until the maturity date or early repayment date of each operation, the interest rates for TLTRO III were indexed to the average applicable key ECB interest rates over this period. Banks were also offered three voluntary early repayment dates. See Deutsche Bundesbank (2023a), p. 14 and Deutsche Bundesbank (2022b), p. 25.
9 See Deutsche Bundesbank (2023b), pp. 47 f., Deutsche Bundesbank (2022c), p. 47 and Deutsche Bundesbank (2022d), pp. 48 f.
10 See Deutsche Bundesbank (2023b), p. 42.
11 See Deutsche Bundesbank (2022b), p. 42, Deutsche Bundesbank (2022c), p. 39 and Deutsche Bundesbank (2022d), pp. 44 f.
12 See Deutsche Bundesbank (2023c). In 2021, the decline excluding special factors (due to the entry into force of the Investment Institutions Act, 71 institutions were no longer considered credit institutions and 43 UK branches were dissolved as a result of Brexit) amounted to 46 institutions.
13 See Deutsche Bundesbank (2023c).

Structural data on German credit institutions

End of year

Category of banks	Number of institutions[1]			Number of branches[1]			Number of employees[2]		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
All categories of banks	1,519	1,456	1,395	24,060	21,697	20,432	551,976	540,365	535,081
Commercial banks	270	261	246	6,453	5,199	4,825	[3] 151,600	[3] 146,900	[3] 145,700
Big banks	3	3	3	5,146	4,037	3,719	.	.	.
Regional banks and other commercial banks	151	151	141	1,142	1,013	954	.	.	.
Branches of foreign banks	116	107	102	165	149	152	.	.	.
Landesbanken	6	6	6	210	179	144	27,150	27,150	26,900
Savings banks	377	371	362	8,318	7,732	7,326	200,700	194,950	191,000
Credit cooperatives	818	771	735	7,765	7,297	6,881	[4] 138,150	[4] 135,500	[4] 134,550
Mortgage banks	10	9	8	37	32	31	.	.	.
Building and loan associations	18	18	18	1,259	1,239	1,205	[5] 12,500	[5] 12,900	[5] 12,900
Banks with special, development and other central support tasks	20	20	20	18	19	20	[6] 21,876	[6] 22,965	[6] 24,031

1 Source: Bank office statistics, in Deutsche Bundesbank, Banking statistics, tables contained in the Statistical Series, IV. Structural figures, multi-office banks, p. 104. The term "credit institution" is used as in the Banking Act, resulting in divergences from data in the monthly balance sheet statistics and the statistics on the banks' profit and loss accounts. **2** Number of full-time and part-time employees excluding the Bundesbank. Sources: Data provided by associations and Bundesbank calculations. **3** Employees in private banking, including mortgage banks established under private law. **4** Only employees whose primary occupation is in banking. **5** Only office-based employees. **6** Employees at public mortgage banks (mortgage banks established under public law), banks with special tasks established under public law and DZ Bank AG.

Deutsche Bundesbank

Balance sheet growth continued despite monetary policy tightening

German credit institutions' average aggregate total assets[14] for the year continued to grow in 2022, although the Eurosystem tightened its monetary policy considerably. At 12.0%, the growth rate was more than four times the year-on-year level.[15] Brexit is also likely to have continued to play a role in this regard:[16] almost half of the increase in the aggregate total assets in the reporting year was attributable to the balance sheet growth of regional and other commercial banks (+37.1%). The latter was driven mainly by the merger of one institution with foreign business units that had not been recorded in the data previously. This institution was responsible for more than 85% of the balance sheet growth of regional and other commercial banks and just under 40% of the growth of aggregate total assets. In addition, big banks also expanded their total assets by 10.4%, after having recorded a decline of around the same amount in 2021. Big banks thus contributed just under one-quarter to the growth in average aggregate total assets for the year in 2022. By contrast, savings banks and credit cooperatives recorded growth of 3.8% and 5.1% in their respective total assets in 2022, slower than in the previous year (2021: +7.7% in each case).

Central bank balances no longer growth item on assets side of aggregated bank balance sheet

With regard to the assets side of the aggregated bank balance sheet, balances with the central bank, the main driver of growth in 2021, did not contribute to growth in the reporting year, according to data from the monthly balance sheet statistics. Discontinuation of the Eurosystem's net purchases under the PEPP and APP in March and July 2022, as well as the decision not to launch a new series

14 For more information, see the box on methodological notes on p. 92.
15 However, the high growth is likely to be partly due to a statistical one-off effect. Derivatives were shown gross in the monthly balance sheet statistics for the first time in the reporting year, whereas they were recorded in net terms in previous years.
16 For more information, see also Deutsche Bundesbank (2022e), pp. 71 f.

under TLTRO III, ended the growth trend of previous years. The repayment of the first two maturing series of TLTRO III and the early repayment of other series, some that were still ongoing, were chiefly responsible for the decrease in balances in the reporting year. Overall, German banks' liabilities to the Eurosystem fell by around 9%. Furthermore, in September 2022, German banks transferred large amounts from their current accounts with the central bank to the deposit facility, as balances exceeding the minimum reserve requirement were no longer remunerated as of September 2022. By contrast, as a result of monetary policy tightening, the interest rate on the deposit facility rose simultaneously to 0.75% and then gradually further.[17]

Lending to non-banks grew strongly again

Unlike central bank balances, lending continued to be a significant factor in driving growth on the assets side of the aggregated bank balance sheet in the reporting year. German credit institutions once again expanded their domestic lending strongly, although interest rates on loans rose sharply over the course of the year. At 5.4%, annual average growth not only exceeded the previous year's figure (+3.2%) significantly, it also recorded the highest growth rate in the past 20 years. In particular, lending to the German private sector, i.e. domestic non-financial corporations and households, rose steeply during the first three quarters of 2022. Growth did not weaken significantly until the fourth quarter. However, this was, to some extent, a countermovement to the exceptionally high growth in the preceding quarters, buoyed by government stabilisation measures to address uncertainty about the energy supply.[18]

Short-term loans to domestic non-financial corporations and households recorded the strongest growth (+19.4%). Non-financial corporations, in particular, already had high financing needs related to inventories and working capital at the beginning of 2022 owing to supply chain problems and material shortages that have existed since the coronavirus pandemic. As of the end of the first quarter of 2022, non-financial corporations' financing needs and thus demand for credit continued to increase. The main reasons are likely to have been the additional uncertainty caused by the war in Ukraine and its economic consequences, the hedging against rising interest rates and the further rise in inflation.[19] In the third quarter of 2022, a one-off effect also boosted lending to enterprises: a large portion of net lending was attributable to government assistance loans to energy companies that were granted directly by the Kreditanstalt für Wiederaufbau (KfW).[20]

In addition to short-term loans, medium and long-term loans to domestic non-financial corporations and households also grew significantly in the reporting year. Loans to households for house purchase were again the main driver of this growth. At an annual average of 6.6%, however, their expansion was somewhat smaller than in 2021 (+7.1%). From the third quarter of 2022 onwards, growth in loans for house purchase progressively weakened, after the growth trend of the previous year had initially continued in the first half of 2022. The general loss of purchasing power as a result of inflation, considerably higher construction prices, and the rise in financing costs dampened households' demand for loans for house purchase. In addition, given the rise in credit default risk, banks further tightened their credit conditions substantially for new lending and significantly increased their rejection rate.[21]

A comparison across the various categories of banks reveals a mixed picture. While big banks expanded their loans for house purchase at an annual average of 4.4%, much less than in the previous year (2021: +6.6%), for savings banks and credit cooperatives growth continued almost unabated. At 7.6% and 8.5%, respect-

17 See Deutsche Bundesbank (2023a), p. 53.
18 See Deutsche Bundesbank (2023b), p. 34.
19 See Deutsche Bundesbank (2022c), p. 35 and Deutsche Bundesbank (2022d), pp. 38 f.
20 See Deutsche Bundesbank (2022b), p. 35.
21 See Deutsche Bundesbank (2022b), p. 35 and Deutsche Bundesbank (2023b), p. 37.

Methodological notes

The results from the profit and loss accounts are based on the published annual reports of the individual institutions in accordance with the provisions set forth in the German Commercial Code (*Handelsgesetzbuch*) and the Regulation on the Accounting of Credit Institutions *(Verordnung über die Rechnungslegung der Kreditinstitute)*. In terms of their conception, structure and definitions, they differ from the International Financial Reporting Standards (IFRS)[1] for publicly traded banking groups. This means that – from a methodological viewpoint – business performance and certain balance sheet or individual profit and loss items are not comparable across the national and international accounting frameworks. For reasons of comparability within Germany, it is advisable to consider the individual accounts when analysing financial performance. The figures for balance sheet capital (total equity), total assets and other stock variables are not obtained from the annual reports but are taken as annual average values on the basis of the monthly balance sheet statistics reported for the institution as a whole.

The reporting group for profit and loss statistics includes all banks which are monetary financial institutions (MFIs) that conform to the definition of a CRR credit institution as set forth in Article 4(1) number 1 of Regulation (EU) No 575/2013 and are domiciled in Germany. Branches of foreign banks that are exempted from the provisions of Section 53 of the German Banking Act (*Kreditwesengesetz*, or KWG), banks in liquidation and banks with a financial year of less than twelve months (truncated financial year) are not included in this performance analysis.

At the launch of monetary union in 1999, the reporting group relevant for calculating the money supply and for monetary analysis was uniformly defined by the European Central Bank (ECB) for the euro area as a whole and designated as the MFI sector. Unlike the population of banks used for the Bundesbank's analysis up to that point, building and loan associations are also included. Except where another time period is explicitly mentioned, the calculations with regard to the longer-term average cover the years since the launch of monetary union, i.e. from 1999 to 2022.

1 IFRS-based financial statements are of relevance, for instance, to matters of macroprudential analysis and oversight, concentrating on systemically important banks and their international business activities (including their foreign subsidiaries). For details, see Deutsche Bundesbank (2013).

ively, the growth rate of loans for house purchase at savings banks and credit cooperatives was only slightly below the previous year's figures (2021: +7.7% and +8.8%, respectively).

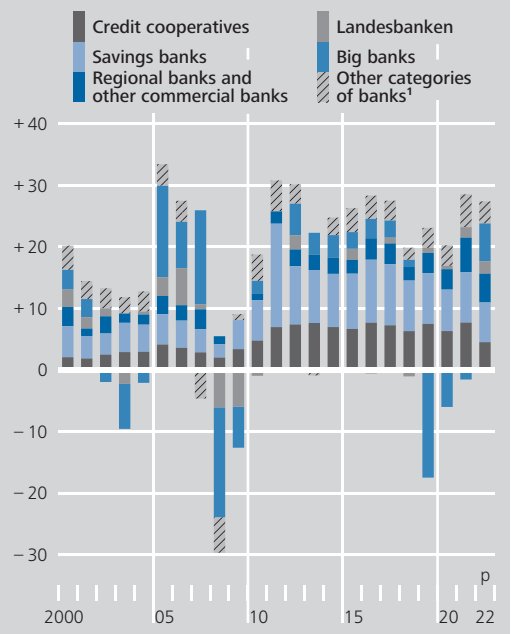
Continued growth in deposits, albeit at a lower growth rate

On the liabilities side of the aggregated bank balance sheet, the volume of deposits held by domestic non-banks with German credit institutions reached a new historical high of around €4,097 billion in 2022. However, at 3.6%, the average growth rate for the year was lower than in 2021, and was more at the level of the long-term average of 3.5%. The pace of growth fluctuated considerably in some cases in the course of 2022. For example, non-financial corporations and households significantly expanded their deposits with German banks, particularly in the first and third quarters of the reporting year. By contrast, growth was less dynamic in the second and fourth quarters of 2022. Uncertainty about the effects of the Russian war of aggression against Ukraine and the marked deterioration in the economic outlook are likely to have initially contributed to an increase in liquidity holdings.[22] Over the course of the year, however, market players are likely to have become more aware of the high opportunity costs of holding money in an environment of high inflation rates and rising interest rates. Together with rising expenditure on intermediate and consumer goods, this is likely to have subdued growth in deposits.[23]

Against this backdrop, the volume of sight deposits held by domestic non-banks with German credit institutions grew at a significantly slower pace overall than in the previous year. At 4.0%, the growth rate in 2022 was less than half of the previous year's figure. By contrast, the holdings of time deposits rose by 6.6% in the reporting year, following on from a continuous decline over the past ten years. A comparison of the various categories of banks shows high growth, especially in the case of Landesbanken (+31.3%) and savings banks (+20.1%). However, time deposits also rose sharply at around 12% for both big banks and credit cooperatives.

Credit institutions' profit for the year before tax*

€ billion



***** Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

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The strong growth was mainly concentrated on short-term time deposits. Both non-financial corporations and households increasingly shifted their sight deposits, short-term savings deposits and longer-term time and savings deposits into short-term time deposits, as interest rates on these deposits rose far more sharply than interest rates on other forms of deposit in the course of 2022.[24]

Balance sheet equity also recorded steep growth of 5.2% in the reporting year, more

22 See Deutsche Bundesbank (2022b), pp. 34 f. and Deutsche Bundesbank (2022c), pp. 32 f.
23 See Deutsche Bundesbank (2022d), p. 38 and Deutsche Bundesbank (2023b), p. 34.
24 See Deutsche Bundesbank (2023b), p. 34.

Balance sheet equity increased far more strongly than last year

than three times as high as in 2021.[25] Growth in the balance sheet equity of regional and other commercial banks (around +16%), in particular, was far above average.[26] At around 7%, however, the equity capital of credit cooperatives also recorded above-average growth, while savings banks, at just under 4%, fell short of the aggregate level. By contrast, the balance sheet equity of big banks slipped by around 1%.

Performance, profitability and cost efficiency

According to data from the statistics on banks' profit and loss accounts,[27] the aggregate profit for the financial year before tax generated by German credit institutions was slightly up on the year. Nevertheless, the performance of German banks tends to have deteriorated in 2022. Ultimately, the rise in aggregate profit was mainly driven by a one-off effect at one particular big bank. The institution in question registered high income from value readjustments to participating interests and shares in affiliated enterprises in the reporting year, which significantly bolstered the balance in the other and extraordinary account. Without this improvement, aggregate profit for the year before tax would have been lower than in 2021.

The much higher level of interest rates brought about by monetary policy tightening exerted both positive and negative effects on earnings. On the one hand, the rise in interest rates was instrumental in improving net interest income, which in turn was the driving force behind the significant increase in operating income. On the other hand, high write-downs on fixed-income securities, in particular, as well as increased risk provisioning requirements in lending business meant German banks' net valuation charges climbed sharply in 2022. These opposing effects of higher interest rates impacted the performance of the individual categories of banks to different degrees. In addition, there was also a moderate rise in general administrative spending compared with 2021. Combined with the increase in net valuation charges, this more than offset the improvement in operating income.

Profit for the financial year

Profit for the year before tax rose slightly despite the challenging macroeconomic setting and monetary policy tightening

Overall, German credit institutions increased their aggregate profit for the year before tax[28] by 1.4% in 2022, reaching €27.4 billion. Coming after 2021, a year in which profit almost doubled, the reporting year thus saw only slight growth. Overall it was still well above the long-term average of €18.4 billion, however.

Profit for the year before tax increased for only a few categories of banks

Unlike in 2021, the increase in the aggregate net profit for the reporting year was not founded on a broad-based improvement in annual results across all the categories of banks looked at. The much higher level of interest rates brought about by monetary policy tightening, in particular, exerted both positive and negative effects on earnings; as expected, these effects manifested in very different ways

25 This development is likely to have been partly driven by the improvement in performance in 2021, with German credit institutions almost doubling their profit for the financial year before tax compared with 2020. When interpreting the data on the equity base, it should be borne in mind that the amounts transferred from the profit for the respective financial year do not increase balance sheet equity until the year after the annual accounts are adopted, while withdrawals from equity items are to be deducted at the latest when the annual accounts are prepared.
26 In addition to the improvement in performance in 2021, the aforementioned merger at one institution belonging to the category of regional and other commercial banks is likely to have been the main driver of this increase. However, Brexit is also likely to have continued to play a role. For more information, see also Deutsche Bundesbank (2022e), pp. 71f.
27 Statistics on banks' profit and loss accounts are compiled on an annual basis. This involves the evaluation of the profits and losses calculated from the annual accounts (individual accounts prepared in accordance with the German Commercial Code (*Handelsgesetzbuch;* HGB)), which the banks must submit to the Bundesbank pursuant to Section 26 of the German Banking Act *(Kreditwesengesetz)*. As the annual accounts apply to the whole institution (but not to the group), the charges and income of foreign branches are also recorded. See also the box on methodological notes on p. 92.
28 Profit for the financial year before tax is calculated as operating income less administrative spending and net valuation charges plus the balance of the other and extraordinary account.

Major income and cost items for individual categories of banks in 2022[p]

As a percentage of operating income

Item	All categories of banks	Big banks	Regional banks and other commercial banks	Landesbanken	Savings banks	Credit cooperatives	Mortgage banks	Building and loan associations	Banks with special, development and other central support tasks
Net interest income	64.9	63.2	53.8	65.0	67.8	70.8	105.4	92.3	61.9
Net commission income	26.9	35.8	28.3	16.1	28.4	24.8	– 5.1	– 6.2	23.6
Result from the trading portfolio	6.9	14.3	9.2	18.2	0.0	0.0	0.0	0.0	13.8
Other operating result	1.3	– 13.4	8.7	0.7	3.7	4.4	– 0.3	13.9	0.7
Operating income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
General administrative spending	– 67.3	– 89.8	– 60.5	– 62.6	– 62.0	– 62.5	– 47.3	– 78.2	– 59.4
of which:									
Staff costs	– 34.3	– 40.6	– 27.9	– 29.2	– 37.6	– 35.1	– 23.0	– 35.1	– 29.9
Other administrative spending	– 33.0	– 49.2	– 32.6	– 33.4	– 24.4	– 27.5	– 24.3	– 43.1	– 29.4
Result from the valuation of assets	– 11.5	– 2.5	– 12.6	– 16.3	– 13.9	– 16.1	– 15.0	– 4.6	– 10.9
Other and extraordinary result	– 1.7	13.7	– 11.1	0.2	– 5.2	– 3.4	– 11.1	– 4.9	– 1.4

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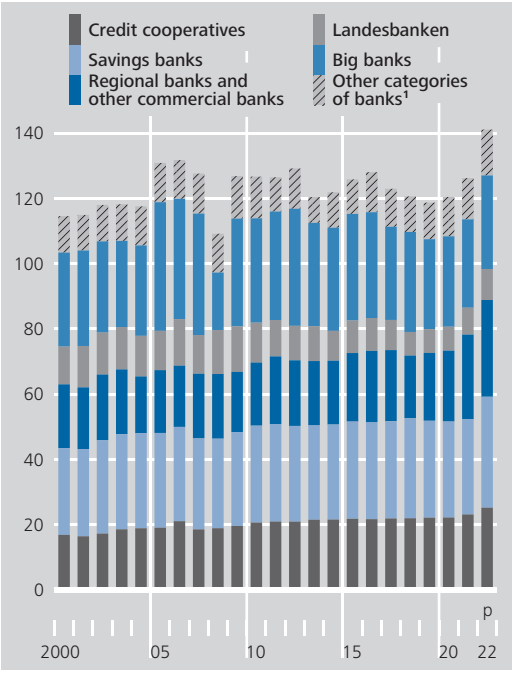
in the individual categories of banks.[29] In 2022, big banks, the Landesbanken and the building and loan associations were the only groupings that managed to increase their profit for the year before tax. The significant growth posted by Landesbanken and building and loan associations was based on a comparatively low level in the previous year[30] and hardly had any bearing on the improvement in net profit for the year at the aggregate level. For the big banks the story was quite a different one: in particular the huge €7.7 billion increase in their result for the financial year was a main driver of the growth seen overall. Having booked a loss in 2021, big banks thus achieved a profit for the year before tax of €6.1 billion for the 2022 reporting year. That said, around two-thirds of the increase was attributable to the balance of the other and extraordinary account, which exhibited strong improvement primarily due to one institution's income from value readjustments to participating interests, shares in affiliated enterprises and securities treated as fixed assets.

The other categories of banks considered,[31] especially mortgage banks, credit cooperatives and savings banks, saw their profit for the year before tax decline markedly in some cases. The drop experienced by mortgage banks, amounting to just under 70%, was mainly due to a sharp reduction in the balance of the other and extraordinary account and was not caused by the rise in interest rates. Profit for the year before tax also fell steeply at credit cooperatives and savings banks in the reporting year, contracting by 41.2% and 21.1% respectively. In

29 See Deutsche Bundesbank (2022e), pp. 91 f., "Estimation of the effect of an interest rate reversal on the interest margin of German credit institutions".
30 Landesbanken increased their profit for the year before tax by €0.3 billion (+18.0%) and building and loan associations increased theirs by €0.2 billion (+101.1%).
31 Regional banks and other commercial banks, branches of foreign banks, savings banks, credit cooperatives, mortgage banks as well as banks with special, development and other central support tasks.

Credit institutions' operating income*

€ billion



* Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

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both cases, the decline was mainly attributable to net valuation charges, which rose significantly compared with 2021 as a result of the higher interest rate level.

Operating income and its components

Operating income rose sharply in the reporting year

In 2022, operating income[32] provided a particularly strong boost to growth in profit for the year before tax. In the reporting year, German credit institutions' operating income rose by €14.9 billion (+11.8%) – more than twice as strongly as in the previous year, both in absolute and relative terms. The improvement in operating income was driven mainly by a sharp rise in net interest income, but a significant increase in net trading income also played a part.

Operating income rose across the board for all categories of banks

In contrast to the previous year, all categories of banks included in the analysis recorded higher operating income in 2022. Savings banks and credit cooperatives recorded the highest growth in absolute terms, with increases of €4.8 billion and €2.1 billion respectively.[33] Taken together, these two categories of banks were thus responsible for almost half of the total increase in operating income. However, big banks and Landesbanken also made significant contributions to the overall growth, with their operating income rising by €1.6 billion and €1.3 billion respectively.

Net interest income rose significantly overall and was the main driver of the increase in operating income

Net interest income remained the most important source of revenue for German banks. It accounted for around 65% of operating income – the same share as in 2021. Overall, German banks' operating business benefited from the end of the multi-year period of low interest rates. The significantly higher interest rate level as a result of monetary policy tightening was the key factor leading to a considerable increase in net interest income. At 11.4%, the growth rate of net interest income was more than eight times the prior-year figure. In addition, net interest income contributed just over 60% to the increase in operating income and was thus the largest driver of growth there.

Unlike in 2021, around 90% of the increase in the reporting year was attributable to net interest income in the narrower sense, i.e. the contribution to earnings by interest-related business. Up by 11.9%, net interest income in the narrower sense actually grew somewhat more strongly than net interest income overall. Current income from shares and other variable-yield securities, as well as from participating interests, which are likewise included in net interest income, also increased. In contrast to the previous year, however, it made only a small contribution to growth in 2022.

32 Sum of net interest income, net commission income, net result from the trading portfolio, and other operating result.

33 The very sizeable increase of €3.7 billion in the operating income of regional and other commercial banks was partly due to the growth of one institution in this category following mergers with foreign business units.

Overall, net interest income improved on a broad basis. Almost all categories of banks[34] recorded strong growth for the most part. Big banks (+16.5%) and savings banks (+16.0%) saw especially strong increases.[35] Credit cooperatives saw a less significant rise, meanwhile, with net interest income up 9.2%

Interest margin still at a low level overall, but much improved within certain categories of banks

However, the interest margin (net interest income in relation to average total assets for the year) fell again slightly overall in the reporting year, down by 0.01 percentage point to a new low of 0.86%. Aggregate average total assets for the year rose so strongly in 2022 that the improvement in net interest income ultimately failed to bring about an increase in the interest margin overall.

However looking at the categories of banks in isolation reveals sizeable differences between them. Savings banks and credit cooperatives, in particular, significantly increased their interest margins by 0.16 percentage point and 0.06 percentage point, respectively, compared with 2021. In addition, at 1.47% and 1.53% respectively, the interest margins they generated continued to be the highest out of all the categories of banks considered. By contrast, the interest margin of the big banks only amounted to 0.67%, despite them recording an improvement of 0.04 percentage point. Regional and other commercial banks posted the largest decline (-0.17 percentage point) among the categories of banks considered.[36] At 0.84%, their interest margin was nevertheless higher than that of the big banks.

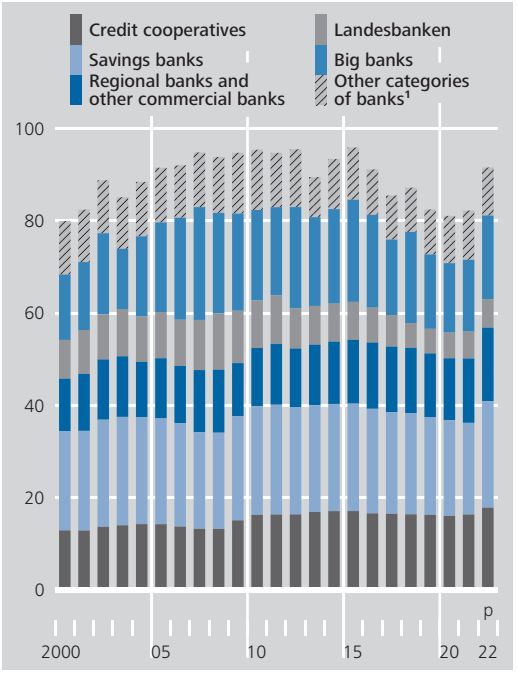
Overall, interest income rose more strongly than interest expenditure in 2022

The growth in net interest income was generally due to the fact that interest received rose more strongly than interest paid. In absolute terms, interest income in the narrower sense, in particular, rose by a total of €34.6 billion (+28.4%) in the reporting year. Interest expenditure, meanwhile, went up by €26.0 billion (+52.6%).[37]

The altered interest rate environment in the wake of monetary policy tightening is likely to have been the key cause of this development. Interest rates on new loans, especially in the high-growth housing loans segment, went up very quickly and unexpectedly sharply amid fast-paced credit growth.[38] By contrast, interest rates on overnight deposits, which, according to monthly balance sheet statistics, accounted for around two-thirds of the total annual aver-

Credit institutions' net interest income*

€ billion



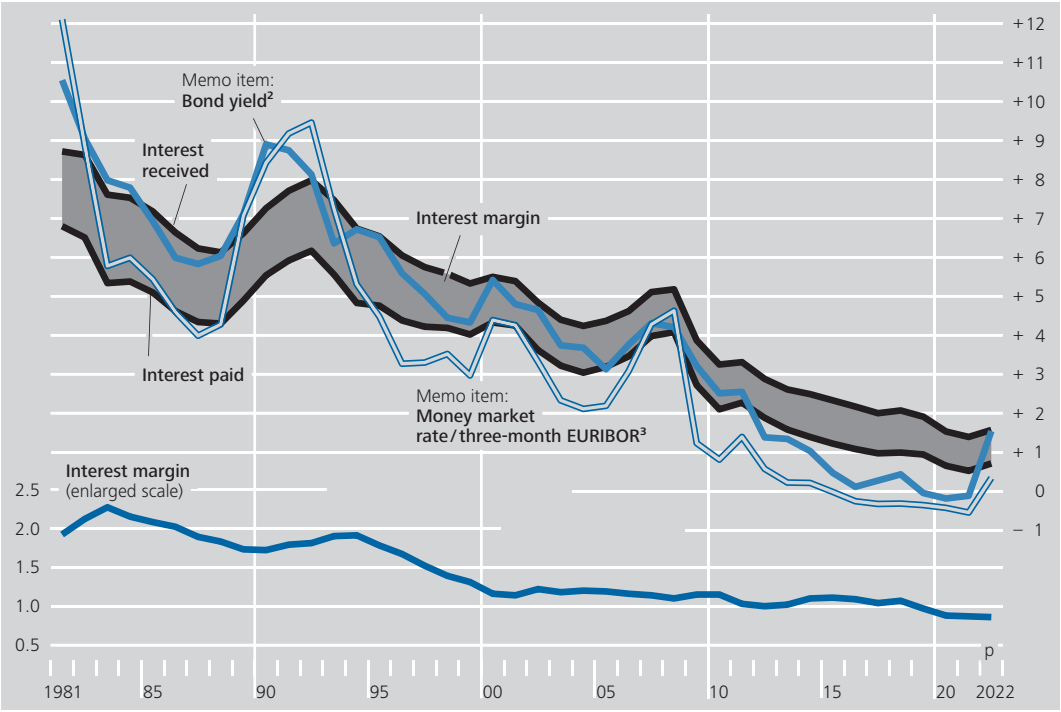
* Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

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34 Big banks, regional and other commercial banks, Landesbanken, savings banks, credit cooperatives, and building and loan associations increased their net interest income. Branches of foreign banks, mortgage banks, and banks with special, development and other central support tasks were the only ones to see slight declines.
35 Regional banks and other commercial banks also recorded a substantial rise in net interest income of 14.3%. However, mergers with foreign business units at one institution in particular are likely to have fuelled that increase.
36 The exceptionally strong growth in average total assets for the year driven by merger activity exerted a negative impact on the interest margin of regional and other commercial banks, which outweighed the positive effect of the rise in net interest income.
37 In a long-term comparison, interest income in the narrower sense was around 40% lower, and interest expenditure around 60% lower, than their respective long-term averages.
38 See Deutsche Bundesbank (2023d), p. 39.

Interest received and interest paid by credit institutions

As a percentage of average total assets for the year[1]



1 Up to end-1998, as a percentage of the average volume of business for the given year. **2** Average yield on domestic bearer debt securities overall. **3** Source: Bundesbank calculation of monthly averages using daily data from the European Money Markets Institute (EMMI). Up to end-1998, money market rate for three-month funds in Frankfurt am Main.

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age deposit volume in 2022, rose only marginally.[39] According to the MFI interest rate statistics, average interest rates did not start going up here until key interest rates began to be raised from July 2022.[40]

In 2022, institutions also generated interest income from balances held in the Eurosystem's deposit facility.[41] The third series of targeted longer-term refinancing operations (TLTRO III) once again made a contribution to net interest income in 2022 as well, albeit a much smaller one than the year before on account of the Eurosystem having changed the terms and conditions of TLTRO III in October 2022.[42] Together, around 2.4% of German credit institutions' total interest income was attributable to interest income from the deposit facility and from refinancing operations with the Eurosystem.

Looking at the categories of banks on an individual basis reveals a similar picture: with few exceptions,[43] interest income rose more strongly than interest expenditure. However,

39 See Deutsche Bundesbank (2023d), p. 39.

40 Between January and June 2022, the average interest rate on households' overnight deposits fell from -0.0149% to -0.0196%. Between July and December 2022, the interest rate then rose to +0.0915%. The average interest rate on non-financial corporations' overnight deposits followed a similar pattern, falling from -0.1423% to -0.1463% between January and June 2022 and then rising to +0.1147% from July to December 2022.

41 From July 2022, amounts held in the Eurosystem's deposit facility were no longer remunerated at negative rates; from September 2022, positive interest rates were applied to such holdings. According to the Bundesbank's Annual Report, this generated interest income totalling €2.0 billion for German credit institutions in 2022. The previous year, the negative deposit facility rate entailed interest expenses of €4.8 billion for German banks. See Deutsche Bundesbank (2023a), p. 60.

42 In 2022, German credit institutions generated interest income of €2.0 billion from negatively remunerated refinancing operations with the Eurosystem. The year before, that figure stood at €4.0 billion. See Deutsche Bundesbank (2023a), p. 60.

43 Interest income and interest expenditure rose in equal measure at mortgage banks. Banks with special, promotional and other central support tasks saw interest expenditure climb more strongly than interest income. In the case of building and loan associations, interest expenditure fell more sharply than interest income.

there are some significant differences when it comes to the size of those increases. In particular, the big banks and regional and other commercial banks recorded considerably higher growth rates for both interest income and interest expenditure compared with the aggregate across all categories of banks. By contrast, savings banks and credit cooperatives saw their interest income grow less strongly than the figure for all categories put together. Credit cooperatives' interest expenditure remained virtually the same as in 2021. Savings banks reduced their interest expenditure by around one-fifth.

These differences are likely to ultimately be due to divergent business models. On the one hand, long interest rate fixation periods mean that the low interest rates on loans for house purchase in recent years are likely to have remained the determining factor for interest income in the reporting year for savings banks and credit cooperatives in particular. These institutions had some time to wait before the sharp increases in interest rates on loans for house purchase from the start of 2022 onwards had a positive effect on earnings through new business. According to the monthly balance sheet statistics, savings banks and credit cooperatives respectively accounted for around 33% and around 25% of the total average stock of housing loans in 2022. Big banks only accounted for around 15% of this loan category, while regional and other commercial banks held a small share of just under 8% of the total stock.

On the other hand, the very slow pace of increases in interest rates for overnight deposits[44] is likely to have been the key factor in curbing growth in interest expenditure at savings banks and credit cooperatives. According to data from the monthly balance sheet statistics, savings banks and credit cooperatives respectively held just under one-third and just over one-fifth of the annual average total stock of overnight deposits in 2022. Big banks likewise accounted for just under one-fifth of total overnight deposits. At the same time, however, they also held around 17% of total time deposits, and interest rates on those rose significantly more swiftly and more sharply in 2022 than interest rates on overnight deposits.[45] By contrast, the shares in the total stock of time deposits held by savings banks and credit cooperatives was much smaller at just over 3% and just under 6%, respectively.

Overall, differences between the speed and degree of interest rate increases applying to loans and deposits led to a significant rise in the margin in new business from the beginning of 2022. From mid-2022, the margin in existing business increased as well, with the time lag being the result of long interest rate fixation periods – especially in the case of loans for house purchase.[46]

Net commission income stagnated at the previous year's level and, unlike in 2021, did not aid the improvement in operating income

In 2022, net commission income remained the second most important source of revenue for German credit institutions. However, its share of operating income fell by roughly 3 percentage points on the year, to around 27%.

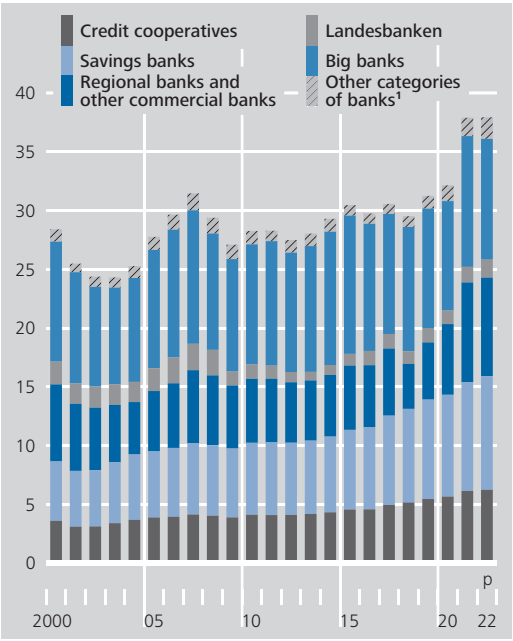
Unlike in 2021, net commission income therefore did not play a part in improving operating income in the reporting year. Commissions received and commissions paid rose by equal amounts in 2022, leaving net commission income unchanged at the previous year's level of €37.9 billion. Owing to strong balance sheet growth, the commission margin declined by 0.04 percentage point and, at 0.36%, was only slightly above its long-term average. This suggests that, overall, German credit institutions were unable to use increased business volumes to bolster commissions business.

The fact that the growth in net commission income seen in the previous year did not persist in 2022 is likely to have been the result of opposing dynamics in the various segments making up commissions business. Overall, German

44 See Deutsche Bundesbank (2023d), pp. 56 f.
45 See Deutsche Bundesbank (2023d), pp. 55 f.
46 See Deutsche Bundesbank (2023d), p. 58.

Credit institutions' net commission income*

€ billion



* Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

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credit institutions derived most benefit out of lending, card business and payment activities. By contrast, securities and safe custody business with customers, which had still been a major driver behind the improvement in net commission income in 2021, was a notable area of deterioration, whilst issuance and advisory business also performed less well.

Heterogeneous developments in net commission income among categories of banks

A comparison across categories of banks this reporting year reveals a heterogeneity not seen the year before. Big banks and regional and other commercial banks recorded the biggest declines in net commission income, at -7.6% and -1.3% respectively. Despite those declines, these two categories of banks accounted for just under half of German credit institutions' total net commission income in 2022.

By contrast, Landesbanken (+15.1%), savings banks (+4.6%) and credit cooperatives (+1.6%) recorded increases in net commission income – in some cases sizeable ones.

Developments in commission margin also heterogeneous across categories of banks

In a comparison between the various categories of banks, the different trajectories of net commission income also carried through to commission margins. Having recorded increases in the previous year, big banks and regional and other commercial banks saw commission margins contract in 2022, with pressure coming in the form of high balance sheet growth and decreased net commission income for both categories. In the case of the big banks, half of the 0.07 percentage point decline in the commission margin was due to the increase in average total assets for the year, while the other half can be put down to their lower net commission income. At regional and other commercial banks, the significant 0.17 percentage point decline in the commission margin was primarily due to the above-average growth in total assets. These developments suggest that both categories of banks experienced a general downturn in commissions business despite the fact that business volumes increased overall. Following the decline in the reporting year, commission margins at big banks and regional and other commercial banks stood at 0.38% and 0.44% respectively, close to the aggregate for all German banks.

By contrast, savings banks and credit cooperatives achieved commission margins that were considerably above average, at 0.61% and 0.54% respectively. This meant savings banks matched their commission margin from the previous year. The positive effect stemming from the rise in net commission income served to offset the dampening effect of the increase in average total assets for the year. It therefore appears that savings banks primarily increased their net commission income in 2022 through higher business volumes. By contrast, credit cooperatives were evidently unable to harness the expansion in business volumes to strengthen commissions business. Here, the commission margin fell slightly by 0.01 percentage point, as the dampening effect of the increase in total assets outweighed the positive impact from the increase in net commission income.

Net trading income almost doubled, making it the second main driver of the increase in total operating income

In 2022, the net result from the trading portfolio was the second most important growth factor for operating income after net interest income. The €4.8 billion increase in net trading income contributed around one-third to the total growth in operating income. Furthermore, the net result from the trading portfolio almost doubled compared with the previous year, reaching €9.8 billion; this took its share of operating income from just under 4% in 2021 to just under 7% in the reporting year.

As in previous years, the trading result remained a key source of revenue in the reporting year, particularly for big banks, regional banks and other commercial banks as well as Landesbanken. All three categories of banks achieved significantly higher net trading income. Compared with 2021, big banks more than doubled their trading result to €4.1 billion and generated just over 40% of the overall trading result in the reporting year. Regional banks and other commercial banks increased their trading result by just over 80% on the year to €2.7 billion and generated just under 30% of the overall trading result. This improvement is likely to be partly due to one institution's mergers with foreign business units. Landesbanken, too, almost doubled their trading result compared with the previous year, contributing just under 20% to the overall trading result with their €1.7 billion.

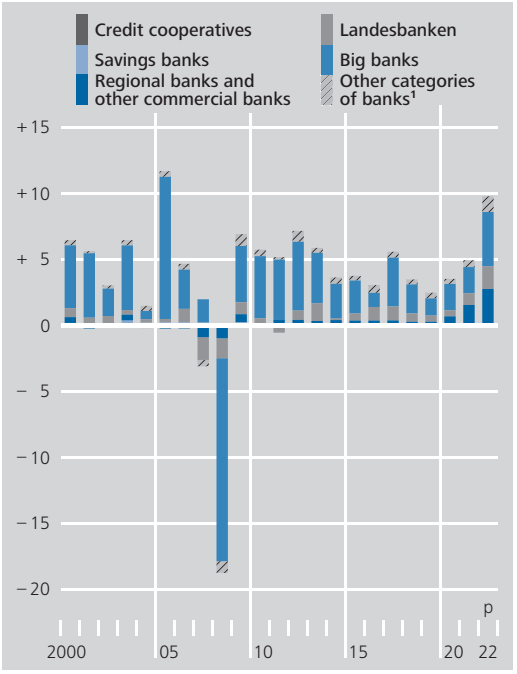
All in all, the improvement in the trading result was mainly due to valuation gains on derivatives, the sale of hedging instruments and the provision of capital market financing. Amid the altered interest rate environment and the macroeconomic uncertainty caused by geopolitical tensions, customers exhibited increased demand. Currency and commodities transactions also contributed to the increase.

Other operating result significantly improved on the year

The other operating result[47] increased in the reporting year by just under 58% to €1.8 billion. However, it had no bearing on overall operating income or the rise in the latter in 2022.

Credit institutions' trading result*

€ billion



***** Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

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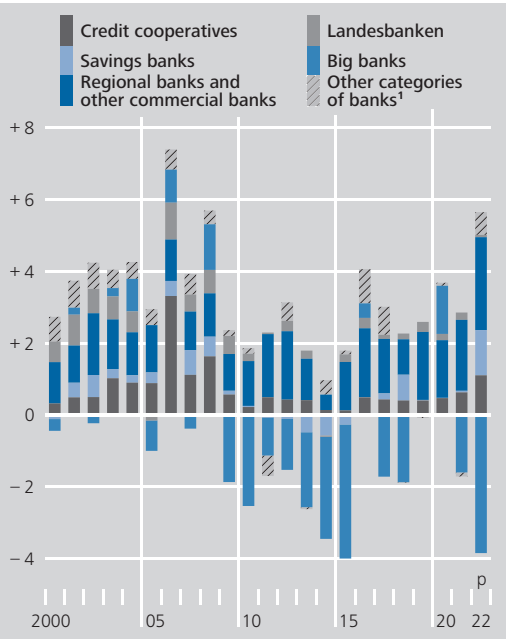
The increase in the other operating result was primarily driven by savings banks and credit cooperatives, as well as regional and other commercial banks. In particular, they dissolved provisions that had been set aside in previous years for restructuring purposes and for legal and litigation risks, for example.

The overall increase in the other operating result was dampened by the big banks. A significant expansion of other operating expenses resulted in a substantial reduction in their other operating result. This was mainly attributable to spending arising from the marking-up of post-employment benefit obligations.

47 Summary item used to record income and charges from operating business that have no connection to net interest income, net commission income or the trading result. It includes leasing expenses and income, the gross result for transactions in goods and subsidiary transactions, depreciation of assets leased, other operating charges and income, and other taxes as well as withdrawals from and transfers to the fund required by the building and loan association rules (only for building and loan associations).

Credit institutions' other operating result*

€ billion



* Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

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Net valuation charges

Sharp rise in net valuation charges offset a large part of the improvement in operating income and considerably slowed net profit growth for the year

German credit institutions' net valuation charges[48] increased significantly in 2022 and thus had a strong negative impact on the aggregate profit for the financial year before tax. Following an increase of €12.6 billion, net valuation charges in the reporting year stood at €16.2 billion – four-and-a-half times the previous year's level. This figure exceeded both the long-term average (€13.6 billion) and the level recorded in 2020 (€13.3 billion), when credit risk provisioning increased significantly due to the effects of the coronavirus pandemic. The increase in net valuation charges offset the improvement in operating income in 2022 by around 85%.

This steep increase was chiefly attributable to high depreciation of and value adjustments to loans and advances, and provisions for contingent liabilities and for commitments. At €18.3 billion in the reporting year, they stood at just over two-and-a-half times the previous year's figure, putting them above the long-term average of €17.4 billion. At the same time, receipts from value readjustments to loans and advances as well as provisions for contingent liabilities and for commitments declined by just under 40% relative to 2021, to €2.1 billion.

Savings banks and credit cooperatives accounted for bulk of rise in net valuation charges

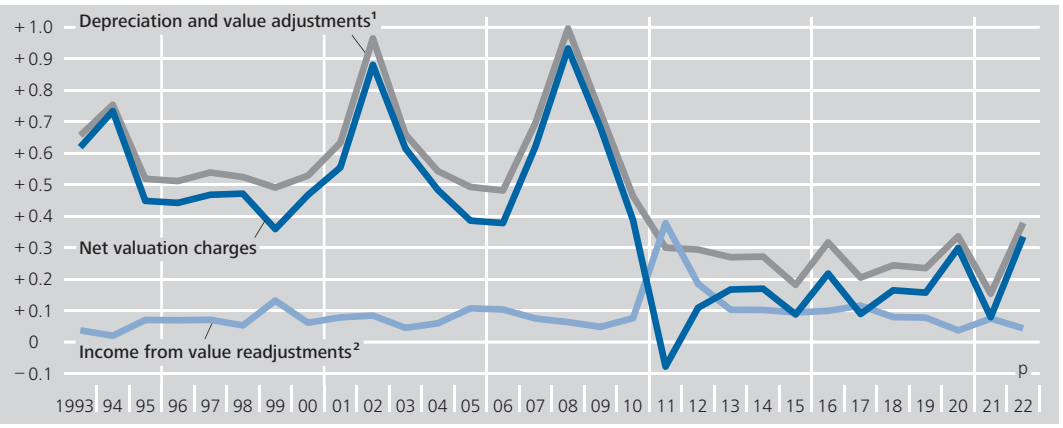
Savings banks and credit cooperatives accounted for the bulk of the rise in net valuation charges in 2022. Together, they were responsible for almost 70% of the total increase. The net valuation charges of savings banks (€4.7 billion) and credit cooperatives (€4.1 billion) were also well above their long-term averages (€2.3 billion and €1.7 billion respectively). In the reporting year, these categories of banks presented a fairly uniform picture: more than 80% of savings banks and almost 90% of credit cooperatives recorded increases in their net valuation charges compared with 2021. In particular, large price losses stemming from the increased interest rate level and the resultant write-downs on securities in the liquidity reserve had a negative impact, although in some cases available reserves and interest rate hedges were used to compensate for this. In addition, securities in the liquidity reserve were also reclassified from current to fixed assets. Although this partly avoided direct effects on income, it also resulted in the accumulation of hidden losses.[49]

On the other hand, heightened risk provisioning in lending business was less important for savings banks and credit cooperatives overall, in spite of the challenging macroeconomic environment.

48 Net valuation charges comprise the effects of value adjustments, write-ups and write-downs on accounts receivable and securities in the liquidity reserve. In addition, income and charges in connection with transfers from and to loan-loss provisions are taken into account, as are transfers and releases relating to undisclosed reserves pursuant to Section 340f of the German Commercial Code. However, due to the cross-offsetting option permissible under the Commercial Code, the annual accounts do not show the extent to which undisclosed reserves have been formed or dissolved.

49 For more information, see the box on pp. 105 f.

Net valuation charges overall and by component*



***** Relative to the annual average lending portfolio. **1** In respect of loans and advances, and provisions for contingent liabilities and for commitments. **2** In respect of loans and advances, and provisions for contingent liabilities and for commitments.

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In contrast to savings banks and credit cooperatives, the big banks barely contributed to the increase in net valuation charges in 2022 on the whole. Unlike at the beginning of the coronavirus pandemic, they hardly set up any new risk provisions on balance during the reporting year, just as in the previous year. However, this was mainly due to the fact that the net valuation result at one institution in this banking category almost fully offset the net valuation charges of another institution in this group.

The situation at regional and other commercial banks also painted a mixed picture. While just over 60% of institutions in this category of banks increased their net valuation charges on the year, the remaining institutions recorded lower net valuation charges than in the previous year. On aggregate, the net valuation charges of regional and other commercial banks more than doubled in 2022, to €3.7 billion.

Administrative spending

General administrative spending[50] climbed by a moderate €3.0 billion (+3.3%) in 2022. With regard to the profit for the financial year before tax in the reporting year, the increase was generally less significant than it had been a year earlier. However, together with the substantial increase in net valuation charges, the increase in administrative expenditure more than offset the improvement in operating income, resulting in a negative net effect on profit for the financial year before tax.

Moderate rise in administrative expenditure coupled with increase in net valuation charges more than offset improvement in operating income

As in 2021, higher staff costs and other administrative spending contributed equally to the overall increase in administrative expenditure in the reporting year. As a result of almost equal increases of €1.7 billion and €1.3 billion respectively, the shares of total administrative spending accounted for by staff costs and other administrative expenditure remained stable, at just under 51% and 49% respectively.[51] The increase in staff costs was primarily due to one-off inflation compensation payments and inflation-related adjustments to pension obligations. Meanwhile, other admin-

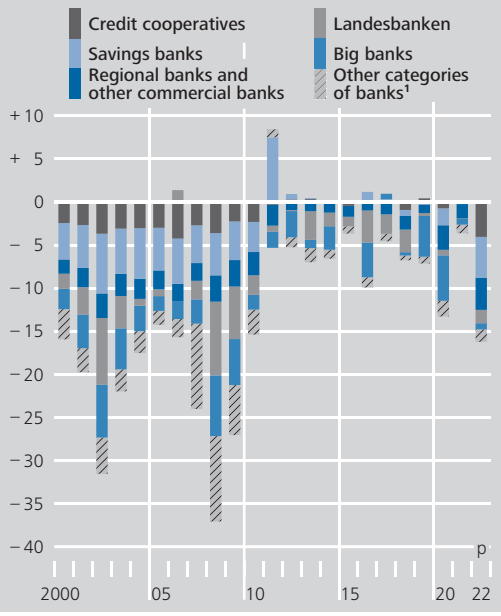
Higher staff costs and higher other administrative spending contributed equally to overall increase in general administrative spending

50 General administrative spending encompasses staff costs and other administrative spending. Other administrative spending includes, for example, investment in product development, information technology, and digitalisation. In addition, other administrative spending also comprises depreciation of and value adjustments to tangible and intangible assets.

51 Comparing the categories of banks under analysis, the share of staff costs at savings banks (around 61%) and at credit cooperatives (around 56%) remained above average in the reporting year owing to their heavily staff-based business model with many branches nationwide. At big banks, by contrast, staff costs accounted for a share of around 45%.

Credit institutions' risk provisioning (result from the valuation of assets)*

€ billion

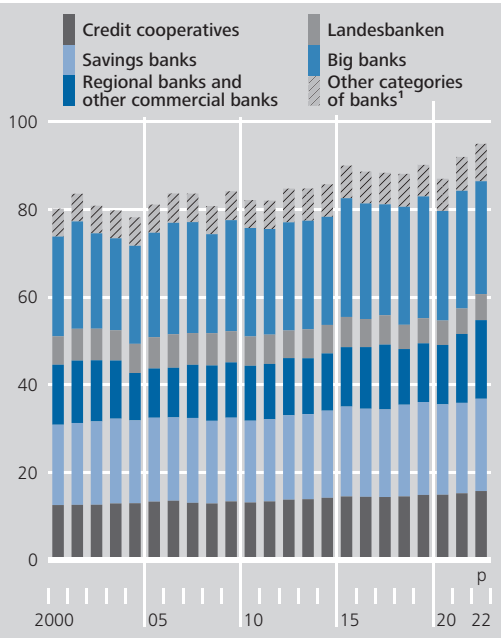


* Net valuation charges excluding investment in tangible and financial fixed assets. Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

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Credit institutions' administrative spending*

€ billion



* Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

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istrative expenditure climbed mainly on account of IT costs and investment in digitalisation and cyber and information security. In addition, expenditure in connection with the European bank levy and the statutory deposit guarantee fund also increased.

Increased administrative burden observable in almost all bank categories

Administrative expenditure increased in all bank categories[52] except that of the big banks. Regional and other commercial banks, in particular, contributed 14.1% to the overall rise by expanding their administrative expenditure.[53] Savings banks and credit cooperatives also recorded increases in their administrative expenditure, of 2.1% and 3.4% respectively. Only the administrative spending of the big banks fell, by 4.1%.

Balance in the other and extraordinary account

The balance in the other and extraordinary account improved significantly and was ultimately the main factor behind the slight increase in profit for the financial year before tax

The balance in the other and extraordinary account[54] was ultimately the main factor behind the slight overall increase in the profit for the financial year before tax. Excluding the increase of just over 30% in this balance (in absolute terms: €1.1 billion), profit for the financial year before tax would have fallen slightly in the reporting year.[55]

52 Regional banks and other commercial banks, branches of foreign banks, Landesbanken, savings banks, credit cooperatives, mortgage banks, building and loan associations as well as banks with special, development and other central support tasks.
53 At regional and other commercial banks, however, mergers between an institution and foreign business units are also likely to have played a major role in the overall increase.
54 The other and extraordinary account includes write-downs of and value adjustments to participating interests, shares in affiliated enterprises and securities treated as fixed assets, income from value readjustments to participating interests, shares in affiliated enterprises and securities treated as fixed assets, charges and income from loss transfers, extraordinary charges and income as well as profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement.
55 The negative impact on net profit for the financial year caused by the sharp rise in net valuation charges and the increase in administrative expenses was stronger than the positive income effects resulting from the overall improvement in operating income.

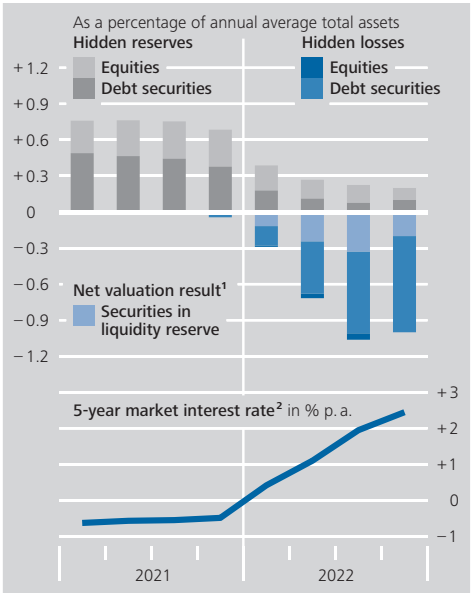
Earnings effects of the interest rate reversal on securities held in German credit institutions' banking books

In 2022, the significant rise in the interest rate level led to price losses, especially for fixed-income securities.[1] However, equities also suffered interest-related price losses, as a higher interest rate level can, inter alia, have a negative impact on enterprises' valuations.

According to the German Commercial Code (*Handelsgesetzbuch;* HGB), the method used to value securities in credit institutions' financial statements depends on the purpose the securities are intended to serve. In the banking book,[2] securities are valued according to the lower of cost or market principle. This rules out recognising a value higher than the book value reported in previous financial statements. If the market value of a security is higher than the previously established book value, hidden reserves build up in the amount of the positive difference between the current market value and the book value. If, by contrast, the market value of a security falls below its previously reported book value, two different approaches must be considered. Depending on the purpose the securities are intended to serve, securities in the banking book are classified either as current assets or fixed assets.[3] Current assets are subject to the strict lower of cost or market principle, which always requires a write-down to the lower market value, even if it is assumed that the market value will only temporarily be lower than the book value. Fixed assets are subject to the moderate lower of cost or market principle. If the reduction in market value is not regarded as permanent, any depreciation requirement may be dispensed with. Such unrealised losses then accumulate as hidden losses.[4] Neither hidden reserves nor hidden losses are visible in the balance sheet or the profit and loss account.

As a result of the valuation approaches described above, in 2022 a major part of the price losses for securities in the banking

Key metrics for valuation of securities in the banking book*



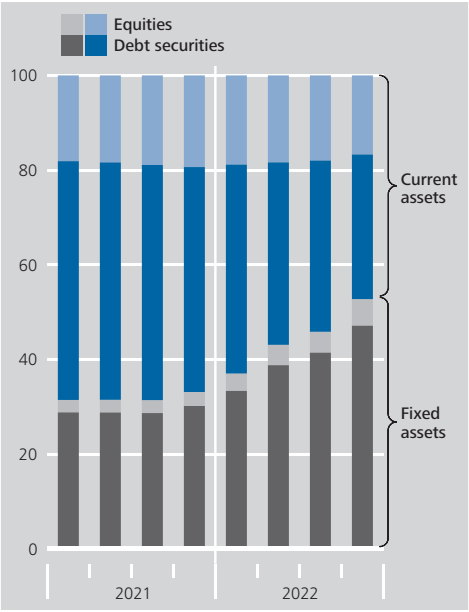
* Institutions preparing their financial statements according to the German Commercial Code (HGB accounting standard). **1** Negative values represent write-downs. **2** The market interest rate corresponds to euro area yields according to ECB yield curves at the end of each quarter for AAA-rated debt securities.

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1 Interest rate increases lead to price losses for fixed-rate securities already in circulation as the latter can only match the resultant higher market return if their prices fall. In 2022, price losses were reflected in a 12.8% decline in the German bond index (REX), for example.
2 The banking book comprises all on-balance sheet and off-balance sheet financial instruments outside the trading portfolio, including, for example, central bank balances, loans and securities (also securities in the liquidity reserve) assigned to the banking book. See Institute of Public Auditors in Germany (2012), subsection 14.
3 If the intention is to hold the securities on a permanent basis, they may be held as fixed assets. However, during the audit of the annual accounts, for example, evidence of the intention to hold these securities on a permanent basis and that such securities are suitable for this purpose must be provided.
4 Due to the pull-to-par effect, such hidden losses dissipate again at the end of the security's term. The pull-to-par effect is the gradual convergence of the market value of a fixed-interest security to its redemption value (par value) toward the end of the term.

Allocation of securities in the banking book to fixed and current assets*

%, end of quarter figures



* Shares of securities in the banking book of German HGB institutions that are valued according to the strict lower of cost or market principle for current assets and according to the moderate lower of cost or market principle for fixed assets.

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book – which were caused mainly by the rise in the interest rate level – were not visible in the annual results of German credit institutions that prepare their financial statements according to the HGB accounting standard. Overall, price losses in 2022 amounted to around 1.5% of these institutions' average total assets for the year. Around one-third (0.5% of 1.5%) of price losses were initially offset through the dissolution of hidden reserves, which decreased from 0.7% to 0.2% of the average total assets for the year. This development can be traced over the quarters in the chart on p. 105.

However, around one-half of the price losses in 2022 were reflected in an increase in hidden losses (0.8% of 1.5%). Only a little under one-sixth (0.2% of 1.5%) of the price losses were recognised in the income statement as write-downs of securities classified as current assets.

The need for write-downs may vary between individual institutions, partly on account of different securities holdings,[5] but also in view of the purpose that the securities are intended to serve and the resulting valuation method used. The adjacent chart shows changes in the shares of securities classified as current assets or fixed assets in the banking books of German credit institutions on aggregate. Whilst only around one in three securities had been allocated to fixed assets until 2021, this share gradually increased to 53% in 2022. Shifts in these shares are also visible at the level of individual institutions. Whilst around 70% of institutions still held their securities fully in current assets at the end of 2021, by the end of 2022 this figure was only 23%.

There are two general explanations for the shifts in these shares in 2022, with total holdings remaining virtually unchanged. First, the share of fixed assets in the banking book may have increased due to the sale or redemption (at maturity) of securities classified as current assets if the proceeds were subsequently reinvested in securities classified as fixed assets. Second, some securities that had not yet reached maturity were reclassified from current assets to fixed assets.[6] This reclassification enabled the reversal of write-downs recognised in the income statement since the last assessment of the book value and increased hidden losses to the same extent. Some of the hidden losses incurred in 2022 are therefore also attributable to reclassified securities.

5 The significance of securities in the banking book varies between the balance sheets of German credit institutions. While securities in the banking book at the beginning of 2022 accounted for around one-fifth of the aggregate bank balance sheet, at the level of individual institutions they made up more than one-third of the balance sheet at every tenth institution.

6 A reallocation of securities from current assets to fixed assets is permissible provided that it is based on a decision of the management board and that the intention to hold securities permanently can be plausibly demonstrated.

Breakdown of extraordinary result

€ million

Item	2020	2021	2022p
Other and extraordinary result	– 5,822	– 3,547	– 2,445
Income (total)	4,247	5,720	6,155
Value readjustments to participating interests, shares in affiliated enterprises, and securities treated as fixed assets	1,350	2,144	5,182
from loss transfers	590	1,210	33
Extraordinary income	2,307	2,366	940
Charges (total)	– 10,069	– 9,267	– 8,600
Depreciation of and value adjustments to participating interests, shares in affiliated enterprises, and securities treated as fixed assets	– 2,839	– 1,494	– 3,394
from loss transfers	– 328	– 318	– 568
Extraordinary charges	– 3,972	– 3,585	– 981
Profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement	– 2,930	– 3,870	– 3,657

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The increase in the balance in the other and extraordinary account in 2022 was again influenced to a large extent by the big banks. Higher valuation of holdings at one institution resulted in a substantial rise in the balance in big banks' other and extraordinary account. Furthermore, the expenditure in this account fell markedly compared with 2021. The €5.0 billion increase resulting from both developments led to the big banks reporting net revenue of €3.9 billion in the other and extraordinary account in 2022, having recorded net charges the previous year. In addition, the sharp rise seen by the big banks more than offset, in particular, the deterioration in the balances in the other and extraordinary account of savings banks and credit cooperatives as well as of mortgage banks. In the case of savings banks and credit cooperatives, the balances in the other and extraordinary account fell by €1.6 billion and €0.7 billion respectively compared with the previous year. In both cases, the main reason for this was significantly increased depreciation of and value adjustments to participating interests, shares in affiliated enterprises and securities treated as fixed assets, which are likely to have also been related to the interest rate reversal. By contrast, the €1.3 billion decline in mortgage banks' balance was primarily due to decreased income resulting from the assumption of losses.

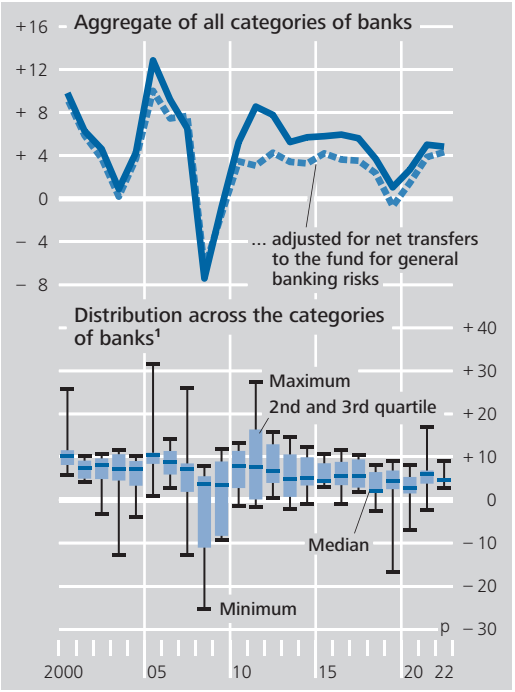
Profitability and cost efficiency

Return on equity

Decline in return on equity indicates reduced profitability

Overall, the return on equity (profit for the financial year before tax in relation to the average balance sheet equity for the year) declined by 0.18 percentage point in 2022 to 4.85%. Compared with the previous year, this increased the difference to the long-term aver-

Credit institutions' return on equity*



* Profit or loss for the financial year before tax as a percentage of average equity for the year. **1** Interpretation guide: The minimum (maximum) represents the respective category of bank with the smallest (largest) value.

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age.[56] This indicates a slight deterioration in profitability for several reasons. First, the aggregate profit for the financial year before tax increased only marginally. Second, the improvement in net profit for the financial year was ultimately driven by the increase in the balance in the other and extraordinary account, which was the result of the positive balance of the big banks. Third, average balance sheet equity for the year rose steeply. This had a negative impact on the return on equity, which was more than three-and-a-half times as great as the positive effect of the slight increase in profit for the financial year.

Decreased return on equity in most bank categories, albeit to varying degrees

A general deterioration in profitability is also suggested by the fact that aside from the big banks, the Landesbanken and the building and loan associations, all other categories of banks[57] showed a lower return on equity in 2022 than in the previous year. Relatively large declines were observed, first and foremost, among mortgage banks (-10.92 percentage points)[58] and credit cooperatives (-3.78 percentage points). However, the return on equity of savings banks also fell by 1.50 percentage points.

In each case, the decline was primarily attributable to the profit for the financial year before tax. Among mortgage banks, the profit for the financial year before tax declined relatively significantly at a low level owing to the steep decline in the balance in the other and extraordinary account. In the case of savings banks and credit cooperatives, by contrast, the sharp rise in net valuation charges was chiefly responsible for the decreased profit for the financial year before tax. On balance, the return on equity of savings banks and credit cooperatives in 2022 amounted to 4.77% and 4.59% respectively, which was just below the aggregate level across all German banks. In the previous year, these two categories of banks still recorded a significantly above-average return on equity.

By contrast, the big banks recorded the largest increase in return on equity among all the categories of banks considered. Having still been negative, at -2.26%, due to a net loss for the financial year in 2021, the return on equity of the big banks rose very significantly in the reporting year by 11.38 percentage points to 9.12%. In 2022, the big banks thus recorded by far the highest return on equity out of all the categories of banks under review. The steep increase was almost exclusively driven by the massive improvement in the profit for the financial year before tax, which was mainly due to the sharp rise in the balance in the other and extraordinary account.

56 In 2021, the return on equity had risen significantly, and, at 5.1%, had almost reached the long-term average of 5.2%.
57 Regional banks and other commercial banks, branches of foreign banks, savings banks, credit cooperatives, mortgage banks as well as banks with special, development and other central support tasks.
58 In 2021, the main reason for the high return on equity of mortgage banks was an exceptionally high positive balance in the other and extraordinary account.

Return on equity of individual categories of banks*

%

Category of banks	2018		2019		2020		2021		2022p	
All categories of banks	3.73	(2.41)	1.07	(– 0.41)	2.71	(1.12)	5.03	(3.22)	4.85	(3.88)
Commercial banks	2.07	(1.54)	– 7.70	(– 8.99)	– 1.56	(– 2.95)	2.65	(1.41)	6.09	(6.01)
of which:										
Big banks	1.14	(1.24)	– 16.63	(– 17.58)	– 7.08	(– 8.22)	– 2.26	(– 2.13)	9.12	(12.29)
Regional banks and other commercial banks	3.30	(1.89)	4.44	(2.69)	4.10	(2.46)	6.00	(3.81)	4.32	(2.30)
Landesbanken	– 2.45	(– 3.89)	2.03	(1.55)	1.29	(0.84)	4.02	(2.26)	4.77	(2.72)
Savings banks	7.19	(4.83)	6.86	(4.83)	5.36	(3.36)	6.27	(4.22)	4.77	(2.84)
Credit cooperatives	8.19	(5.50)	9.17	(6.57)	7.31	(4.98)	8.37	(6.19)	4.59	(3.46)
Mortgage banks	2.09	(0.88)	5.31	(3.75)	8.06	(1.40)	16.91	(5.73)	5.99	(3.76)
Building and loan associations	2.21	(1.02)	3.83	(2.95)	1.66	(0.86)	1.41	(0.50)	2.79	(1.65)

* Profit or loss for the financial year before tax (in brackets: after tax) as a percentage of annual average equity as shown in the balance sheet (including the fund for general banking risks, but excluding participation rights capital).

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Return on assets

Overall return on assets also decreased

In general, the return on assets (the ratio of profit for the financial year before tax to average total assets for the year) moved in parallel with the return on equity. The exceptionally high growth in the average aggregate total assets for the year was the main reason for a year-on-year decline of 0.03 percentage point in the return on assets. By contrast, the small increase in the profit for the financial year before tax had no significant effect. Contrary to the return on equity, the return on assets in 2022, at 0.26%, remained above the long-term average of 0.22% in spite of the decline.

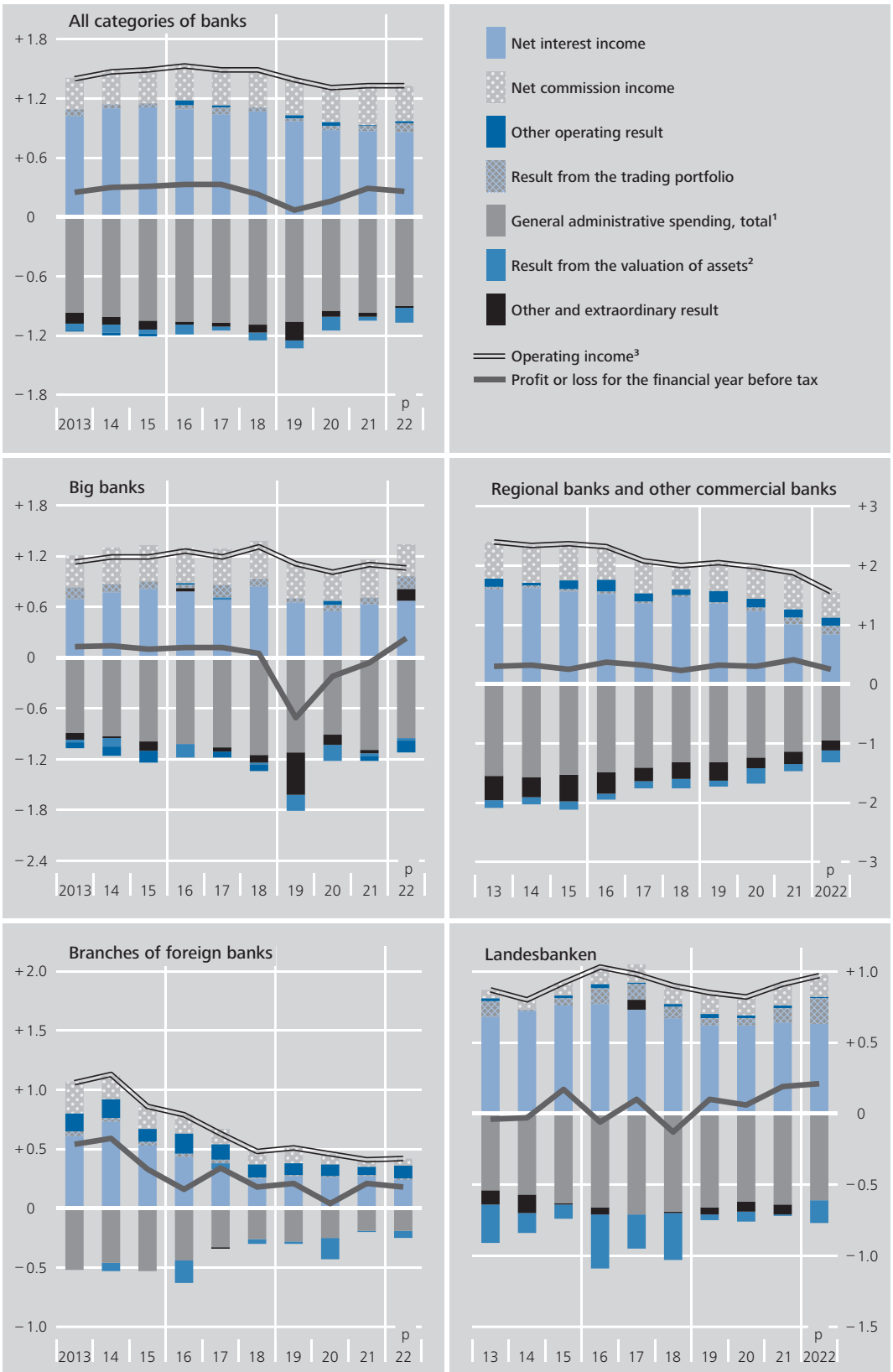
The picture is also similar to that of the return on equity with regard to the categories of banks. Here, too, only the big banks (+0.29 percentage point), the building and loan associations (+0.06 percentage point) and the Landesbanken (+0.02 percentage point) recorded increases. The big banks' return on assets improved to 0.23% after having been still in slightly negative territory in 2021; this improvement was, in particular, due to the steep rise in profit for the financial year.

On the other hand, mortgage banks and credit cooperatives as well as regional and other commercial banks and savings banks registered particularly sharp declines in their return on assets. In the case of mortgage banks, the strong decrease in profit for the financial year was almost solely responsible for the steep drop of 0.49 percentage point in return on assets. By contrast, the 0.16 percentage point decline in return on assets at regional and other commercial banks was primarily due to the sharp increase in total assets.

The savings banks' and credit cooperatives' return on assets also fell significantly, by 0.13 percentage point and 0.31 percentage point respectively. In both cases, the main driver of this development was the steep decline in profit for

Return on assets and its components by category of banks*

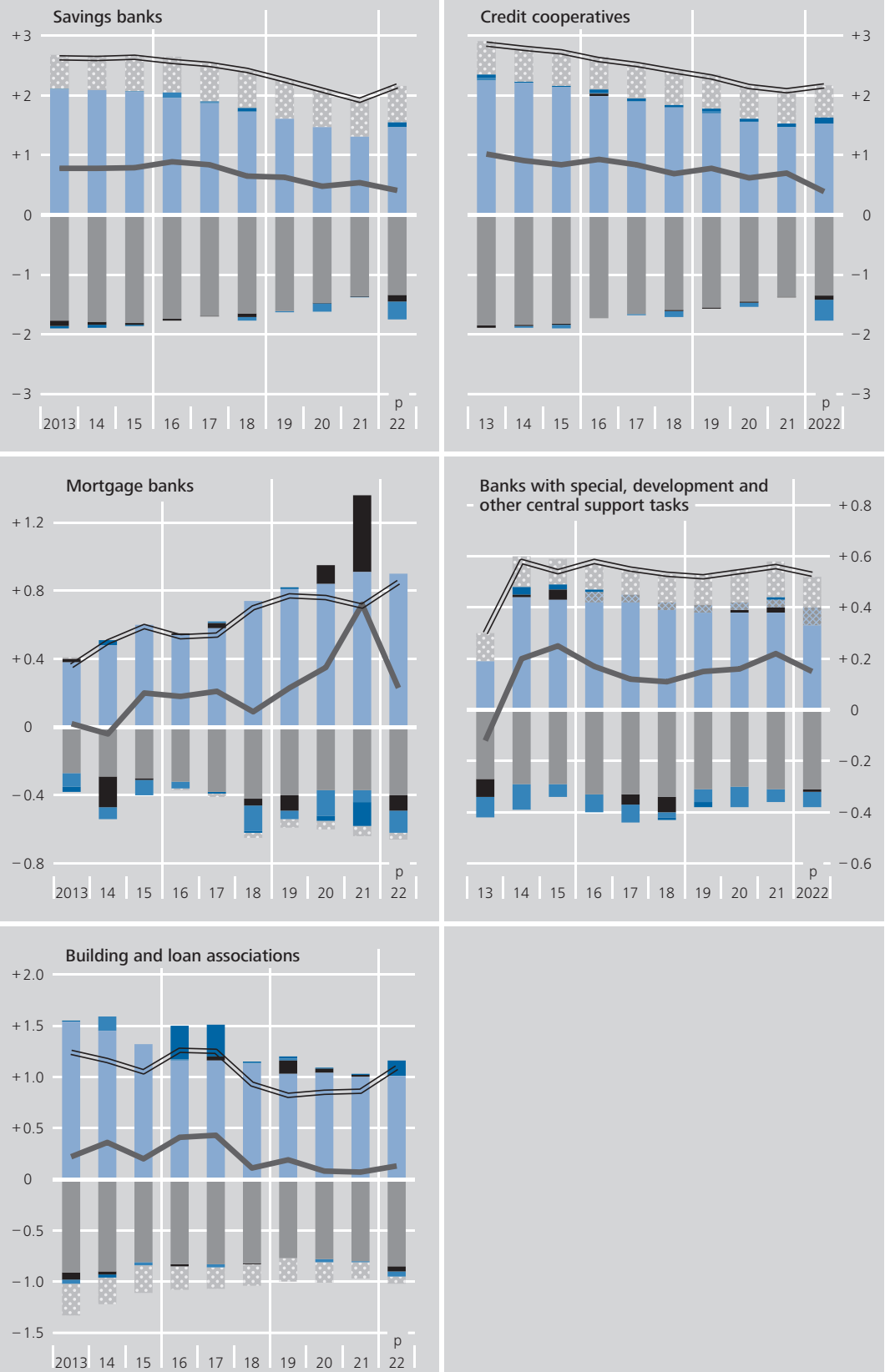
As a percentage of average total assets for the year; the charts below use different scales



***** Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Including depreciation of and value adjustments to tangible and intangible assets. **2** Net valuation charges excluding investment in tangible and financial fixed assets.

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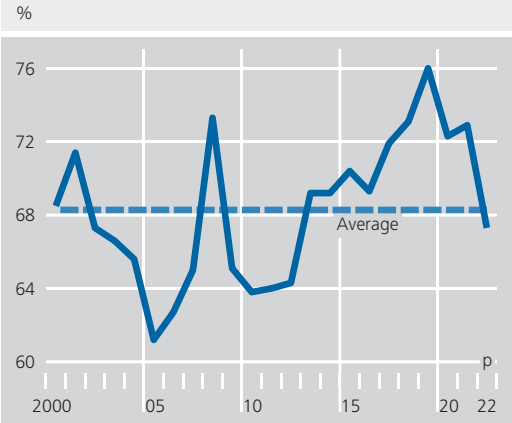
As a percentage of average total assets for the year; the charts below use different scales



3 Sum of net interest income, net commission income, net result from the trading portfolio, and other operating result.

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Ratio of credit institutions' administrative spending to operating income*



* Sum of net interest income, net commission income, net result from the trading portfolio, and other operating result.

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Cost/income ratios by category of banks

%

Category of banks	General administrative spending in relation to operating income[1]		
	2020	2021	2022p
All categories of banks	72.3	72.9	67.3
Commercial banks	77.7	79.9	74.6
Big banks	90.3	99.2	89.8
Regional banks and other commercial banks	62.4	60.6	60.5
Branches of foreign banks	53.2	46.2	44.8
Landesbanken	75.9	70.6	62.6
Savings banks	70.1	70.7	62.0
Credit cooperatives	67.2	65.9	62.5
Mortgage banks	49.0	52.5	47.3
Building and loan associations	91.4	93.6	78.2
Banks with special, development and other central support tasks	56.2	55.5	59.4

1 Sum of net interest income, net commission income, result from the trading portfolio and other operating result.

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the financial year before tax. At 0.41% and 0.39% respectively, the return on assets of savings banks and credit cooperatives was nevertheless significantly above the level of the aggregate of all German credit institutions.

Cost efficiency

Significant overall improvement in cost efficiency compared with previous year

Measured by the cost/income ratio in its broad definition (administrative spending relative to operating income), German credit institutions' cost efficiency improved substantially in 2022. The cost/income ratio fell to 67.3% overall in the reporting year (previous year: 72.9%) and was thus slightly below the long-term average of 68.2% for the first time since 2012. The increase in administrative expenditure in 2022 was, again, not insignificant. However, operating income rose almost five times as sharply, meaning that the increased administrative expenditure made less of an impact than in the previous year.

The improvement was particularly marked for the big banks, which in 2021 showed the largest cost/income ratio deterioration of all the categories of banks considered. The decline of 9.4 percentage points in the reporting year was due to both higher operating income and lower administrative expenses. Nevertheless, at 89.8%, the cost/income ratio of the big banks was still significantly higher than for the other categories of banks considered.[59] Furthermore, within the category of big banks, developments at the level of the individual institutions varied greatly.

By contrast, the picture was much more uniform among the savings banks, almost all of which reported declines in their cost/income ratios. Overall too, savings banks therefore recorded a significant decline in their cost/income ratio, of 8.7 percentage points. Moreover, at 62.0%, this was below the level of the aggregate across all German banks and below the long-term average for savings banks. This improvement was chiefly due to the rise in their operating income.

59 Regional banks and other commercial banks, branches of foreign banks, Landesbanken, savings banks, credit cooperatives, mortgage banks, building and loan associations as well as banks with special, development and other central support tasks.

Compared with savings banks, the decline in the cost/income ratio of credit cooperatives was rather moderate, at 3.4 percentage points. Operating income in this area rose relatively weakly in relation to administrative expenditure. Moreover, developments at the level of the individual institutions were somewhat less uniform than at the savings banks, with just over two-thirds of credit cooperatives recording a decline in their cost/income ratio. Overall, at 62.5%, the cost/income ratio of credit cooperatives was only slightly higher than that of savings banks.

Outlook

Business environment remains challenging for German credit institutions

In the current year, high inflation rates, the tightening of monetary policy and persistently elevated uncertainty about macroeconomic developments will continue to shape German credit institutions' business environment. Germany's economic output stagnated in the second quarter of 2023 after having contracted in the winter half-year (October-March). Higher financing costs, in particular, have recently dampened domestic investment, which has weighed on industry and the construction sector above all.[60]

Eurosystem continues to tighten monetary policy

Against the backdrop of persistently high inflation rates, the Eurosystem has continued to tighten monetary policy. In May 2023, the Governing Council of the ECB decided to reduce the asset purchase programme (APP) portfolio at a moderate pace. Furthermore, since July 2023, no principal payments from maturing securities under the APP have been reinvested. In addition, the Eurosystem continued to raise key interest rates, but reduced the size of each increase from 50 basis points to 25 basis points in May 2023.[61]

Uncertain earnings outlook for German credit institutions

The extent to which the rising interest rate level will bolster the profitability of German banks in the medium term following a short-term strain remains to be seen. In a persistently difficult economic environment, risks that have a negative impact on profitability are on the rise. The need for further impairments on fixed-income securities is expected to decline due to smaller interest rate steps being made by the Eurosystem and reduced interest rate expectations on the part of the markets. However, it is uncertain whether the recently observed improvement in net interest income will continue. In particular, the increase in the interest margin in outstanding lending and deposit business[62] of German credit institutions in 2022 is likely to prove unsustainable: rising deposit rates here are likely to be reflected on the expenditure side, should the competition for deposits and therefore the pass-through of interest rates into deposit business increase. In addition, both demand-side and supply-side factors are putting increasing pressure on new lending, which could also bring down the interest margin in outstanding lending through a reduced margin in new business. Weak overall economic growth could additionally lead to an increase in credit defaults.

Added challenges of digitalisation, climate action and cyber risks

The profitability of German institutions will probably be more greatly affected by structural changes such as digitalisation and climate considerations in future. Recently, cyber and information risks have also posed an increasing challenge to German credit institutions; these are likely to lead to growing investment needs and therefore higher administrative expenditure.

60 See Deutsche Bundesbank (2023e), p. 8.
61 See Deutsche Bundesbank (2023f), p. 8.
62 See Deutsche Bundesbank (2023g), p. 37.

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The tables accompanying this article are printed on pp. 115 ff.

Major components of credit institutions' profit and loss accounts by category of banks*

As a percentage of average total assets for the year°

Financial year	All categories of banks	Commercial banks			Landesbanken[1]	Savings banks[1]	Credit cooperatives	Mortgage banks[1]	Building and loan associations	Banks with special, development and other central support tasks
		Total	of which: Big banks[1]	of which: Regional banks and other commercial banks[1]						
	Interest received[2]									
2016	2.17	1.58	1.30	2.37	2.81	2.64	2.55	4.01	2.89	2.15
2017	2.00	1.54	1.26	2.25	2.74	2.42	2.33	3.35	2.63	1.78
2018	2.07	1.82	1.62	2.45	3.10	2.17	2.13	2.99	2.42	1.67
2019	1.91	1.58	1.41	2.09	3.23	2.03	2.00	2.80	2.34	1.52
2020	1.53	1.13	0.92	1.74	2.79	1.78	1.77	2.49	2.11	1.15
2021	1.39	0.98	0.90	1.21	2.93	1.58	1.63	2.35	1.92	0.93
2022	1.57	1.26	1.38	1.17	2.94	1.67	1.68	2.39	1.74	1.36
	Interest paid									
2016	1.08	0.61	0.52	0.85	2.04	0.68	0.55	3.47	1.73	1.73
2017	0.97	0.66	0.58	0.89	2.02	0.56	0.43	2.78	1.47	1.36
2018	0.99	0.82	0.77	0.98	2.43	0.44	0.33	2.25	1.29	1.28
2019	0.94	0.74	0.76	0.73	2.61	0.42	0.30	1.99	1.32	1.13
2020	0.65	0.40	0.37	0.52	2.17	0.30	0.21	1.65	1.07	0.77
2021	0.52	0.23	0.27	0.20	2.28	0.27	0.16	1.43	0.91	0.55
2022	0.71	0.54	0.71	0.33	2.31	0.21	0.15	1.49	0.73	1.03
	Excess of interest received over interest paid = net interest income (interest margin)									
2016	1.09	0.97	0.78	1.52	0.77	1.96	1.99	0.54	1.16	0.42
2017	1.04	0.87	0.68	1.36	0.73	1.87	1.90	0.58	1.16	0.42
2018	1.07	1.00	0.84	1.47	0.67	1.73	1.80	0.74	1.13	0.39
2019	0.97	0.84	0.65	1.36	0.62	1.61	1.70	0.81	1.03	0.38
2020	0.88	0.73	0.55	1.23	0.62	1.47	1.56	0.84	1.04	0.38
2021	0.87	0.75	0.63	1.01	0.64	1.31	1.47	0.91	1.00	0.38
2022	0.86	0.72	0.67	0.84	0.63	1.47	1.53	0.90	1.01	0.33
	Excess of commissions received over commissions paid = net commission income (commission margin)									
2016	0.36	0.45	0.42	0.56	0.12	0.60	0.55	– 0.01	– 0.23	0.10
2017	0.37	0.45	0.43	0.54	0.13	0.64	0.57	– 0.02	– 0.21	0.10
2018	0.36	0.43	0.45	0.40	0.13	0.63	0.57	– 0.03	– 0.21	0.11
2019	0.37	0.42	0.41	0.48	0.14	0.64	0.57	– 0.05	– 0.23	0.12
2020	0.35	0.39	0.34	0.55	0.13	0.62	0.55	– 0.05	– 0.20	0.13
2021	0.40	0.49	0.45	0.61	0.15	0.61	0.55	– 0.06	– 0.16	0.14
2022	0.36	0.39	0.38	0.44	0.16	0.61	0.54	– 0.04	– 0.07	0.12

* The figures for the most recent date should be regarded as provisional in all cases. ° Excluding the total assets of the foreign branches of savings banks; from 2016, excluding the total assets of the foreign branches of mortgage banks; from 2021, excluding the total assets of the foreign branches of banks with special, development and other central support tasks. For footnotes **1** and **2**, see p. 116.

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Major components of credit institutions' profit and loss accounts by category of banks* (cont'd)

As a percentage of average total assets for the year°

Financial year	All categories of banks	Commercial banks			Landesbanken1	Savings banks1	Credit cooperatives	Mortgage banks1	Building and loan associations	Banks with special, development and other central support tasks
		Total	of which: Big banks1	of which: Regional banks and other commercial banks1						
	General administrative spending									
2016	1.06	1.14	1.02	1.49	0.66	1.74	1.73	0.32	0.83	0.33
2017	1.07	1.14	1.06	1.41	0.71	1.69	1.66	0.38	0.83	0.33
2018	1.09	1.17	1.15	1.32	0.69	1.65	1.59	0.42	0.82	0.34
2019	1.06	1.16	1.12	1.32	0.66	1.61	1.55	0.40	0.77	0.31
2020	0.95	0.98	0.91	1.24	0.62	1.47	1.45	0.37	0.78	0.30
2021	0.97	1.07	1.09	1.14	0.64	1.36	1.37	0.37	0.80	0.31
2022	0.90	0.92	0.95	0.95	0.61	1.34	1.35	0.40	0.85	0.31
	Result from the trading portfolio									
2016	0.04	0.04	0.04	0.04	0.11	0.00	0.00	0.00	0.00	0.04
2017	0.07	0.12	0.15	0.03	0.11	0.00	0.00	0.00	0.00	0.03
2018	0.04	0.07	0.09	0.03	0.08	0.00	0.00	0.00	0.00	0.03
2019	0.03	0.04	0.05	0.02	0.05	0.00	0.00	0.00	0.00	0.03
2020	0.04	0.07	0.07	0.06	0.05	0.00	0.00	0.00	0.00	0.03
2021	0.05	0.09	0.08	0.11	0.10	0.00	0.00	0.00	0.00	0.03
2022	0.09	0.14	0.15	0.14	0.18	0.00	0.00	0.00	0.00	0.07
	Operating result before the valuation of assets									
2016	0.47	0.39	0.23	0.83	0.38	0.83	0.87	0.21	0.43	0.25
2017	0.42	0.30	0.13	0.67	0.27	0.83	0.86	0.16	0.42	0.23
2018	0.40	0.31	0.16	0.68	0.21	0.77	0.81	0.28	0.11	0.18
2019	0.33	0.21	– 0.01	0.73	0.18	0.65	0.76	0.38	0.04	0.21
2020	0.36	0.28	0.10	0.75	0.20	0.62	0.71	0.39	0.07	0.23
2021	0.36	0.27	0.01	0.74	0.27	0.56	0.71	0.34	0.05	0.25
2022	0.43	0.31	0.11	0.62	0.36	0.82	0.81	0.45	0.24	0.21
	Result from the valuation of assets									
2016	– 0.10	– 0.14	– 0.16	– 0.10	– 0.38	0.09	0.01	– 0.04	0.01	– 0.07
2017	– 0.04	– 0.02	0.03	– 0.12	– 0.24	0.02	– 0.02	0.01	– 0.03	– 0.07
2018	– 0.08	– 0.06	– 0.02	– 0.16	– 0.33	– 0.06	– 0.10	– 0.15	0.01	– 0.02
2019	– 0.08	– 0.16	– 0.19	– 0.10	– 0.04	– 0.02	0.04	– 0.05	0.02	– 0.05
2020	– 0.14	– 0.21	– 0.19	– 0.26	– 0.07	– 0.14	– 0.07	– 0.15	– 0.03	– 0.08
2021	– 0.04	– 0.06	– 0.03	– 0.12	– 0.01	– 0.01	0.00	– 0.07	– 0.01	– 0.05
2022	– 0.15	– 0.09	– 0.03	– 0.20	– 0.16	– 0.30	– 0.35	– 0.13	– 0.05	– 0.06

For footnotes * and °, see p. 115. **1** From 2018, DB Privat- und Firmenkundenbank AG allocated to the category "Big banks", merger with Deutsche Bank AG in 2020. From 2018, HSH Nordbank (now Hamburg Commercial Bank AG) allocated to the category "Regional banks and other commercial banks" and Landesbank Berlin allocated to the category "Savings banks". 2018 to 2021 DSK Hyp AG (formerly SEB AG) allocated to the category "Mortgage banks". **2** Interest received plus current income and profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement.

Deutsche Bundesbank

Major components of credit institutions' profit and loss accounts by category of banks* (cont'd)

As a percentage of average total assets for the year°

Financial year	All categories of banks	Commercial banks			Landesbanken[1]	Savings banks[1]	Credit cooperatives	Mortgage banks[1]	Building and loan associations	Banks with special, development and other central support tasks
		Total	of which:							
			Big banks[1]	Regional banks and other commercial banks[1]						
	Operating result									
2016	0.37	0.25	0.08	0.73	0.00	0.92	0.88	0.17	0.44	0.18
2017	0.37	0.28	0.16	0.55	0.03	0.85	0.84	0.17	0.40	0.15
2018	0.32	0.25	0.14	0.51	– 0.12	0.71	0.71	0.14	0.11	0.17
2019	0.26	0.05	– 0.20	0.63	0.14	0.62	0.80	0.32	0.06	0.16
2020	0.22	0.07	– 0.09	0.49	0.13	0.48	0.63	0.24	0.04	0.15
2021	0.32	0.21	– 0.02	0.62	0.26	0.55	0.71	0.27	0.05	0.20
2022	0.28	0.22	0.08	0.42	0.21	0.52	0.46	0.32	0.19	0.16
	Other and extraordinary result									
2016	– 0.03	– 0.06	0.04	– 0.36	– 0.05	– 0.03	0.04	0.01	– 0.02	0.00
2017	– 0.04	– 0.10	– 0.05	– 0.23	0.07	– 0.01	0.00	0.03	0.04	– 0.04
2018	– 0.08	– 0.14	– 0.09	– 0.28	– 0.01	– 0.06	– 0.02	– 0.04	– 0.01	– 0.06
2019	– 0.19	– 0.43	– 0.50	– 0.31	– 0.05	0.00	– 0.02	– 0.09	0.13	0.00
2020	– 0.06	– 0.14	– 0.12	– 0.18	– 0.07	– 0.01	– 0.02	0.11	0.04	0.01
2021	– 0.04	– 0.10	– 0.04	– 0.21	– 0.07	– 0.01	– 0.01	0.45	0.02	0.02
2022	– 0.02	0.01	0.14	– 0.17	0.00	– 0.11	– 0.07	– 0.09	– 0.05	– 0.01
	Profit or loss (–) for the financial year before tax									
2016	0.33	0.19	0.12	0.37	– 0.06	0.89	0.93	0.18	0.41	0.17
2017	0.33	0.18	0.12	0.32	0.10	0.84	0.84	0.21	0.43	0.12
2018	0.23	0.10	0.05	0.23	– 0.13	0.65	0.69	0.09	0.11	0.11
2019	0.07	– 0.39	– 0.71	0.32	0.10	0.63	0.78	0.23	0.19	0.15
2020	0.16	– 0.07	– 0.22	0.30	0.06	0.48	0.62	0.35	0.08	0.16
2021	0.29	0.11	– 0.06	0.41	0.19	0.54	0.70	0.72	0.07	0.22
2022	0.26	0.23	0.23	0.25	0.21	0.41	0.39	0.23	0.13	0.15
	Profit or loss (–) for the financial year after tax									
2016	0.24	0.13	0.09	0.26	– 0.11	0.63	0.67	0.14	0.34	0.17
2017	0.24	0.13	0.09	0.20	0.05	0.60	0.58	0.13	0.37	0.13
2018	0.15	0.08	0.05	0.13	– 0.20	0.44	0.47	0.04	0.05	0.09
2019	– 0.03	– 0.45	– 0.75	0.20	0.07	0.44	0.56	0.16	0.15	0.12
2020	0.06	– 0.13	– 0.25	0.18	0.04	0.30	0.42	0.06	0.04	0.12
2021	0.18	0.06	– 0.06	0.26	0.11	0.36	0.52	0.24	0.02	0.14
2022	0.21	0.23	0.30	0.13	0.12	0.24	0.29	0.14	0.08	0.12

For footnotes * and °, see p. 115. For footnote 1, see p. 116.
Deutsche Bundesbank

Credit institutions' profit and loss accounts*

Financial year	Number of reporting institutions	Average total assets for the year[1]	Interest business			Commissions business			Result from the trading portfolio	Other operating result	Operating income[3] (col. 3 plus col. 6 plus col. 9 plus col. 10)
			Net interest income (col. 4 less col. 5)	Interest received[2]	Interest paid	Net commission income (col. 7 less col. 8)	Commissions received	Commissions paid			
	1	2	3	4	5	6	7	8	9	10	11
		€ billion									
2015	1,679	8,605.6	95.9	200.9	105.0	30.5	44.5	14.1	3.7	– 2.2	127.9
2016	1,611	8,355.0	91.1	181.5	90.4	29.7	43.2	13.5	3.0	4.1	128.0
2017	1,538	8,251.2	85.5	165.4	79.9	30.6	44.2	13.6	5.6	1.3	122.9
2018	1,484	8,118.3	87.2	167.8	80.6	29.5	43.1	13.6	3.5	0.4	120.6
2019	1,440	8,532.7	82.5	162.8	80.4	31.2	45.8	14.5	2.5	2.5	118.7
2020	1,408	9,206.9	81.1	140.5	59.4	32.1	46.7	14.5	3.5	3.7	120.4
2021	1,358	9,476.1	82.2	131.6	49.4	37.9	53.6	15.7	4.9	1.2	126.2
2022	1,301	10,609.2	91.6	167.0	75.4	37.9	54.6	16.7	9.8	1.8	141.1
	Year-on-year percentage change										
2016	– 4.1	– 2.9	– 4.9	– 9.6	– 13.9	– 2.3	– 3.0	– 4.4	– 18.4	.	0.1
2017	– 4.5	– 1.2	– 6.2	– 8.9	– 11.6	2.7	2.3	1.3	82.9	– 67.9	– 4.0
2018	– 3.5	– 1.6	2.0	1.4	0.8	– 3.4	– 2.4	– 0.2	– 37.7	– 70.1	– 1.9
2019	– 3.0	5.1	– 5.4	– 3.0	– 0.3	5.8	6.1	6.8	– 28.8	545.6	– 1.6
2020	– 2.2	7.9	– 1.7	– 13.7	– 26.0	2.9	2.0	0.2	42.3	46.4	1.5
2021	– 3.6	2.9	1.4	– 6.3	– 16.8	17.9	14.9	8.2	40.2	– 68.8	4.8
2022	– 4.2	12.0	11.4	26.9	52.6	0.1	1.8	6.0	98.3	57.5	11.8
	As a percentage of average total assets for the year										
2015	.	.	1.11	2.33	1.22	0.35	0.52	0.16	0.04	– 0.03	1.49
2016	.	.	1.09	2.17	1.08	0.36	0.52	0.16	0.04	0.05	1.53
2017	.	.	1.04	2.00	0.97	0.37	0.54	0.17	0.07	0.02	1.49
2018	.	.	1.07	2.07	0.99	0.36	0.53	0.17	0.04	0.00	1.49
2019	.	.	0.97	1.91	0.94	0.37	0.54	0.17	0.03	0.03	1.39
2020	.	.	0.88	1.53	0.65	0.35	0.51	0.16	0.04	0.04	1.31
2021	.	.	0.87	1.39	0.52	0.40	0.57	0.17	0.05	0.01	1.33
2022	.	.	0.86	1.57	0.71	0.36	0.51	0.16	0.09	0.02	1.33

* The figures for the most recent date should be regarded as provisional in all cases. **1** Excluding the total assets of the foreign branches of savings banks; excluding the total assets of the foreign branches of regional institutions of credit cooperatives until 2015; from 2016, excluding the total assets of the foreign branches of mortgage banks; from 2021, excluding the total assets of the foreign branches of banks with special, development and other central support tasks.

General administrative spending										
Total (col. 13 plus col. 14)	Staff costs	Total other administrative spending[4]	Operating result before the valuation of assets (col. 11 less col. 12)	Result from the valuation of assets (other than tangible or financial fixed assets)	Operating result (col. 15 plus col. 16)	Other and extraordinary result	Profit or loss (–) for the financial year before tax (col. 17 plus col. 18)	Taxes on income and earnings	Profit or loss (–) for the financial year after tax (col. 19 less col. 20)	
12	13	14	15	16	17	18	19	20	21	Financial year
									€ billion	
90.0	46.0	44.0	37.9	– 3.5	34.4	– 7.8	26.6	8.4	18.1	2015
88.7	44.6	44.0	39.4	– 8.8	30.6	– 2.8	27.8	7.9	19.9	2016
88.4	44.6	43.8	34.5	– 3.6	30.9	– 3.4	27.5	7.5	20.0	2017
88.1	44.3	43.9	32.4	– 6.8	25.7	– 6.8	18.9	6.7	12.2	2018
90.2	44.4	45.7	28.5	– 6.7	21.8	– 16.1	5.6	7.8	– 2.2	2019
87.0	44.2	42.8	33.4	– 13.3	20.1	– 5.8	14.3	8.4	5.9	2020
92.0	46.7	45.3	34.2	– 3.6	30.6	– 3.5	27.0	9.8	17.3	2021
95.0	48.4	46.6	46.1	– 16.2	29.8	– 2.4	27.4	5.5	21.9	2022
									Year-on-year percentage change	
– 1.5	– 3.1	0.1	4.0	– 150.3	– 10.9	63.9	4.6	– 6.7	9.9	2016
– 0.3	– 0.1	– 0.5	– 12.2	58.7	1.0	– 20.8	– 1.0	– 4.3	0.4	2017
– 0.3	– 0.6	0.1	– 6.0	– 86.9	– 16.9	– 101.0	– 31.5	– 11.2	– 39.1	2018
2.3	0.4	4.3	– 12.2	0.7	– 15.2	– 136.2	– 70.1	16.6	.	2019
– 3.5	– 0.5	– 6.4	17.2	– 97.7	– 7.6	63.9	153.3	7.5	.	2020
5.7	5.7	5.7	2.4	72.7	52.0	39.1	89.1	16.3	192.5	2021
3.3	3.6	2.9	34.8	– 347.8	– 2.4	31.1	1.4	– 43.6	26.9	2022
									As a percentage of average total assets for the year	
1.05	0.53	0.51	0.44	– 0.04	0.40	– 0.09	0.31	0.10	0.21	2015
1.06	0.53	0.53	0.47	– 0.10	0.37	– 0.03	0.33	0.09	0.24	2016
1.07	0.54	0.53	0.42	– 0.04	0.37	– 0.04	0.33	0.09	0.24	2017
1.09	0.55	0.54	0.40	– 0.08	0.32	– 0.08	0.23	0.08	0.15	2018
1.06	0.52	0.54	0.33	– 0.08	0.26	– 0.19	0.07	0.09	– 0.03	2019
0.95	0.48	0.47	0.36	– 0.14	0.22	– 0.06	0.16	0.09	0.06	2020
0.97	0.49	0.48	0.36	– 0.04	0.32	– 0.04	0.29	0.10	0.18	2021
0.90	0.46	0.44	0.43	– 0.15	0.28	– 0.02	0.26	0.05	0.21	2022

2 Interest received plus current income and profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement. **3** Sum of net interest income, net commission income, result from the trading portfolio and other operating result. **4** Including depreciation of and value adjustments to tangible and intangible assets, but excluding depreciation of and value adjustments to assets leased ("broad" definition).

Profit and loss accounts by category of banks*

Financial year	Number of reporting institutions	€ million									
			Interest business			Commissions business					
		Average total assets for the year[1]	Net interest income (col. 4 less col. 5)	Interest received[2]	Interest paid	Net commission income (col. 7 less col. 8)	Commissions received	Commissions paid	Result from the trading portfolio	Other operating result	Operating income[3] (col. 3 plus col. 6 plus col. 9 plus col. 10)
	1	2	3	4	5	6	7	8	9	10	11
	All categories of banks										
2017	1,538	8,251,175	85,486	165,387	79,901	30,559	44,190	13,631	5,572	1,304	122,921
2018	1,484	8,118,298	87,202	167,777	80,575	29,522	43,124	13,602	3,470	390	120,584
2019	1,440	8,532,738	82,453	162,805	80,352	31,244	45,765	14,521	2,469	2,518	118,684
2020	1,408	9,206,853	81,074	140,502	59,428	32,142	46,689	14,547	3,513	3,686	120,415
2021	1,358	9,476,130	82,227	131,647	49,420	37,891	53,625	15,734	4,926	1,150	126,194
2022	1,301	10,609,156	91,564	167,001	75,437	37,934	54,613	16,679	9,767	1,811	141,076
	Commercial banks										
2017	172	3,532,639	30,887	54,373	23,486	16,027	23,832	7,805	4,074	– 83	50,905
2018	167	3,404,697	34,140	62,134	27,994	14,514	22,145	7,631	2,462	– 779	50,337
2019	165	3,591,261	30,191	56,720	26,529	15,154	23,252	8,098	1,560	1,959	48,864
2020	164	3,966,453	28,807	44,739	15,932	15,439	23,385	7,946	2,670	3,074	49,990
2021	166	3,995,423	29,941	39,134	9,193	19,708	28,382	8,674	3,511	489	53,649
2022	156	4,779,020	34,496	60,211	25,715	18,764	28,258	9,494	6,840	– 1,070	59,030
	Big banks[7]										
2017	4	2,400,315	16,369	30,216	13,847	10,205	12,929	2,724	3,701	– 1,712	28,563
2018	4	2,346,111	19,751	37,924	18,173	10,573	13,478	2,905	2,196	– 1,866	30,654
2019	4	2,475,076	16,126	34,920	18,794	10,154	13,650	3,496	1,302	– 32	27,550
2020	3	2,748,655	15,052	25,257	10,205	9,311	12,495	3,184	2,000	1,341	27,704
2021	3	2,461,038	15,568	22,111	6,543	11,124	14,085	2,961	1,985	– 1,595	27,082
2022	3	2,716,868	18,137	37,394	19,257	10,278	13,743	3,465	4,101	– 3,840	28,676
	Regional banks and other commercial banks[7]										
2017	149	1,048,189	14,237	23,545	9,308	5,712	10,779	5,067	350	1,516	21,815
2018	145	962,520	14,149	23,562	9,413	3,827	8,543	4,716	261	986	19,223
2019	142	1,013,378	13,784	21,153	7,369	4,864	9,456	4,592	252	1,892	20,792
2020	139	1,094,301	13,435	19,073	5,638	6,015	10,759	4,744	660	1,605	21,715
2021	139	1,382,623	13,956	16,740	2,784	8,496	14,160	5,664	1,514	1,975	25,941
2022	129	1,895,932	15,953	22,127	6,174	8,383	14,366	5,983	2,729	2,586	29,651
	Branches of foreign banks										
2017	19	84,135	281	612	331	110	124	14	23	113	527
2018	18	96,066	240	648	408	114	124	10	5	101	460
2019	19	102,807	281	647	366	136	146	10	6	99	522
2020	22	123,497	320	409	89	113	131	18	10	128	571
2021	24	151,762	417	283	– 134	88	137	49	12	109	626
2022	24	166,220	406	690	284	103	149	46	10	184	703
	Landesbanken[7]										
2017	8	940,293	6,833	25,797	18,964	1,238	2,867	1,629	1,059	114	9,244
2018	6	803,978	5,365	24,895	19,530	1,074	2,408	1,334	634	160	7,233
2019	6	862,346	5,327	27,818	22,491	1,226	2,617	1,391	466	280	7,299
2020	6	898,328	5,559	25,055	19,496	1,152	2,697	1,545	456	174	7,341
2021	6	905,608	5,826	26,496	20,670	1,326	3,118	1,792	886	204	8,242
2022	6	977,020	6,178	28,753	22,575	1,526	3,152	1,626	1,729	65	9,498

For footnotes * and **1**-**7**, see pp. 122 f.

General administrative spending			Operating result before the valuation of assets (col. 11 less col. 12)	Result from the valuation of assets (other than tangible or financial fixed assets)	Operating result (col. 15 plus col. 16)	Other and extraordinary result	Profit or loss (–) for the financial year before tax (col. 17 plus col. 18)	Taxes on income and earnings[5]	Profit or loss (–) for the financial year after tax (col. 19 less col. 20)	Withdrawals from or transfers to (–) reserves and participation rights capital[6]	Balance sheet profit or loss (–) (col. 21 plus col. 22)	Financial year
Total (col. 13 plus col. 14)	Staff costs	Total other administrative spending[4]										
12	13	14	15	16	17	18	19	20	21	22	23	
											All categories of banks	
88,389	44,563	43,826	34,532	– 3,619	30,913	– 3,398	27,515	7,536	19,979	– 16,777	3,202	2017
88,135	44,282	43,853	32,449	– 6,763	25,686	– 6,831	18,855	6,692	12,163	– 13,116	– 953	2018
90,191	44,447	45,744	28,493	– 6,719	21,774	– 16,133	5,641	7,806	– 2,165	7,223	5,058	2019
87,023	44,210	42,813	33,392	– 13,282	20,110	– 5,822	14,288	8,388	5,900	– 1,312	4,588	2020
92,004	46,747	45,257	34,190	– 3,625	30,565	– 3,547	27,018	9,759	17,259	– 8,511	8,748	2021
94,999	48,427	46,572	46,077	– 16,233	29,844	– 2,445	27,399	5,500	21,899	– 9,678	12,221	2022
											Commercial banks	
40,400	17,160	23,240	10,505	– 540	9,965	– 3,536	6,429	1,885	4,544	– 4,064	480	2017
39,899	16,558	23,341	10,438	– 1,992	8,446	– 4,918	3,528	906	2,622	– 4,264	– 1,642	2018
41,481	16,933	24,548	7,383	– 5,743	1,640	– 15,611	– 13,971	2,356	– 16,327	18,097	1,770	2019
38,867	16,909	21,958	11,123	– 8,336	2,787	– 5,412	– 2,625	2,334	– 4,959	6,467	1,508	2020
42,882	19,257	23,625	10,767	– 2,361	8,406	– 4,004	4,402	2,060	2,342	2,234	4,576	2021
44,022	20,043	23,979	15,008	– 4,540	10,468	622	11,090	151	10,939	– 2,008	8,931	2022
											Big banks[7]	
25,324	10,489	14,835	3,239	666	3,905	– 1,126	2,779	559	2,220	– 433	1,787	2017
26,944	10,660	16,284	3,710	– 382	3,328	– 2,179	1,149	– 97	1,246	22	1,268	2018
27,806	10,807	16,999	– 256	– 4,723	– 4,979	– 12,479	– 17,458	988	– 18,446	21,922	3,476	2019
25,003	10,532	14,471	2,701	– 5,270	– 2,569	– 3,415	– 5,984	960	– 6,944	7,344	400	2020
26,866	11,614	15,252	216	– 665	– 449	– 1,080	– 1,529	– 84	– 1,445	2,659	1,214	2021
25,761	11,651	14,110	2,915	– 707	2,208	3,922	6,130	– 2,125	8,255	– 3,276	4,979	2022
											Regional banks and other commercial banks[7]	
14,795	6,538	8,257	7,020	– 1,252	5,768	– 2,405	3,363	1,257	2,106	– 3,612	– 1,506	2017
12,702	5,781	6,921	6,521	– 1,574	4,947	– 2,739	2,208	945	1,263	– 4,258	– 2,995	2018
13,391	5,998	7,393	7,401	– 997	6,404	– 3,131	3,273	1,294	1,979	– 3,794	– 1,815	2019
13,560	6,251	7,309	8,155	– 2,846	5,309	– 1,997	3,312	1,329	1,983	– 884	1,099	2020
15,727	7,528	8,199	10,214	– 1,674	8,540	– 2,927	5,613	2,045	3,568	– 414	3,154	2021
17,946	8,270	9,676	11,705	– 3,737	7,968	– 3,299	4,669	2,185	2,484	1,241	3,725	2022
											Branches of foreign banks	
281	133	148	246	46	292	– 5	287	69	218	– 19	199	2017
253	117	136	207	– 36	171	0	171	58	113	– 28	85	2018
284	128	156	238	– 23	215	– 1	214	74	140	– 31	109	2019
304	126	178	267	– 220	47	0	47	45	2	7	9	2020
289	115	174	337	– 22	315	3	318	99	219	– 11	208	2021
315	122	193	388	– 96	292	– 1	291	91	200	27	227	2022
											Landesbanken[7]	
6,699	3,083	3,616	2,545	– 2,257	288	656	944	443	501	– 741	– 240	2017
5,538	2,789	2,749	1,695	– 2,625	– 930	– 91	– 1,021	603	– 1,624	– 128	– 1,752	2018
5,729	2,805	2,924	1,570	– 337	1,233	– 410	823	196	627	– 575	52	2019
5,574	2,773	2,801	1,767	– 643	1,124	– 586	538	185	353	– 527	– 174	2020
5,815	2,828	2,987	2,427	– 50	2,377	– 665	1,712	748	964	– 1,154	– 190	2021
5,943	2,772	3,171	3,555	– 1,550	2,005	16	2,021	868	1,153	– 1,187	– 34	2022

Profit and loss accounts by category of banks* (cont'd)

Financial year	Number of reporting institutions	€ million									
			Interest business			Commissions business					
		Average total assets for the year[1]	Net interest income (col. 4 less col. 5)	Interest received[2]	Interest paid	Net commission income (col. 7 less col. 8)	Commissions received	Commissions paid	Result from the trading portfolio	Other operating result	Operating income[3] (col. 3 plus col. 6 plus col. 9 plus col. 10)
	1	2	3	4	5	6	7	8	9	10	11
	Savings banks[7]										
2017	390	1,179,915	22,018	28,577	6,559	7,590	8,069	479	6	169	29,783
2018	386	1,267,726	21,949	27,541	5,592	7,965	8,778	813	1	718	30,633
2019	380	1,315,579	21,217	26,758	5,541	8,458	9,405	947	10	17	29,702
2020	377	1,407,118	20,741	24,986	4,245	8,660	9,646	986	5	8	29,414
2021	371	1,516,119	19,873	23,966	4,093	9,242	10,309	1,067	11	44	29,170
2022	362	1,573,071	23,058	26,317	3,259	9,668	10,740	1,072	9	1,259	33,994
	Credit cooperatives										
2017	915	868,255	16,475	20,250	3,775	4,957	6,071	1,114	10	437	21,879
2018	875	911,385	16,375	19,424	3,049	5,160	6,318	1,158	4	408	21,947
2019	841	957,859	16,251	19,151	2,900	5,456	6,718	1,262	6	407	22,120
2020	814	1,029,671	16,027	18,239	2,212	5,663	6,955	1,292	10	474	22,174
2021	770	1,108,885	16,326	18,122	1,796	6,141	7,507	1,366	11	634	23,112
2022	733	1,165,801	17,828	19,634	1,806	6,240	7,568	1,328	10	1,109	25,187
	Mortgage banks[7]										
2017	13	236,414	1,360	7,921	6,561	– 48	158	206	0	– 35	1,277
2018	11	233,165	1,732	6,975	5,243	– 80	97	177	6	– 27	1,631
2019	10	234,978	1,908	6,576	4,668	– 109	116	225	0	15	1,814
2020	10	241,909	2,024	6,020	3,996	– 123	109	232	0	– 72	1,829
2021	9	232,447	2,121	5,452	3,331	– 144	122	266	0	– 335	1,642
2022	8	235,064	2,117	5,620	3,503	– 102	121	223	0	– 6	2,009
	Building and loan associations										
2017	20	227,924	2,634	5,995	3,361	– 481	1,226	1,707	0	701	2,854
2018	20	233,865	2,653	5,661	3,008	– 500	1,295	1,795	0	14	2,167
2019	19	237,363	2,438	5,566	3,128	– 548	1,309	1,857	0	52	1,942
2020	18	242,190	2,520	5,103	2,583	– 493	1,270	1,763	0	30	2,057
2021	18	249,553	2,505	4,785	2,280	– 389	1,295	1,684	0	26	2,142
2022	18	259,381	2,607	4,508	1,901	– 174	1,834	2,008	0	393	2,826
	Banks with special, development and other central support tasks										
2017	20	1,265,735	5,279	22,474	17,195	1,276	1,967	691	423	1	6,979
2018	19	1,263,482	4,988	21,147	16,159	1,389	2,083	694	363	– 104	6,636
2019	19	1,333,352	5,121	20,216	15,095	1,607	2,348	741	427	– 212	6,943
2020	19	1,421,184	5,396	16,360	10,964	1,844	2,627	783	372	– 2	7,610
2021	18	1,468,095	5,635	13,692	8,057	2,007	2,892	885	507	88	8,237
2022	18	1,619,799	5,280	21,958	16,678	2,012	2,940	928	1,179	61	8,532
	Memo item: Banks majority-owned by foreign banks[8]										
2017	34	765,500	8,801	12,037	3,236	3,589	5,218	1,629	812	891	14,093
2018	33	763,177	9,252	12,327	3,075	3,042	4,711	1,669	436	– 340	12,390
2019	32	849,008	9,683	12,911	3,228	3,520	5,338	1,818	546	1,184	14,933
2020	34	973,655	9,350	11,328	1,978	4,640	6,756	2,116	539	650	15,179
2021	35	1,236,335	9,238	10,296	1,058	6,858	9,737	2,879	1,526	242	17,864
2022	31	1,872,399	10,869	15,104	4,235	7,018	10,163	3,145	2,994	1,037	21,918

* The figures for the most recent date should be regarded as provisional in all cases. **1** Excluding the total assets of the foreign branches of savings banks; excluding the total assets of the foreign branches of mortgage banks; from 2021, excluding the total assets of the foreign branches of banks with special, development and other central support tasks. **2** Interest received plus current income and profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement. **3** Sum of net interest income, net commission income, result from the trading portfolio and other operating result. **4** Including depreciation of and value adjustments to tangible and intangible assets, but excluding depreciation of and value adjustments to assets leased ("broad" definition). **5** In

General administrative spending			Operating result before the valuation of assets (col. 11 less col. 12)	Result from the valuation of assets (other than tangible or financial fixed assets)	Operating result (col. 15 plus col. 16)	Other and extraordinary result	Profit or loss (–) for the financial year before tax (col. 17 plus col. 18)	Taxes on income and earnings	Profit or loss (–) for the financial year after tax (col. 19 less col. 20)	Withdrawals from or transfers to (–) reserves and participation rights capital[6]	Balance sheet profit or loss (–) (col. 21 plus col. 22)	Financial year
Total (col. 13 plus col. 14)	Staff costs	Total other administrative spending[4]										
12	13	14	15	16	17	18	19	20	21	22	23	
											Savings banks[7]	
19,991	12,646	7,345	9,792	283	10,075	– 153	9,922	2,861	7,061	– 5,517	1,544	2017
20,930	13,012	7,918	9,703	– 704	8,999	– 786	8,213	2,694	5,519	– 4,070	1,449	2018
21,211	13,079	8,132	8,491	– 296	8,195	41	8,236	2,437	5,799	– 4,390	1,409	2019
20,630	12,832	7,798	8,784	– 1,960	6,824	– 88	6,736	2,513	4,223	– 2,923	1,300	2020
20,637	12,606	8,031	8,533	– 209	8,324	– 155	8,169	2,675	5,494	– 4,190	1,304	2021
21,063	12,772	8,291	12,931	– 4,730	8,201	– 1,753	6,448	2,610	3,838	– 2,660	1,178	2022
											Credit cooperatives	
14,382	8,583	5,799	7,497	– 186	7,311	– 33	7,278	2,199	5,079	– 3,774	1,305	2017
14,520	8,564	5,956	7,427	– 926	6,501	– 172	6,329	2,078	4,251	– 2,978	1,273	2018
14,858	8,518	6,340	7,262	419	7,681	– 174	7,507	2,124	5,383	– 4,154	1,229	2019
14,899	8,533	6,366	7,275	– 745	6,530	– 192	6,338	2,020	4,318	– 3,119	1,199	2020
15,235	8,665	6,570	7,877	– 34	7,843	– 122	7,721	2,007	5,714	– 4,440	1,274	2021
15,746	8,832	6,914	9,441	– 4,052	5,389	– 851	4,538	1,114	3,424	– 2,295	1,129	2022
											Mortgage banks[7]	
897	411	486	380	32	412	75	487	171	316	– 722	– 406	2017
975	449	526	656	– 341	315	– 95	220	128	92	– 795	– 703	2018
929	428	501	885	– 125	760	– 217	543	160	383	– 229	154	2019
896	405	491	933	– 357	576	271	847	700	147	19	166	2020
862	404	458	780	– 156	624	1,043	1,667	1,102	565	166	731	2021
951	462	489	1,058	– 301	757	– 223	534	199	335	– 124	211	2022
											Building and loan associations	
1,891	719	1,172	963	– 61	902	89	991	155	836	– 622	214	2017
1,921	696	1,225	246	22	268	– 14	254	137	117	13	130	2018
1,838	647	1,191	104	49	153	303	456	105	351	– 139	212	2019
1,880	661	1,219	177	– 82	95	108	203	98	105	95	200	2020
2,005	752	1,253	137	– 16	121	53	174	113	61	26	87	2021
2,209	991	1,218	617	– 129	488	– 138	350	143	207	– 112	95	2022
											Banks with special, development and other central support tasks	
4,129	1,961	2,168	2,850	– 890	1,960	– 496	1,464	– 178	1,642	– 1,337	305	2017
4,352	2,214	2,138	2,284	– 197	2,087	– 755	1,332	146	1,186	– 894	292	2018
4,145	2,037	2,108	2,798	– 686	2,112	– 65	2,047	428	1,619	– 1,387	232	2019
4,277	2,097	2,180	3,333	– 1,159	2,174	77	2,251	538	1,713	– 1,324	389	2020
4,568	2,235	2,333	3,669	– 799	2,870	303	3,173	1,054	2,119	– 1,153	966	2021
5,065	2,555	2,510	3,467	– 931	2,536	– 118	2,418	415	2,003	– 1,292	711	2022
											Memo item: Banks majority-owned by foreign banks[8]	
8,817	4,070	4,747	5,276	– 590	4,686	– 1,819	2,867	808	2,059	– 565	1,494	2017
8,717	4,064	4,653	3,673	– 994	2,679	– 992	1,687	586	1,101	– 518	583	2018
9,612	4,611	5,001	5,321	– 164	5,157	– 1,952	3,205	1,189	2,016	2,664	4,680	2019
9,531	4,587	4,944	5,648	– 1,869	3,779	– 1,255	2,524	1,175	1,349	846	2,195	2020
12,134	6,350	5,784	5,730	– 581	5,149	– 495	4,654	2,483	2,171	647	2,818	2021
13,730	6,651	7,079	8,188	– 2,140	6,048	– 2,052	3,996	815	3,181	– 768	2,413	2022

part, including taxes paid by legally dependent building and loan associations affiliated to Landesbanken. **6** Including profit or loss brought forward and withdrawals from or transfers to the fund for general banking risks. **7** From 2018, DB Privat- und Firmenkundenbank AG allocated to the category "Big banks", merger with Deutsche Bank AG in 2020. From 2018, HSH Nordbank (now Hamburg Commercial Bank AG) allocated to the category "Regional banks and other commercial banks" and Landesbank Berlin allocated to the category "Savings banks". 2018 to 2021 DSK Hyp AG (formerly SEB AG) allocated to the category "Mortgage banks". **8** Separate presentation of the (legally independent) banks majority-owned by foreign banks and included in other categories of banks.

Credit institutions' charge and income items*

Financial year	Number of reporting institutions	Charges, € billion										
							General administrative spending					
								Staff costs		Social security costs and costs relating to pensions and other benefits		
		Total	Interest paid	Commissions paid	Net loss from the trading portfolio	Gross loss on transactions in goods and subsidiary transactions	Total	Total	Wages and salaries	Total	of which: Pensions	Other administrative spending[1]
2014	1,715	262.8	117.4	13.3	0.4	0.0	82.0	44.0	35.3	8.7	3.2	38.0
2015	1,679	256.6	105.0	14.1	0.5	0.0	86.0	46.0	36.4	9.6	3.7	39.9
2016	1,611	240.9	90.4	13.5	0.2	0.0	84.4	44.6	36.1	8.6	2.7	39.8
2017	1,538	224.1	79.9	13.6	0.0	0.0	84.0	44.6	35.6	8.9	2.9	39.4
2018	1,484	226.9	80.6	13.6	0.0	0.0	83.6	44.3	34.6	9.7	3.9	39.4
2019	1,440	242.0	80.4	14.5	0.1	0.0	84.8	44.4	34.9	9.6	3.6	40.3
2020	1,408	211.0	59.4	14.5	0.1	0.0	82.6	44.2	34.7	9.5	3.6	38.3
2021	1,358	204.0	49.4	15.7	0.0	0.0	87.1	46.7	36.4	10.3	4.4	40.4
2022	1,301	247.8	75.4	16.7	0.0	0.0	90.5	48.4	36.6	11.9	6.0	42.1

Financial year	Income, € billion								
		Interest received			Current income				
	Total	Total	from lending and money market transactions	from debt securities and debt register claims	Total	from shares and other variable yield securities	from participating interests[2]	from shares in affiliated enterprises	Profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement
2014	280.2	196.4	170.2	26.1	11.3	6.3	1.1	4.0	3.1
2015	274.7	183.1	160.1	22.9	15.0	6.7	1.8	6.5	2.8
2016	260.8	166.8	147.1	19.7	10.0	5.8	1.3	2.9	4.7
2017	244.1	151.0	134.4	16.5	11.0	6.9	1.1	3.0	3.4
2018	239.1	152.4	136.9	15.5	10.0	5.3	1.1	3.5	5.4
2019	239.8	152.2	137.5	14.7	7.6	4.8	1.1	1.7	3.0
2020	216.9	131.4	119.1	12.3	6.0	3.5	0.6	1.9	3.2
2021	221.2	121.8	111.8	10.0	7.1	4.0	1.3	1.7	2.7
2022	269.7	156.5	144.7	11.7	8.1	3.9	1.2	3.0	2.4

***** The figures for the most recent date should be regarded as provisional in all cases. **1** Spending item does not include depreciation of and value adjustments to tangible and intangible assets, shown net of depreciation of assets leased ("narrow" definition). All other tables are based on a broad definition of "other administrative spending". **2** Including amounts paid up on cooperative society shares.

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Depreciation of and value adjustments to tangible and intangible assets										
Total	of which: Assets leased	Other operating charges	Depreciation of and value adjustments to loans and advances, and provisions for contingent liabilities and for commitments	Depreciation of and value adjustments to participating interests, shares in affiliated enterprises and securities treated as fixed assets	Charges incurred from loss transfers	Extraordinary charges	Taxes on income and earnings	Other taxes	Profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement	Financial year
5.5	1.8	16.4	10.5	3.5	0.6	1.5	7.6	0.2	3.9	2014
5.9	1.8	17.9	7.2	3.6	1.2	2.5	8.4	0.3	4.1	2015
6.6	2.3	13.8	12.7	3.7	0.9	1.8	7.9	0.3	4.7	2016
7.0	2.6	14.8	8.3	1.5	0.6	2.3	7.5	0.3	4.3	2017
7.4	2.9	15.2	10.0	1.7	0.5	1.7	6.7	0.2	5.7	2018
9.2	3.7	14.7	10.0	12.2	0.9	3.2	7.8	0.3	4.1	2019
8.5	4.0	12.2	14.9	2.8	0.3	4.0	8.4	0.2	2.9	2020
9.4	4.5	16.0	7.0	1.5	0.3	3.6	9.8	0.3	3.9	2021
9.4	5.0	22.9	18.3	3.4	0.6	1.0	5.5	0.3	3.7	2022

					Other operating income				
Commissions received	Net profit from the trading portfolio	Gross profit on transactions in goods and subsidiary transactions	Value readjustments to loans and advances, and provisions for contingent liabilities and for commitments	Value readjustments to participating interests, shares in affiliated enterprises and securities treated as fixed assets	Total	of which: From leasing business	Extraordinary income	Income from loss transfers	Financial year
42.6	4.0	0.2	4.0	1.7	15.7	4.5	0.8	0.4	2014
44.5	4.2	0.2	3.8	1.9	17.6	4.7	0.5	1.1	2015
43.2	3.3	0.2	4.0	3.4	20.3	5.5	4.9	0.0	2016
44.2	5.6	0.2	4.7	3.1	18.8	6.0	1.6	0.6	2017
43.1	3.5	0.2	3.3	0.9	18.5	6.3	1.2	0.7	2018
45.8	2.5	0.2	3.3	1.6	21.0	8.4	1.9	0.7	2019
46.7	3.6	0.2	1.6	1.4	20.0	9.1	2.3	0.6	2020
53.6	4.9	0.2	3.4	2.1	21.7	10.5	2.4	1.2	2021
54.6	9.8	0.2	2.1	5.2	29.8	11.4	0.9	0.0	2022

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I. Key economic data for the euro area

1. Monetary developments and interest rates

	Money stock in various definitions [1,2]				Determinants of the money stock [1]			Interest rates	
			M3 [3]						
Period	M1	M2		3-month moving average (centred)	MFI lending, total	MFI lending to enterprises and households	Monetary capital formation [4]	€STR [5,6]	Yield on European government bonds outstanding [7]
	Annual percentage change							% p.a. as a monthly average	
2021 Dec.	10.0	7.0	7.0	7.1	6.1	3.9	– 0.5	– 0.58	0.1
2022 Jan.	9.4	7.0	6.7	6.8	6.2	4.4	– 0.3	– 0.58	0.4
Feb.	9.3	6.9	6.5	6.6	6.3	4.4	– 0.6	– 0.58	0.8
Mar.	9.1	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	6.1	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	5.9	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	– 0.4	– 0.09	1.8
Sep.	5.3	5.9	6.0	5.7	5.5	5.7	– 0.4	0.36	2.6
Oct.	3.5	5.0	4.9	5.2	5.1	5.3	– 0.7	0.66	3.0
Nov.	2.1	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	0.5	1.57	2.8
2023 Jan.	– 1.3	2.6	3.1	3.2	3.0	3.7	1.2	1.90	2.9
Feb.	– 3.1	1.7	2.6	2.6	2.5	3.3	1.8	2.28	3.0
Mar.	– 4.7	1.1	2.1	2.0	2.0	2.9	2.3	2.57	3.1
Apr.	– 5.7	0.5	1.4	1.5	1.4	2.4	2.3	2.90	3.0
May	– 7.0	– 0.1	0.9	1.0	0.9	2.2	3.1	3.08	3.0
June	– 8.0	– 0.5	0.6	0.4	0.4	1.6	3.5	3.24	3.0
July	– 9.2	– 1.4	– 0.4	...	0.1	1.3	3.9	3.40	3.1
Aug.	...	...	...	...	...	...	...	3.64	3.2

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

	Selected items of the euro area balance of payments								Euro exchange rates [1]		
	Current account		Financial account						Reference rate vis-á-vis the US dollar	Effective exchange rate [3]	
Period	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	
2021 Dec.	+ 32,673	+ 9,198	+ 29,655	+ 14,131	+ 24,902	+ 115	– 8,674	– 820	1.1304	97.0	91.4
2022 Jan.	– 6,164	– 11,333	– 9,364	– 289	+ 51,258	+ 3,062	– 61,075	– 2,321	1.1314	96.6	91.3
Feb.	+ 7,045	+ 7,880	+ 44,277	+ 43,551	– 6,431	– 3,857	+ 9,488	+ 1,526	1.1342	96.8	91.8
Mar.	+ 5,369	+ 1,384	– 19,759	+ 23,697	– 136,572	+ 2,624	+ 90,586	– 95	1.1019	95.8	91.5
Apr.	– 14,980	– 13,116	– 28,199	+ 17,249	+ 33,628	+ 21,864	– 100,232	– 708	1.0819	95.0	90.1
May	– 28,980	– 7,752	+ 61,702	+ 120,438	+ 23,540	+ 1,396	– 84,882	+ 1,210	1.0579	95.4	90.5
June	– 4,363	– 7,997	+ 14,518	+ 8,784	– 86,875	+ 3,074	+ 87,721	+ 1,814	1.0566	95.7	90.7
July	– 15,845	– 12,961	+ 16,882	– 7,759	+ 48,281	+ 10,520	– 35,796	+ 1,636	1.0179	93.9	89.2
Aug.	– 29,623	– 30,402	– 5,830	– 28,702	– 59,182	+ 12,420	+ 67,471	+ 2,163	1.0128	93.4	88.9
Sep.	– 21,601	– 12,400	– 47,235	+ 69,983	– 166,756	+ 15,515	+ 30,551	+ 3,472	0.9904	93.9 p	89.8
Oct.	– 16,676	– 8,515	+ 22,133	– 315	– 21,109	+ 2,237	+ 37,390	+ 3,931	0.9826	94.5 p	91.2
Nov.	+ 5,763	+ 7,390	– 5,984	– 18,557	– 26,773	+ 1,364	+ 37,469	+ 513	1.0201	95.7 p	92.1
Dec.	+ 19,429	+ 8,558	+ 42,466	+ 4,113	+ 56,720	– 7,707	– 15,482	+ 4,823	1.0589	96.8 p	92.5
2023 Jan.	– 12,657	– 14,379	+ 20,784	+ 5,700	+ 32,042	– 568	– 7,665	– 8,725	1.0769	97.1 p	92.6
Feb.	+ 10,520	+ 21,029	+ 507	+ 53,020	– 28,109	+ 10,410	– 23,433	– 11,381	1.0715	97.0 p	92.7
Mar.	+ 34,357	+ 43,607	+ 26,319	– 4,081	– 100,376	+ 5,676	+ 123,453	+ 1,647	1.0706	97.3 p	92.9
Apr.	+ 3,013	+ 14,665	– 29,781	+ 8,950	+ 33,694	+ 951	– 71,527	– 1,849	1.0968	98.4 p	93.8
May	– 12,461	+ 23,342	+ 22,052	– 36,528	+ 58,816	+ 13,307	– 14,902	+ 1,358	1.0868	98.0 p	93.2
June	+ 36,769	+ 42,739	+ 78,070	+ 13,365	– 14,246	– 7,297	+ 83,855	+ 2,393	1.0840	98.2 p	93.5
July	...	...	...	...	...	...	...	...	1.1058	99.2 p	94.6
Aug.	...	...	...	...	...	...	...	...	1.0909	99.0 p	94.8

***** 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 calculation. Vis-á-vis the currencies of the extended EER group of tranding 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
Real gross domestic product [1] Annual percentage change											
2020	− 6.1	− 5.4	− 3.8	− 1.0	− 2.4	− 7.5	− 9.0	6.6	− 9.0	− 8.5	− 2.3
2021	5.6	6.3	3.2	7.2	3.2	6.4	8.4	15.1	7.0	13.1	4.3
2022	3.3	3.2	1.8	− 0.5	1.6	2.5	5.9	9.4	3.7	6.2	2.8
2022 Q1	5.4	5.3	4.3	3.1	3.5	4.5	8.5	8.8	6.5	7.8	6.6
Q2	4.2	4.1	1.6	0.2	2.7	4.1	7.4	9.3	5.0	8.7	3.5
Q3	2.3	2.1	1.2	− 0.5	1.2	1.1	3.9	9.4	2.4	5.3	0.6
Q4	1.7	1.6	0.2	− 4.2	− 0.7	0.3	4.5	10.2	1.1	3.5	1.2
2023 Q1	1.1	1.4	0.1	− 3.7	0.4	1.0	1.8	1.1	2.1	2.8	0.8
Q2	0.5	0.9	− 0.6	− 2.9	− 0.7	0.4	2.8	− 0.7	0.1	2.7	− 0.5
Industrial production [2] 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	2.2	− 0.7	− 0.3	− 2.3	4.0	− 0.2	2.4	18.9	0.4	1.6	0.8
2022 Q1	1.6	6.4	− 1.3	4.2	5.7	− 0.3	4.9	7.6	1.5	2.9	4.0
Q2	2.0	− 5.1	− 1.3	2.5	8.0	− 0.1	3.1	14.9	2.1	2.5	3.6
Q3	3.4	− 3.6	1.9	− 5.0	3.5	0.2	3.6	21.0	0.0	2.4	− 2.6
Q4	2.1	− 0.2	− 0.6	− 10.4	− 0.6	− 0.4	− 1.8	29.8	− 2.2	− 1.4	− 1.2
2023 Q1	0.3	− 2.9	0.4	− 9.7	1.0	− 0.4	1.9	7.8	− 1.5	− 1.7	− 6.0
Q2	− 1.2	− 4.4	p − 0.1	− 14.2	− 2.9	1.4	0.8	4.2	− 3.9	0.1	− 6.7
Capacity utilisation in industry [3] As a percentage of full capacity											
2020	74.5	75.6	77.3	67.7	76.9	73.8	71.0	69.1	53.3	67.8	72.0
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
2022 Q2	82.5	80.0	84.9	69.2	80.7	82.2	76.8	81.2	78.8	79.9	75.6
Q3	81.9	79.0	85.1	74.5	81.2	81.7	74.5	79.2	78.4	75.9	75.7
Q4	81.4	77.2	84.9	71.7	80.7	80.6	75.5	79.8	77.9	74.3	73.3
2023 Q1	81.4	76.7	84.6	71.1	78.4	81.0	74.8	79.2	77.4	77.6	72.6
Q2	81.2	77.3	84.2	69.9	76.6	82.0	73.8	...	77.4	78.2	73.8
Q3	80.2	75.1	82.9	63.2	77.9	82.2	76.3	...	77.0	78.5	72.7
Standardised unemployment rate [4] 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 7.7	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 Mar.	6.5	5.6	2.9	5.9	6.6	7.1	11.2	4.1	7.8	6.6	6.0
Apr.	6.5	5.6	2.9	6.2	7.0	7.3	11.6	4.1	7.8	6.5	6.2
May	6.5	5.6	2.9	6.7	7.1	7.3	11.2	4.1	7.7	6.6	6.4
June	6.4	5.6	2.9	7.1	7.2	7.3	11.0	4.2	7.5	6.7	6.6
July	6.4	5.5	2.9	7.2	7.4	7.4	10.8	4.1	7.6	6.8	6.6
Aug.	...	...	...	...	...	...	...	4.1	...	...	...
Harmonised Index of Consumer Prices Annual percentage change											
2020	0.3	0.4	5 0.4	− 0.6	0.4	0.5	− 1.3	− 0.5	− 0.1	0.0	0.1
2021	2.6	3.2	5 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 Mar.	6 6.9	4.9	7.8	15.6	6.7	6.7	5.4	7.0	8.1	10.5	17.2
Apr.	7.0	3.3	7.6	13.2	6.3	6.9	4.5	6.3	8.6	8.9	15.0
May	6.1	2.7	6.3	11.2	5.0	6.0	4.1	5.4	8.0	8.3	12.3
June	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.	e 5.3	e 2.4	6.4	e 4.3	e 3.4	5.7	3.5	4.9	e 5.5	8.4	5.6
General government financial balance [7] As a percentage of GDP											
2020	− 7.1	− 9.0	− 4.3	− 5.5	− 5.6	− 9.0	− 9.7	− 5.0	− 9.7	− 7.3	− 4.4
2021	− 5.3	− 5.5	− 3.6	− 2.4	− 2.8	− 6.5	− 7.1	− 1.6	− 9.0	− 2.5	− 7.1
2022	− 3.6	− 3.9	− 2.5	− 0.9	− 0.9	− 4.7	− 2.3	1.6	− 8.0	0.4	− 4.4
General government debt [7] As a percentage of GDP											
2020	97.2	112.0	68.7	18.5	74.7	114.6	206.3	58.4	154.9	87.0	42.0
2021	95.4	109.1	69.0	17.6	72.6	112.9	194.6	55.4	149.9	78.4	43.7
2022	91.5	105.1	66.1	18.4	73.0	111.6	171.3	44.7	144.4	68.4	40.8

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
Real gross domestic product [1] Annual percentage change										
– 0.0	– 0.9	– 8.1	– 3.9	– 6.5	– 8.3	– 3.3	– 4.2	– 11.3	– 4.4	2020
6.0	7.2	12.3	6.2	4.6	5.5	4.9	8.2	5.5	6.6	2021
1.9	1.4	6.9	4.3	4.8	6.7	1.7	2.5	5.5	5.6	2022
4.8	2.6	8.0	6.4	9.2	11.4	3.0	10.2	6.8	6.7	2022 Q1
1.7	2.3	9.9	5.2	6.4	8.0	1.3	8.6	6.9	5.9	Q2
1.8	3.8	4.7	3.0	2.0	5.0	1.3	3.3	5.1	5.5	Q3
– 0.3	– 2.2	5.3	2.9	2.3	2.8	1.2	0.2	3.3	4.6	Q4
– 2.4	– 0.3	5.0	1.9	1.9	2.8	1.0	0.8	4.5	3.1	2023 Q1
0.7	...	3.9	– 0.3	– 1.1	1.7	1.5	1.4	1.7	2.1	Q2
Industrial production [2] 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	11.4	3.5	10.3	10.2	7.5	6.4	2021
9.4	– 1.3	2.8	2.6	6.7	– 0.0	– 3.9	1.2	3.0	1.1	2022
23.5	0.1	– 2.1	2.1	11.7	– 2.9	– 2.4	6.4	1.7	3.0	2022 Q1
9.2	– 1.6	– 4.0	4.7	8.4	2.0	– 3.2	2.8	5.0	3.0	Q2
10.0	– 0.3	7.7	2.4	5.5	1.3	– 1.4	1.7	4.5	– 1.0	Q3
– 2.5	– 3.3	10.0	1.3	1.9	– 0.3	– 8.4	– 5.7	0.7	– 0.4	Q4
– 11.7	– 4.3	13.8	– 3.6	0.2	1.3	– 3.4	– 3.4	1.6	– 1.3	2023 Q1
– 0.4	– 7.1	7.5	– 9.4	– 0.9	– 4.9	0.6	– 4.2	– 2.0	p 0.6	Q2
Capacity utilisation in industry [3] As a percentage of full capacity										
73.0	72.5	70.7	78.2	79.5	74.9	79.5	78.4	74.4	51.5	2020
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	84.9	78.7	58.2	2022
78.2	79.9	64.6	84.2	88.8	82.4	83.9	85.1	80.0	58.8	2022 Q2
76.8	81.4	67.6	83.9	87.9	81.6	83.5	84.1	78.9	58.3	Q3
76.1	79.8	63.6	82.6	85.6	81.6	83.0	84.0	77.2	60.4	Q4
69.7	74.3	65.7	82.9	87.1	81.5	80.2	83.1	77.1	59.8	2023 Q1
70.5	75.5	53.3	82.5	86.3	83.6	84.0	83.9	76.3	60.9	Q2
67.0	72.0	69.4	81.3	84.6	80.9	83.0	83.0	76.2	62.7	Q3
Standardised unemployment rate [4] As a percentage of civilian labour force										
8.6	6.8	4.4	3.9	5.4	6.9	6.7	5.0	15.5	7.6	2020
e 7.1	e 5.4	e 3.4	e 4.2	e 6.2	e 6.6	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 6.1	e 6.2	e 4.0	e 13.0	e 6.8	2022
7.6	4.9	2.8	3.5	4.5	6.8	6.0	3.7	12.5	6.3	2023 Mar.
6.5	5.0	2.7	3.4	5.1	6.5	5.9	3.8	12.1	6.2	Apr.
6.1	5.0	2.6	3.5	4.7	6.4	5.9	3.7	11.9	6.2	May
5.8	5.2	2.5	3.5	5.1	6.3	5.8	3.7	11.7	6.3	June
6.4	5.2	2.5	3.6	5.6	6.3	5.8	3.5	11.6	6.7	July
...	...	...	...	...	...	...	...	...	...	Aug.
Harmonised Index of Consumer Prices 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
15.2	2.9	7.1	4.5	9.2	8.0	14.8	10.4	3.1	6.1	2023 Mar.
13.3	2.7	6.4	5.8	9.4	6.9	14.0	9.2	3.8	3.9	Apr.
10.7	2.0	6.3	6.8	8.7	5.4	12.3	8.1	2.9	3.6	May
8.2	1.0	6.2	6.4	7.8	4.7	11.3	6.6	1.6	2.8	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	e 5.0	3.4	e 7.6	5.3	e 9.6	6.1	2.4	e 3.0	Aug.
General government financial balance [7] As a percentage of GDP										
– 6.5	– 3.4	– 9.7	– 3.7	– 8.0	– 5.8	– 5.4	– 7.7	– 10.1	– 5.8	2020
– 1.2	0.7	– 7.8	– 2.4	– 5.8	– 2.9	– 5.4	– 4.6	– 6.9	– 2.0	2021
– 0.6	0.2	– 5.8	0.0	– 3.2	– 0.4	– 2.0	– 3.0	– 4.8	2.1	2022
General government debt [7] As a percentage of GDP										
46.3	24.5	52.9	54.7	82.9	134.9	58.9	79.6	120.4	113.8	2020
43.7	24.5	55.1	52.5	82.3	125.4	61.0	74.5	118.3	101.2	2021
38.4	24.6	53.4	51.0	78.4	113.9	57.8	69.9	113.2	86.5	2022

quarterly data seasonally adjusted. Data collection at the beginning of the quarter. **4** Monthly data seasonally adjusted. **5** Influenced by a temporary reduction of value added tax between July and December 2020. **6** Including Croatia from 2023 onwards. **7** According to Maastricht Treaty definition.

II. Overall monetary survey in the euro area

1. The money stock and its counterparts *

a) Euro area [1]

€ billion

Period	I. Lending to non-banks (non-MFIs) in the euro area					II. Net claims on non-euro area residents			III. Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
		Enterprises and households		General government									
	Total	Total	of which: Securities	Total	of which: Securities	Total	Claims on non-euro area residents	Liabilities to non-euro area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) [2]	Capital and reserves [3]
2021 Dec.	52.7	27.6	20.1	25.1	22.6	– 62.4	– 205.6	– 143.3	4.3	18.0	– 0.8	– 25.1	12.1
2022 Jan.	173.3	98.0	– 10.3	75.4	64.8	7.9	141.4	133.5	– 19.9	– 14.8	– 0.1	9.3	– 14.3
Feb.	110.9	44.4	2.0	66.5	73.8	– 14.7	82.3	97.0	– 24.6	– 12.6	– 0.4	– 3.5	– 8.1
Mar.	149.8	104.5	26.4	45.3	36.0	4.3	– 23.7	– 28.1	– 2.2	2.8	– 0.7	– 21.8	17.5
Apr.	111.9	96.8	20.2	15.2	5.2	– 101.6	– 79.2	22.3	5.5	– 10.5	– 0.2	1.5	14.7
May	107.2	65.1	– 18.8	42.1	49.5	– 51.8	40.4	92.2	– 17.8	3.1	– 3.2	– 21.2	3.6
June	116.2	83.6	– 8.8	32.6	33.5	99.5	– 25.9	– 125.4	20.3	– 4.8	– 0.4	1.0	24.4
July	29.8	58.6	– 3.0	– 28.8	– 28.8	– 27.6	63.7	91.3	4.6	– 11.7	– 0.4	– 3.6	20.3
Aug.	– 10.7	26.1	– 18.8	– 36.8	– 31.2	46.9	69.4	22.5	– 15.8	– 22.1	0.8	1.9	3.6
Sep.	86.6	83.1	– 0.1	3.4	2.2	– 53.1	– 199.8	– 146.8	12.9	– 16.4	– 0.4	3.6	26.1
Oct.	– 12.5	0.1	– 6.1	– 12.6	– 9.7	– 0.8	169.5	170.3	– 11.3	– 14.7	0.0	11.5	– 8.1
Nov.	93.0	84.0	31.0	9.0	14.3	14.6	– 40.6	– 55.2	35.8	1.7	– 0.1	34.6	– 0.4
Dec.	– 122.2	– 88.9	– 0.9	– 33.2	– 41.3	– 0.0	– 257.1	– 257.1	43.7	10.0	– 0.1	1.1	32.7
2023 Jan.	– 10.2	– 0.7	– 14.4	– 9.5	– 4.2	11.6	126.7	115.1	31.4	– 6.2	1.8	57.5	– 21.8
Feb.	7.5	– 13.3	3.2	20.9	29.8	8.5	0.4	– 8.1	12.7	– 1.3	1.3	10.0	2.7
Mar.	33.6	40.8	11.7	– 7.2	– 9.7	74.8	112.1	37.3	30.1	10.8	1.0	5.9	12.4
Apr.	– 10.7	22.8	29.5	– 33.5	– 29.2	– 21.0	– 21.4	– 0.4	9.0	9.3	1.0	4.0	– 5.2
May	0.9	46.7	33.3	– 45.7	– 50.0	1.2	22.2	21.1	35.7	– 0.3	2.0	26.6	7.4
June	1.8	– 12.3	– 13.2	14.0	20.9	119.0	18.3	– 100.7	44.5	1.2	2.5	27.3	13.5
July	– 46.5	6.1	4.7	– 52.6	– 52.2	39.8	107.7	67.9	34.1	1.0	2.5	19.0	11.6

b) German contribution

Period	I. Lending to non-banks (non-MFIs) in the euro area					II. Net claims on non-euro area residents			III. Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
		Enterprises and households		General government									
	Total	Total	of which: Securities	Total	of which: Securities	Total	Claims on non-euro area residents	Liabilities to non-euro area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) [2]	Capital and reserves [3]
2021 Dec.	12.8	10.9	6.8	2.0	4.7	– 122.9	– 47.1	75.8	– 2.3	9.1	– 0.2	– 13.2	2.0
2022 Jan.	40.4	31.0	1.4	9.4	7.5	111.9	72.2	– 39.7	– 4.0	– 1.1	– 0.8	12.6	– 14.8
Feb.	32.7	27.6	3.4	5.2	7.2	16.0	21.9	5.9	5.1	– 1.3	– 0.2	7.0	– 0.4
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	5.2	11.7	– 1.2	– 6.5	– 4.8	9.8	16.5	6.7	16.8	2.7	2.2	6.1	5.7
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	34.2	8.3	– 25.9	24.8	– 0.3	3.0	10.1	12.0

***** 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). **1** Source: ECB. **2** Excluding MFIs' portfolios. **3** After deduction of inter-MFI participations. **4** Including the counterparts of monetary liabilities of central governments. **5** Including the monetary liabilities of central governments (Post Office, Treasury). **6** In Germany, only savings deposits. **7** Paper held by residents outside the euro area has been eliminated. **8** Less German MFIs' holdings

II. Overall monetary survey in the euro area

a) Euro area [1]

IV. Deposits of central governments	V. Other factors		VI. Money stock M3 (balance I plus II less III less IV less V)										Period
	Total [4]	of which: Intra-Eurosystem liability/claim related to banknote issue	Total	Money stock M2				Deposits with an agreed maturity of up to 2 years [5]	Deposits at agreed notice of up to 3 months [5,6]	Repo transactions	Money market fund shares (net) [2,7,8]	Debt securities with maturities of up to 2 years (incl. money market paper) (net) [2,7]	
				Total	Money stock M1								
					Total	Currency in circulation	Overnight deposits [5]						
− 44.5	− 43.1	0.0	91.2	121.7	120.4	20.6	99.8	− 2.3	3.6	− 33.4	− 7.4	− 7.1	2021 Dec.
68.1	95.1	0.0	− 3.7	− 3.6	− 39.5	1.0	− 40.5	23.3	12.6	57.2	− 26.2	9.1	2022 Jan.
44.6	36.4	0.0	39.3	68.0	73.8	9.1	64.6	− 13.8	8.0	9.4	− 37.1	− 0.4	Feb.
13.7	49.0	0.0	97.1	108.4	88.1	22.5	65.6	16.3	4.0	− 17.6	− 0.2	− 2.2	Mar.
− 22.1	− 98.6	0.0	103.0	65.2	64.0	11.2	52.8	− 1.1	2.3	25.1	20.2	16.5	Apr.
− 28.9	55.4	0.0	53.6	63.4	67.3	7.8	59.6	− 15.9	11.9	4.7	− 10.1	− 5.2	May
69.6	67.9	0.0	73.2	79.5	52.3	6.6	45.7	24.1	3.1	− 32.5	− 1.0	11.1	June
− 31.2	−137.3	0.0	159.5	126.7	74.8	8.6	66.2	46.7	5.1	23.7	− 2.1	18.0	July
− 80.3	69.0	0.0	79.0	71.5	20.1	− 4.6	24.8	41.3	10.0	− 22.6	6.8	7.4	Aug.
7.3	21.4	0.0	1.5	− 1.7	− 100.9	− 1.4	− 99.5	99.8	− 0.6	− 19.5	− 8.4	21.6	Sep.
− 5.4	64.4	0.0	− 57.5	− 76.7	− 157.1	− 0.4	− 156.8	85.4	− 5.0	4.4	36.7	− 25.4	Oct.
− 10.5	− 4.3	0.0	70.3	20.8	− 30.0	− 3.5	− 26.5	59.2	− 8.3	27.4	22.3	16.6	Nov.
− 84.5	− 61.6	0.0	3.5	13.3	− 61.3	11.6	− 72.9	59.8	14.8	− 46.5	2.8	10.5	Dec.
− 38.7	123.7	0.0	− 132.9	− 149.0	− 231.2	− 13.2	− 217.9	76.0	6.2	35.1	6.6	− 8.0	2023 Jan.
20.3	25.0	0.0	− 41.8	− 63.1	− 135.2	− 3.5	− 131.7	72.1	0.0	− 2.2	− 6.4	29.7	Feb.
30.5	33.8	0.0	16.5	9.7	− 104.1	3.9	− 108.0	119.3	− 5.5	− 25.7	20.6	9.5	Mar.
− 26.5	− 14.5	0.0	− 0.8	− 17.9	− 52.5	4.1	− 56.7	46.1	− 11.4	6.7	11.5	0.1	Apr.
− 104.5	84.1	0.0	− 33.4	− 44.4	− 94.0	1.7	− 95.7	53.0	− 3.5	29.6	− 2.9	5.1	May
24.6	43.7	0.0	13.1	22.6	− 61.0	3.1	− 64.1	94.4	− 10.8	− 11.2	− 1.6	− 2.0	June
− 29.5	14.4	0.0	− 10.8	− 32.9	− 95.3	3.1	− 98.3	72.6	− 10.3	4.1	8.6	− 5.4	July

b) German contribution

IV. Deposits of central governments	V. Other factors			VI. Money stock M3 (balance I plus II less III less IV less V) [10]								Period
	Total	of which: Intra-Eurosystem liability/claim related to banknote issue [9,11]	Currency in circulation	Total	Components of the money stock							
					Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits at agreed notice of up to 3 months [6]	Repo transactions	Money market fund shares (net) [7,8]	maturities with maturities of up to 2 years (incl. money market paper)(net) [7]		
27.8	− 135.3	5.3	4.5	− 0.4	− 12.8	9.1	1.6	− 0.3	0.3	1.7		2021 Dec.
− 38.1	166.0	1.3	0.8	28.4	22.4	9.3	0.3	− 1.2	0.0	− 2.4		2022 Jan.
2.5	14.4	3.0	2.2	26.8	23.3	1.1	0.3	1.1	0.1	0.8		Feb.
− 0.1	− 13.2	5.8	4.2	− 0.1	− 7.4	8.4	− 1.6	0.5	0.2	− 0.1		Mar.
− 3.0	32.9	3.4	2.3	3.7	− 3.4	10.4	− 0.4	− 2.0	− 0.2	− 0.6		Apr.
22.5	− 30.3	3.4	2.7	15.1	22.5	− 7.4	− 1.2	0.4	0.2	0.7		May
14.9	− 37.5	3.7	0.5	29.0	19.6	7.5	− 1.6	0.6	− 0.0	2.9		June
− 38.2	55.3	− 5.3	9.1	34.6	5.7	23.6	− 1.7	4.3	0.1	2.6		July
− 24.1	− 71.1	− 11.7	12.5	67.9	56.8	13.9	− 2.4	− 1.8	− 0.1	1.4		Aug.
4.7	− 1.1	3.3	0.3	− 13.6	− 56.8	45.1	− 5.3	− 2.6	0.1	6.0		Sep.
5.1	65.9	0.1	0.1	− 5.4	− 32.1	36.8	− 3.3	− 0.2	0.1	− 6.7		Oct.
22.6	13.6	− 0.0	− 0.3	17.3	12.6	4.3	− 5.5	3.2	0.0	2.7		Nov.
− 16.3	− 24.6	2.1	2.4	− 24.6	− 37.6	19.0	− 4.1	− 2.0	0.1	0.0		Dec.
− 42.9	147.9	2.3	− 5.1	− 0.2	− 37.1	38.4	− 6.5	− 0.1	− 0.2	5.4		2023 Jan.
12.9	50.9	1.1	− 0.7	0.4	− 33.2	32.6	− 8.0	1.3	− 0.1	7.8		Feb.
27.1	− 34.8	2.3	0.9	− 15.5	− 45.7	31.8	− 10.4	− 0.2	0.3	8.7		Mar.
− 39.0	86.7	1.9	0.7	6.3	− 11.7	25.3	− 10.2	0.7	0.2	1.9		Apr.
− 11.8	3.1	2.6	0.9	6.9	− 6.1	18.4	− 10.3	− 0.2	− 0.1	5.2		May
− 9.8	8.4	1.7	1.1	0.8	− 29.2	36.7	− 10.0	− 0.3	− 0.0	3.6		June
− 5.8	20.1	1.6	1.3	0.2	− 22.5	31.5	− 10.3	0.3	0.3	1.0		July

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

II. Overall monetary survey in the euro area

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

End of month	Total assets or liabilities	Assets										
		Lending to non-banks (non-MFIs) in the euro area									Claims on non-euro area residents	Other assets
			Enterprises and households				General government					
		Total	Total	Loans	Debt securities 2	Shares and other equities	Total	Loans	Debt securities 3			
	Euro area (€ billion) 1											
2021 June	30,989.4	20,890.5	14,652.6	12,234.6	1,529.8	888.3	6,237.8	1,004.8	5,233.1	6,398.7	3,700.3	
July	31,313.9	21,028.4	14,708.1	12,278.0	1,543.4	886.7	6,320.4	1,011.3	5,309.1	6,504.5	3,781.0	
Aug.	31,438.2	21,047.9	14,684.9	12,261.1	1,533.4	890.4	6,363.1	1,002.3	5,360.8	6,653.6	3,736.6	
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.	33,866.7	21,792.9	15,515.8	13,124.7	1,555.4	835.7	6,277.1	998.9	5,278.2	6,873.2	5,200.6	
2023 Jan.	33,828.5	21,883.5	15,553.3	13,171.9	1,545.6	835.8	6,330.2	1,000.3	5,330.0	6,982.9	4,962.1	
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	5,251.5	
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	4,996.0	
May	34,134.1	21,917.1	15,648.8	13,183.8	1,595.6	869.4	6,268.4	995.4	5,272.9	7,152.5	5,064.5	
June	34,050.3	21,903.4	15,626.2	13,177.9	1,577.9	870.4	6,277.1	988.5	5,288.7	7,082.2	5,064.7	
July	34,265.5	21,852.9	15,629.5	13,174.9	1,579.5	875.1	6,223.5	988.2	5,235.2	7,169.2	5,243.4	
	German contribution (€ billion)											
2021 June	7,277.1	5,009.8	3,786.4	3,290.4	220.8	275.2	1,223.4	282.3	941.1	1,325.1	942.1	
July	7,362.7	5,062.4	3,808.5	3,310.2	221.9	276.4	1,253.9	284.4	969.5	1,317.4	982.9	
Aug.	7,395.2	5,087.3	3,824.6	3,325.1	221.4	278.1	1,262.8	280.8	982.0	1,336.0	971.9	
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	8,612.3	5,390.9	4,218.3	3,686.3	252.1	279.9	1,172.6	286.1	886.4	1,468.3	1,753.1	
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	

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

II. Overall monetary survey in the euro area

Liabilities										
	Deposits of non-banks (non-MFIs) in the euro area									
			Enterprises and households							
					With agreed maturities of			At agreed notice of [6]		
Currency in circulation [4]	Total	of which: in euro [5]	Total	Overnight	up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	End of month
										Euro area (€ billion) [1]
1,423.2	15,270.2	13,971.9	14,119.8	8,947.0	697.4	150.4	1,822.0	2,466.2	36.8	2021 June
1,437.6	15,380.5	14,062.4	14,230.8	9,052.5	705.3	153.6	1,817.0	2,466.2	36.3	July
1,439.2	15,441.7	14,094.7	14,252.2	9,086.6	706.2	151.2	1,809.9	2,462.4	35.9	Aug.
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	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	9,521.8	993.0	130.3	1,741.7	2,522.3	27.6	Oct.
1,533.7	16,084.9	14,722.7	14,917.6	9,457.0	1,042.9	134.6	1,741.1	2,514.5	27.6	Nov.
1,545.3	15,997.1	14,765.9	14,929.6	9,389.2	1,099.5	133.9	1,749.5	2,530.0	27.6	Dec.
1,533.4	15,876.9	14,667.4	14,844.9	9,228.1	1,163.7	146.1	1,746.4	2,532.0	28.7	2023 Jan.
1,529.9	15,843.6	14,625.0	14,773.2	9,083.9	1,223.7	157.3	1,746.5	2,531.8	30.0	Feb.
1,533.8	15,891.6	14,649.1	14,788.4	8,989.9	1,311.7	174.0	1,756.9	2,524.7	31.1	Mar.
1,537.9	15,848.9	14,649.2	14,784.7	8,939.0	1,346.2	187.9	1,765.7	2,513.9	32.1	Apr.
1,539.7	15,718.1	14,616.7	14,756.8	8,855.8	1,387.7	200.0	1,768.2	2,510.9	34.2	May
1,542.7	15,760.6	14,649.1	14,756.0	8,759.3	1,455.7	218.6	1,768.3	2,517.0	37.2	June
1,545.9	15,694.3	14,617.6	14,723.7	8,665.7	1,511.2	232.0	1,768.5	2,506.7	39.6	July
										German contribution (€ billion)
325.1	4,311.0	4,035.3	3,890.5	2,619.4	139.3	31.9	537.5	537.0	25.5	2021 June
328.8	4,313.9	4,047.3	3,911.3	2,645.8	136.0	31.4	536.0	536.7	25.2	July
329.0	4,333.1	4,065.2	3,923.1	2,659.1	135.6	31.3	535.7	536.4	25.0	Aug.
329.8	4,340.5	4,064.1	3,919.8	2,662.1	132.2	31.2	533.6	535.8	24.8	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	4,470.7	4,257.0	4,104.8	2,647.5	373.8	50.3	541.8	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	4,455.2	4,258.4	4,105.2	2,603.2	426.7	57.6	540.7	440.7	36.2	July

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

II. Overall monetary survey in the euro area

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

End of month	Liabilities (cont'd)												
	Deposits of non-banks (non-MFIs) in the euro area (cont'd)								Repo transactions with non-banks in the euro area		Money market fund shares (net) [3]	Debt securities	
	General government												
		Other general government											
				With agreed maturities of			At agreed notice of [2]						
	Central government	Total	Overnight	up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	Total	of which: Enterprises and households		Total	of which: Denominated in euro
	Euro area (€ billion) [1]												
2021 June	709.3	441.2	314.0	46.6	16.3	42.0	18.8	3.5	245.8	245.8	600.5	1,982.6	1,333.7
July	709.6	440.1	313.9	45.6	16.6	42.0	18.6	3.5	254.6	254.5	622.6	1,999.4	1,334.0
Aug.	736.1	453.5	329.1	43.9	17.0	42.0	18.0	3.4	243.0	243.0	628.1	1,988.5	1,334.0
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	288.6	125.7	28.4	39.6	14.7	3.6	255.3	255.2	671.9	2,257.1	1,551.2
Apr.	576.2	488.0	277.8	123.3	29.7	39.4	14.2	3.6	261.7	261.3	683.3	2,253.0	1,560.9
May	471.5	489.8	277.1	126.7	29.3	39.4	13.8	3.5	291.9	287.8	680.4	2,299.9	1,590.5
June	496.0	508.6	287.8	134.7	29.4	39.3	14.0	3.4	280.4	280.3	678.9	2,318.9	1,602.5
July	466.5	504.1	281.1	137.7	28.4	39.4	14.0	3.5	284.1	283.4	687.6	2,404.2	1,646.1
	German contribution (€ billion)												
2021 June	179.3	241.2	152.9	39.9	13.0	32.8	2.4	0.2	9.0	9.0	2.3	515.5	294.6
July	167.3	235.3	148.0	38.9	13.3	32.5	2.4	0.2	9.6	9.6	2.2	518.3	295.1
Aug.	168.1	241.8	155.7	37.3	13.9	32.4	2.4	0.2	9.7	9.7	2.2	522.4	303.1
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	670.7	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	90.0	260.0	96.6	109.2	23.7	29.5	0.9	0.1	7.6	7.6	2.9	680.0	457.6

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

II. Overall monetary survey in the euro area

issued (net) [3]						Other liability items		Memo item: Monetary aggregates [7] (from 2002 German contribution excludes currency in circulation)					
With maturities of													
up to 1 year [4]	over 1 year and up to 2 years	over 2 years	Liabilities to non-euro area residents [5]	Capital and reserves [6]	Excess of inter-MFI liabilities	Total [8]	of which: Intra-Eurosystem-liability/ claim related to banknote issue [9]	M1 [10]	M2 [11]	M3 [12]	Monetary capital formation [13]	Monetary liabilities of central governments (Post Office, Treasury) [14]	End of month
Euro area (€ billion) [1]													
8.1	16.1	1,958.5	4,957.1	2,979.9	26.4	3,503.6	0.0	10,840.5	14,260.2	14,997.7	6,842.7	180.3	2021 June
17.0	17.1	1,965.3	5,043.1	3,024.8	1.1	3,550.3	0.0	10,960.7	14,390.6	15,167.9	6,888.8	180.9	July
12.0	16.3	1,960.3	5,189.9	3,024.5	– 15.9	3,499.0	0.0	11,013.2	14,436.0	15,208.7	6,876.0	182.3	Aug.
15.9	17.7	1,979.7	5,212.8	2,997.6	– 16.5	3,480.9	0.0	11,076.3	14,484.8	15,233.7	6,864.2	187.4	Sep.
23.0	17.6	1,999.5	5,409.6	2,999.7	– 49.4	3,483.7	0.0	11,143.4	14,565.2	15,366.5	6,874.5	188.2	Oct.
19.3	17.8	2,009.6	5,499.4	3,037.4	1.1	3,681.3	0.0	11,226.8	14,637.9	15,451.7	6,912.5	189.7	Nov.
12.3	18.0	1,989.3	5,370.5	3,026.8	12.7	3,371.8	0.0	11,346.9	14,759.5	15,543.1	6,899.2	195.0	Dec.
22.0	18.5	2,008.7	5,541.7	3,001.7	22.9	3,716.5	0.0	11,310.7	14,760.1	15,545.1	6,907.4	196.0	2022 Jan.
33.4	5.7	2,005.7	5,629.5	2,994.0	16.8	3,757.2	0.0	11,386.8	14,829.4	15,584.4	6,883.9	195.0	Feb.
30.7	6.2	1,989.8	5,610.2	3,003.0	38.0	3,991.1	0.0	11,476.3	14,939.5	15,683.4	6,879.4	195.1	Mar.
39.0	16.2	2,018.6	5,747.7	2,979.2	– 2.7	4,402.9	0.0	11,556.5	15,025.5	15,810.2	6,876.8	197.2	Apr.
34.0	15.6	1,988.4	5,795.3	2,915.9	15.6	4,332.0	0.0	11,618.3	15,081.4	15,855.4	6,782.0	199.0	May
47.8	14.4	2,007.0	5,719.3	2,905.2	25.9	4,656.7	0.0	11,679.1	15,172.2	15,942.0	6,786.6	199.4	June
15.1	16.4	2,059.5	5,862.8	2,970.9	7.7	4,320.5	0.0	11,761.8	15,310.5	16,065.4	6,894.6	203.9	July
16.7	19.0	2,077.8	5,914.8	2,890.5	33.9	4,808.0	0.0	11,775.4	15,377.1	16,136.7	6,812.0	196.7	Aug.
34.9	19.5	2,099.1	5,898.7	2,845.0	16.1	5,114.8	0.0	11,681.0	15,419.3	16,179.6	6,773.5	195.9	Sep.
3.8	24.0	2,102.8	6,038.5	2,819.3	38.9	4,996.2	0.0	11,519.5	15,336.1	16,114.0	6,736.2	196.0	Oct.
23.7	22.8	2,112.5	5,881.3	2,857.3	66.8	4,700.0	0.0	11,474.5	15,337.0	16,165.7	6,782.4	199.7	Nov.
31.7	23.2	2,111.2	5,553.4	2,817.9	57.5	4,830.1	0.0	11,396.7	15,330.3	16,146.7	6,749.5	192.2	Dec.
17.6	27.8	2,159.4	5,636.6	2,861.7	85.2	4,688.3	0.0	11,214.6	15,230.8	16,062.3	6,840.5	191.1	2023 Jan.
47.0	30.4	2,181.8	5,670.8	2,810.9	81.4	4,986.3	0.0	11,082.0	15,172.7	16,028.3	6,813.2	191.8	Feb.
54.0	30.4	2,172.6	5,657.4	2,893.2	89.4	4,705.3	0.0	10,971.3	15,173.5	16,032.9	6,897.1	182.0	Mar.
50.1	32.9	2,170.0	5,633.5	2,885.4	113.5	4,724.8	0.0	10,914.2	15,152.2	16,026.9	6,896.2	182.4	Apr.
57.0	32.8	2,210.1	5,725.5	2,908.2	158.1	4,812.3	0.0	10,827.7	15,119.1	16,007.2	6,963.6	178.1	May
55.8	32.9	2,230.2	5,583.1	2,885.6	148.8	4,851.3	0.0	10,744.8	15,136.6	16,015.9	6,964.0	177.5	June
51.7	31.1	2,321.4	5,592.4	2,906.6	187.5	4,962.9	0.0	10,646.5	15,099.0	15,999.8	7,078.9	176.3	July
German contribution (€ billion)													
9.8	6.9	498.8	1,088.8	775.4	– 1,149.4	1,724.5	485.9	2,772.3	3,535.7	3,563.7	1,870.2	0.0	2021 June
9.8	7.0	501.5	1,031.5	795.8	– 1,075.6	1,767.0	490.0	2,793.9	3,552.6	3,581.2	1,891.2	0.0	July
12.7	6.5	503.2	1,068.1	793.5	– 1,088.4	1,754.6	492.9	2,814.8	3,571.7	3,602.8	1,889.9	0.0	Aug.
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	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.
41.3	19.6	609.9	1,122.4	715.6	– 1,038.1	2,660.7	529.0	2,752.4	3,762.9	3,834.1	1,927.5	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	20.1	615.4	1,070.5	724.0	– 996.4	2,835.8	532.2	2,699.8	3,758.6	3,833.7	1,946.0	0.0	July

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 [1]	Liquidity-providing factors					Liquidity-absorbing factors						
		Monetary policy operations of the Eurosystem										
	Net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations [3]	Deposit facility	Other liquidity-absorbing operations [4]	Banknotes in circulation [5]	Central government deposits	Other factors (net) [6]	Credit institutions` current account balances (including minimum reserves) [7]	Base money [8]
Eurosystem [2]												
2021 Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	826.7	0.2	2,213.2	0.0	4,378.9	766.6	0.0	1,499.9	635.7	790.4	3,726.2	5,992.8
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
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
Deutsche Bundesbank												
2021 Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	199.0	0.1	436.7	0.0	950.8	210.7	0.0	365.0	204.3	– 240.8	1,045.3	1,621.0
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
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

Discrepancies may arise from rounding. * The banking system's liquidity position is defined as the current account holdings in euro of euro area credit institutions with the Eurosystem. Amounts are derived from the consolidated financial statement of the Eurosystem and the financial statement of the Bundesbank. **1** Figures are daily averages for the reserve maintenance period ending in the month indicated. Following the changeover in the frequency of Governing Council monetary policy meetings to a six-week cycle, a reserve maintenance period no longer ends in every month. No figures are available in such cases. **2** Source: ECB. **3** Includes liquidity provided under the Eurosystem's asset purchase programmes. **4** From August 2009 includes liquidity absorbed as a result of the Eurosystem's foreign exchange swap operations. **5** From 2002 euro banknotes and other banknotes which have been issued by the national central banks of the Eurosystem and which are still in circulation. In accordance with the accounting procedure chosen by the Eurosystem for the issue of euro banknotes, a share of 8% of the total value of the euro banknotes in circulation is

II. Overall monetary survey in the euro area

Flows

Liquidity-providing factors					Liquidity-absorbing factors							
	Monetary policy operations of the Eurosystem											
Net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations [3]	Deposit facility	Other liquidity-absorbing operations [4]	Banknotes in circulation [5]	Central government deposits	Other factors (net) [6]	Credit institutions` current account balances (including minimum reserves) [7]	Base money [8]	Reserve maintenance period ending in [1]
Eurosystem [2]												
+ 5.0	+ 0.1	+ 17.2	± 0.0	+ 134.4	+ 30.0	± 0.0	+ 14.1	− 16.6	+ 55.9	+ 73.1	+ 117.3	2021 Aug.
												Sep.
+ 8.4	± 0.0	− 3.3	± 0.0	+ 133.4	− 28.1	± 0.0	+ 7.5	+ 35.6	+ 43.3	+ 80.3	+ 59.6	Oct.
+ 4.1	± 0.0	− 1.1	± 0.0	+ 143.3	+ 6.5	± 0.0	+ 14.0	− 43.0	+ 132.0	+ 36.8	+ 57.3	Nov.
												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.
												Mar.
+ 26.0	+ 0.1	− 1.5	± 0.0	+ 47.2	− 31.1	± 0.0	+ 25.3	+ 25.2	+ 25.6	+ 26.5	+ 20.8	Apr.
+ 21.0	+ 0.1	− 1.0	± 0.0	+ 49.9	− 33.6	± 0.0	+ 15.6	− 43.7	+ 12.4	+ 118.8	+ 100.9	May
												June
+ 9.5	+ 0.5	− 49.4	± 0.0	+ 19.7	− 2.6	± 0.0	+ 12.5	+ 43.5	+ 28.9	− 102.8	− 93.0	July
+ 6.4	+ 0.7	− 24.5	± 0.0	− 4.0	+ 28.3	± 0.0	− 18.7	−113.7	+ 91.2	− 7.2	+ 2.5	Aug.
												Sep.
+ 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	Oct.
+ 4.6	− 2.1	− 171.7	± 0.0	− 2.2	+ 31.5	± 0.0	− 2.9	− 44.2	− 37.5	− 118.2	− 89.5	Nov.
												Dec.
− 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.
												Mar.
+ 28.2	+ 0.5	− 115.6	+ 0.1	− 33.4	− 106.9	± 0.0	+ 5.9	− 19.6	+ 8.7	− 8.4	− 109.4	Apr.
+ 3.2	+ 0.2	− 17.2	± 0.0	− 21.5	+ 130.3	± 0.0	+ 3.9	−104.2	− 63.9	− 1.1	+ 133.1	May
												June
− 20.4	+ 9.3	− 418.5	± 0.0	− 31.1	− 422.0	± 0.0	+ 3.3	− 2.0	− 36.1	− 4.2	− 422.8	July
												Aug.
Deutsche Bundesbank												
+ 1.6	+ 0.1	+ 2.4	+ 0.0	+ 32.3	+ 6.5	± 0.0	+ 3.0	− 2.5	+ 29.9	− 0.9	+ 8.6	2021 Aug.
												Sep.
+ 1.3	+ 0.0	+ 2.4	− 0.0	+ 27.8	− 6.4	± 0.0	+ 2.4	+ 13.4	+ 5.7	+ 16.3	+ 12.3	Oct.
+ 1.0	− 0.1	+ 1.2	− 0.0	+ 37.3	+ 2.1	± 0.0	+ 3.5	+ 2.7	+ 15.7	+ 15.6	+ 21.1	Nov.
												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.
												Mar.
+ 8.2	− 0.0	− 0.9	− 0.0	+ 10.8	− 14.2	± 0.0	+ 6.8	+ 5.6	+ 4.6	+ 15.2	+ 7.9	Apr.
+ 6.6	+ 0.1	− 0.6	− 0.0	+ 18.7	− 7.7	± 0.0	+ 3.0	+ 0.2	+ 6.0	+ 24.1	+ 19.4	May
												June
+ 1.3	+ 0.2	− 11.1	− 0.0	− 3.1	− 4.1	± 0.0	+ 2.4	+ 18.0	+ 7.7	− 37.7	− 39.5	July
+ 0.4	+ 0.0	− 5.5	− 0.0	− 7.5	+ 42.7	± 0.0	− 10.8	− 57.1	+ 13.5	− 0.9	+ 31.0	Aug.
												Sep.
− 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	Oct.
+ 0.7	− 0.4	− 48.0	+ 0.0	+ 7.7	+ 42.7	± 0.0	− 0.1	− 6.2	− 11.0	− 65.4	− 22.9	Nov.
												Dec.
− 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.
												Mar.
+ 10.3	+ 0.2	− 12.7	+ 0.0	− 11.0	− 35.7	± 0.0	+ 1.2	+ 4.1	+ 21.4	− 4.1	− 38.5	Apr.
+ 2.6	+ 0.1	− 1.3	+ 0.0	− 9.3	+ 28.3	± 0.0	+ 1.4	− 18.7	− 20.7	+ 1.9	+ 31.5	May
												June
− 5.6	+ 0.8	− 56.5	− 0.0	− 8.0	− 80.8	± 0.0	+ 0.4	− 4.7	+ 19.3	− 3.5	− 83.9	July
												Aug.

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

III. Consolidated financial statement of the Eurosystem

1. Assets *

€ billion

As at reporting date	Total assets	Gold and gold receivables	Claims on non-euro area residents denominated in foreign currency			Claims on euro area residents denominated in foreign currency	Claims on non-euro area residents denominated in euro		
			Total	Receivables from the IMF	Balances with banks, security investments, external loans and other external assets		Total	Balances with banks, security investments and loans	Claims arising from the credit facility under ERM II
Eurosystem [1]									
2023 Feb. 10	7,872.2	593.0	503.7	230.2	273.5	17.1	12.3	12.3	–
17	7,873.6	593.0	505.3	230.2	275.0	16.6	12.3	12.3	–
24	7,839.4	593.0	507.8	230.5	277.3	15.6	12.4	12.4	–
Mar. 3	7,830.8	593.0	507.6	230.5	277.1	15.1	12.1	12.1	–
10	7,829.4	593.0	506.6	230.5	276.1	15.4	12.5	12.5	–
17	7,831.9	593.0	507.7	230.5	277.2	14.8	13.0	13.0	–
24	7,835.9	593.0	508.7	230.5	278.2	14.0	14.0	14.0	–
31	7,729.6	632.9	501.7	229.1	272.6	15.2	13.6	13.6	–
Apr. 7	7,729.3	632.9	501.5	229.1	272.4	14.4	12.7	12.7	–
14	7,730.9	632.9	501.8	229.1	272.7	13.9	12.6	12.6	–
21	7,714.2	632.9	498.8	229.1	269.6	15.7	12.6	12.6	–
28	7,719.8	632.9	499.0	229.4	269.6	14.2	12.9	12.9	–
May 5	7,716.9	632.9	500.7	230.3	270.5	13.2	12.8	12.8	–
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	–
Deutsche Bundesbank									
2023 Feb. 10	2,772.5	184.0	92.1	58.1	34.0	0.0	–	–	–
17	2,760.1	184.0	91.8	58.1	33.7	0.0	–	–	–
24	2,709.2	184.0	92.9	58.1	34.9	0.0	–	–	–
Mar. 3	2,736.1	184.0	92.3	58.1	34.2	0.0	–	–	–
10	2,725.7	184.0	92.0	58.1	33.9	0.0	–	–	–
17	2,738.8	184.0	92.3	58.1	34.3	0.0	–	–	–
24	2,713.8	184.0	92.5	58.1	34.4	0.0	0.3	0.3	–
31	2,775.1	196.4	91.7	57.4	34.3	0.0	0.3	0.3	–
Apr. 7	2,723.0	196.4	91.6	57.4	34.2	0.0	0.0	0.0	–
14	2,718.4	196.4	91.6	57.4	34.2	0.0	–	–	–
21	2,673.2	196.4	91.8	57.4	34.3	0.0	–	–	–
28	2,675.9	196.4	91.8	57.4	34.4	0.0	–	–	–
May 5	2,683.5	196.4	91.9	57.8	34.1	0.0	–	–	–
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	–	–	–

***** The consolidated financial statement of the Eurosystem comprises the financial statement of the European Central Bank (ECB) and the financial statements of the national central banks of the euro area Member States (NCBs). The balance sheet items for foreign currency, securities, gold and financial instruments are valued at the end of the quarter. **1** Source: ECB.

III. Consolidated financial statement of the Eurosystem

Lending to euro area credit institutions related to monetary policy operations denominated in euro							Other claims on euro area credit institutions denominated in euro	Securities of euro area residents in euro			General government debt denominated in euro	Other assets	As at reporting date
Total	Main refinancing operations	Longer-term refinancing operations	Fine-tuning reverse operations	Structural reverse operations	Marginal lending facility	Credits related to margin calls		Total	Securities held for monetary policy purposes	Other securities			
Eurosystem [1]													
1,259.0	1.0	1,258.0	–	–	0.1	–	27.6	5,121.5	4,945.2	176.3	21.5	316.5	2023 Feb. 10
1,258.8	0.8	1,258.0	–	–	0.0	–	35.4	5,119.0	4,942.6	176.5	21.5	311.6	17
1,222.2	1.2	1,220.9	–	–	0.0	–	36.2	5,121.0	4,942.9	178.2	21.5	309.7	24
1,221.8	0.8	1,220.9	–	–	0.0	–	29.5	5,116.0	4,937.6	178.3	21.5	314.1	Mar. 3
1,221.8	0.9	1,220.9	–	–	–	–	25.8	5,115.3	4,936.4	178.9	21.5	317.4	10
1,221.9	1.0	1,220.9	–	–	0.0	–	40.2	5,108.7	4,930.1	178.5	21.5	311.1	17
1,222.0	1.0	1,220.9	–	–	0.1	–	45.3	5,106.3	4,928.2	178.2	21.5	311.1	24
1,102.4	1.7	1,100.5	–	–	0.2	–	41.1	5,087.5	4,909.7	177.9	21.5	313.8	31
1,101.7	1.2	1,100.5	–	–	0.0	–	36.9	5,093.2	4,914.8	178.4	21.5	314.5	Apr. 7
1,102.1	1.6	1,100.5	–	–	–	–	35.7	5,083.8	4,905.1	178.7	21.5	326.6	14
1,102.0	1.5	1,100.5	–	–	0.0	–	37.1	5,076.0	4,895.0	181.0	21.5	317.6	21
1,102.6	1.9	1,100.4	–	–	0.2	–	33.1	5,078.5	4,895.7	182.8	21.5	325.2	28
1,101.6	1.2	1,100.4	–	–	0.0	–	37.1	5,072.9	4,892.5	180.4	21.5	324.3	May 5
1,101.8	1.3	1,100.4	–	–	–	–	37.2	5,081.4	4,900.1	181.2	21.5	327.5	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
Deutsche Bundesbank													
222.5	0.4	222.1	–	–	0.1	–	7.7	1,084.1	1,084.1	–	4.4	1,177.6	2023 Feb. 10
222.4	0.3	222.1	–	–	0.0	–	7.8	1,078.1	1,078.1	–	4.4	1,171.5	17
208.9	0.7	208.2	–	–	0.0	–	7.8	1,075.4	1,075.4	–	4.4	1,135.7	24
208.6	0.4	208.2	–	–	0.0	–	9.2	1,077.8	1,077.8	–	4.4	1,159.8	Mar. 3
208.6	0.4	208.2	–	–	0.0	–	7.3	1,072.3	1,072.3	–	4.4	1,157.0	10
208.6	0.4	208.2	–	–	0.0	–	7.4	1,072.3	1,072.3	–	4.4	1,169.7	17
208.7	0.6	208.2	–	–	–	–	8.5	1,071.0	1,071.0	–	4.4	1,144.2	24
199.6	0.8	198.8	–	–	0.1	–	7.1	1,072.4	1,072.4	–	4.4	1,203.2	31
199.2	0.4	198.8	–	–	0.0	–	8.3	1,074.3	1,074.3	–	4.4	1,148.8	Apr. 7
199.2	0.5	198.8	–	–	0.0	–	8.4	1,066.2	1,066.2	–	4.4	1,152.0	14
199.3	0.5	198.8	–	–	0.0	–	7.8	1,057.6	1,057.6	–	4.4	1,115.9	21
200.2	1.1	198.9	–	–	0.2	–	9.0	1,059.2	1,059.2	–	4.4	1,114.8	28
199.7	0.8	198.9	–	–	0.0	–	8.2	1,061.6	1,061.6	–	4.4	1,121.4	May 5
199.7	0.8	198.9	–	–	–	–	5.7	1,064.2	1,064.2	–	4.4	1,137.4	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

III. Consolidated financial statement of the Eurosystem

2. Liabilities *

€ billion

As at reporting date		Total liabilities	Banknotes in circulation [1]	Liabilities to euro area credit institutions related to monetary policy operations denominated in euro						Other liabilities to euro area credit institutions denominated in euro	Debt certificates issued	Liabilities to other euro area residents denominated in euro		
				Total	Current accounts (covering the minimum reserve system)	Deposit facility	Fixed-term deposits	Fine-tuning reverse operations	Deposits related to margin calls			Total	General government	Other liabilities
Eurosystem [3]														
2023 Feb.	10	7,872.2	1,555.7	4,320.4	180.6	4,138.6	–	–	1.3	34.4	–	452.5	356.1	96.4
	17	7,873.6	1,554.2	4,333.7	165.0	4,167.4	–	–	1.3	32.6	–	466.6	372.5	94.1
	24	7,839.4	1,553.8	4,285.3	172.0	4,112.0	–	–	1.3	29.5	–	496.1	402.5	93.6
Mar.	3	7,830.8	1,554.0	4,310.5	170.7	4,138.5	–	–	1.3	37.1	–	455.8	361.6	94.2
	10	7,829.4	1,553.4	4,336.5	176.9	4,158.3	–	–	1.3	29.7	–	444.8	354.8	90.0
	17	7,831.9	1,554.5	4,175.9	234.9	3,939.8	–	–	1.3	33.6	–	570.5	425.4	145.1
	24	7,835.9	1,553.3	4,223.7	174.9	4,047.5	–	–	1.3	37.0	–	510.0	418.0	92.1
	31	7,729.6	1,556.6	4,034.3	197.4	3,836.6	–	–	0.4	61.1	–	497.4	400.9	96.5
Apr.	7	7,729.3	1,563.7	4,167.8	158.7	4,008.7	–	–	0.4	36.0	–	442.4	350.8	91.6
	14	7,730.9	1,561.1	4,172.9	155.7	4,016.8	–	–	0.4	35.4	–	446.7	356.9	89.8
	21	7,714.2	1,558.8	4,181.6	164.9	4,016.3	–	–	0.4	31.9	–	442.2	354.7	87.5
	28	7,719.8	1,563.6	4,163.5	181.2	3,981.9	–	–	0.4	35.3	–	471.3	381.1	90.2
May	5	7,716.9	1,563.6	4,271.2	204.8	4,066.1	–	–	0.3	37.0	–	362.4	275.9	86.5
	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
Deutsche Bundesbank														
2023 Feb.	10	2,772.5	375.0	1,340.8	52.9	1,286.6	–	–	1.3	9.2	–	79.0	52.2	26.8
	17	2,760.1	374.8	1,325.5	44.6	1,279.6	–	–	1.3	9.5	–	98.9	72.2	26.6
	24	2,709.2	374.7	1,301.2	45.3	1,254.6	–	–	1.3	8.6	–	92.0	66.5	25.5
Mar.	3	2,736.1	374.2	1,318.6	45.9	1,271.5	–	–	1.3	13.2	–	94.8	70.6	24.2
	10	2,725.7	374.4	1,333.4	50.2	1,281.9	–	–	1.3	8.2	–	78.7	55.5	23.2
	17	2,738.8	374.9	1,275.0	62.5	1,211.3	–	–	1.2	10.5	–	127.7	103.7	24.0
	24	2,713.8	374.7	1,276.1	48.7	1,226.2	–	–	1.2	9.1	–	104.1	80.2	24.0
	31	2,775.1	374.3	1,256.6	53.3	1,203.0	–	–	0.3	18.4	–	125.6	100.9	24.7
Apr.	7	2,723.0	377.3	1,283.3	38.8	1,244.1	–	–	0.3	10.7	–	102.0	77.7	24.3
	14	2,718.4	376.1	1,289.6	37.7	1,251.5	–	–	0.3	12.3	–	96.4	73.8	22.7
	21	2,673.2	375.4	1,265.2	42.6	1,222.3	–	–	0.3	10.4	–	80.4	60.3	20.1
	28	2,675.9	376.0	1,262.9	50.9	1,211.7	–	–	0.3	12.4	–	91.7	68.5	23.2
May	5	2,683.5	375.9	1,298.9	66.2	1,232.5	–	–	0.3	13.0	–	70.5	50.6	19.9
	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

***** 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 quarrter. **1** In accordance with the accounting procedure chosen by the Eurosystem for the issue of euro banknotes, a share of 8% of the total value of the euro banknotes in circulation is allocated to the ECB on a monthy 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 [2]	Intra-Eurosystem liability related to euro banknote issue [1]	Revaluation accounts	Capital and reserves	As at reporting date
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
Eurosystem [3]										
311.5	10.9	5.1	5.1	–	182.4	293.7	–	589.1	116.4	2023 Feb. 10
289.6	10.9	5.0	5.0	–	182.4	293.0	–	589.1	116.4	17
278.8	10.8	6.1	6.1	–	182.4	290.9	–	589.1	116.4	24
280.7	10.3	5.6	5.6	–	182.4	284.6	–	589.1	120.7	Mar. 3
275.2	10.3	5.3	5.3	–	182.4	282.0	–	589.1	120.7	10
305.0	10.4	5.4	5.4	–	182.4	284.3	–	589.1	120.7	17
316.5	10.9	5.3	5.3	–	182.4	286.9	–	589.1	120.8	24
357.4	11.1	5.3	5.3	–	180.3	283.8	–	622.2	120.2	31
305.8	11.2	5.3	5.3	–	180.3	274.6	–	622.2	120.2	Apr. 7
298.1	11.6	5.1	5.1	–	180.3	277.4	–	622.2	120.2	14
287.2	11.6	5.1	5.1	–	180.3	273.2	–	622.2	120.2	21
271.6	11.0	5.5	5.5	–	180.3	275.5	–	622.2	120.2	28
265.4	11.0	5.2	5.2	–	180.3	278.5	–	622.2	120.2	May 5
255.7	11.3	5.1	5.1	–	180.3	277.0	–	622.2	120.2	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
Deutsche Bundesbank										
177.2	0.2	0.1	0.1	–	47.0	35.3	521.2	181.7	5.7	2023 Feb. 10
160.3	0.2	– 0.0	– 0.0	–	47.0	35.3	521.2	181.7	5.7	17
141.3	0.2	0.9	0.9	–	47.0	34.7	521.2	181.7	5.7	24
141.9	0.0	0.5	0.5	–	47.0	36.4	522.2	181.7	5.5	Mar. 3
138.4	0.0	– 0.0	– 0.0	–	47.0	35.9	522.2	181.7	5.5	10
158.7	0.0	– 0.0	– 0.0	–	47.0	35.4	522.2	181.7	5.5	17
158.4	0.0	– 0.0	– 0.0	–	47.0	34.8	522.2	181.7	5.5	24
196.8	0.2	0.0	0.0	–	46.5	33.4	524.5	193.2	5.5	31
147.6	0.2	0.0	0.0	–	46.5	32.1	524.5	193.2	5.5	Apr. 7
142.6	0.2	0.0	0.0	–	46.5	31.4	524.5	193.2	5.5	14
141.7	0.2	0.2	0.2	–	46.5	30.0	524.5	193.2	5.5	21
131.2	0.1	0.3	0.3	–	46.5	29.6	526.4	193.2	5.5	28
122.1	0.1	0.0	0.0	–	46.5	31.3	526.4	193.2	5.5	May 5
114.2	0.1	0.0	0.0	–	46.5	34.4	526.4	193.2	5.5	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

euro banknote issue". The remaining 92% of the value of the euro banknotes in circulation is allocated, likewise on an 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". **2** For the Deutsche Bundesbank: including DEM banknotes still in circulation. **3** Source: ECB.

IV. Banks

1. Assets and liabilities of monetary financial institutions (excluding the 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		
												Enterprises and households	
			Total	Total	Loans	Securities issued by banks	Total	Loans	Securities issued by banks	Total	Total	Total	Loans
													End of year or month
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
2021 Oct.	9,395.0	47.8	2,979.8	2,490.1	2,221.1	269.0	489.7	356.2	133.5	4,322.0	3,832.5	3,437.3	3,117.5
Nov.	9,495.5	48.1	3,008.0	2,519.5	2,253.4	266.1	488.5	355.4	133.1	4,352.1	3,856.4	3,459.8	3,138.9
Dec.	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 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
													Changes 3
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
2021 Nov.	95.5	0.3	26.6	29.2	32.2	– 3.0	– 2.5	– 2.1	– 0.5	30.6	25.2	22.1	21.0
Dec.	– 326.2	1.6	– 218.7	– 186.4	– 183.6	– 2.8	– 32.2	– 31.2	– 1.0	– 0.9	4.7	9.4	9.1
2022 Jan.	340.3	– 1.9	238.6	189.0	186.9	2.1	49.6	49.7	– 0.1	28.1	15.4	16.2	14.9
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	74.7	– 0.7	40.7	42.6	41.9	0.7	– 2.0	– 3.2	1.3	11.2	6.5	11.2	10.4
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	166.4	– 0.5	35.4	21.9	22.5	– 0.5	13.5	13.3	0.2	5.5	7.5	4.5	5.7

***** 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														
				to non-banks in other Member States						Claims on non-euro area residents			
	General government				Enterprises and households		General government						
Securities	Total	Loans	Securities [2]	Total	Total	of which: Loans	Total	Loans	Securities	Total	of which: Loans	Other assets [1]	Period
End of year or month													
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
319.9	395.1	249.7	145.4	489.5	356.0	244.3	133.4	30.3	103.2	1,134.6	889.6	910.9	2021 Oct.
320.9	396.5	247.8	148.8	495.7	361.6	249.6	134.1	28.5	105.6	1,137.3	892.4	950.0	Nov.
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	Dec.
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	1,875.3	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	1,916.2	July
Changes [3]													
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
1.1	3.0	– 0.9	4.0	5.5	4.8	4.4	0.6	– 1.6	2.2	– 4.5	– 3.6	42.4	2021 Nov.
0.3	– 4.7	– 2.6	– 2.2	– 5.6	0.9	– 5.3	– 6.5	– 0.1	– 6.3	– 45.9	– 41.0	– 62.3	Dec.
1.3	– 0.8	1.8	– 2.6	12.7	14.8	16.0	– 2.1	0.2	– 2.2	72.3	66.7	3.3	2022 Jan.
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	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	4.6	1.5	3.2	3.2	– 0.4	3.6	16.5	17.4	7.1	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	– 2.0	4.1	3.2	– 6.1	– 0.3	– 5.7	5.5	8.3	120.5	July

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

IV. Banks

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

€ billion

Period	Balance sheet total [1]	Deposits of banks (MFIs) in the euro area			Deposits of non-banks (non-MFIs) in the euro area								
						Deposits of non-banks in the home country						Deposits of non-banks	
			of banks					With agreed maturities		At agreed notice			
		Total	in the home country	in other Member States	Total	Total	Overnight	Total	of which: up to 2 years	Total	of which: up to 3 months	Total	Overnight
	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
2021 Oct.	9,395.0	1,690.9	1,364.7	326.2	4,140.0	3,942.6	2,657.0	725.5	206.4	560.1	535.6	151.4	78.1
Nov.	9,495.5	1,718.6	1,374.9	343.8	4,154.1	3,956.1	2,678.9	717.4	200.2	559.8	535.5	151.4	82.5
Dec.	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 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	1,563.1	1,159.9	403.2	4,382.2	4,115.4	2,569.0	1,070.5	571.9	475.9	439.9	197.0	90.1
	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
2021 Nov.	95.5	26.4	9.6	16.7	12.9	12.5	21.1	– 8.4	– 6.2	– 0.3	– 0.1	– 0.3	4.2
Dec.	– 326.2	– 90.4	– 36.3	– 54.1	– 24.3	– 24.3	– 29.6	3.9	3.7	1.4	1.6	2.4	– 11.9
2022 Jan.	340.3	93.8	23.2	70.6	64.3	47.0	36.5	10.9	11.9	– 0.4	0.3	12.6	15.3
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	74.7	– 12.3	1.5	– 13.8	11.6	7.3	– 8.6	23.9	21.4	– 8.0	– 10.2	0.7	4.0
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	166.4	32.5	10.3	22.2	4.2	5.4	– 17.3	30.1	30.9	– 7.3	– 10.3	0.4	– 0.8

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

IV. Banks

in other Member States [2]				Deposits of central governments		Liabilities arising from repos with non-banks in the euro area	Money market fund shares issued [3]	Debt securities issued [3]		Liabilities to non-euro area residents	Capital and reserves	Other Liabilities [1]	Period
With agreed maturities		At agreed notice											
Total	of which: up to 2 years	Total	of which: up to 3 months	Total	of which: domestic central governments			Total	of which: with maturities of up to 2 years [3]				
End of year or month													
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
70.9	23.4	2.4	2.2	46.1	45.2	7.4	2.2	1,118.0	24.6	866.7	729.5	840.3	2021 Oct.
66.4	17.4	2.4	2.2	46.6	45.5	4.2	2.1	1,123.9	26.0	883.1	736.5	872.8	Nov.
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	Dec.
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	1,257.4	72.5	888.2	746.8	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	69.8	62.1	6.5	2.9	1,262.1	76.5	855.0	757.0	1,914.4	July
Changes [4]													
– 2.3	– 1.2	– 0.2	– 0.1	– 6.4	– 4.8	– 3.4	– 0.6	– 63.7	– 0.2	35.9	26.1	178.3	2014
– 0.1	0.0	0.0	0.1	– 0.4	– 1.9	– 1.0	– 0.0	– 86.8	7.7	– 30.3	28.0	– 143.2	2015
1.1	0.0	– 0.3	– 0.1	– 2.2	– 1.2	– 0.3	– 1.1	8.6	– 1.3	116.1	26.4	– 39.5	2016
10.8	4.2	– 0.1	– 0.0	– 0.0	– 0.0	1.1	– 0.3	– 3.3	– 8.5	– 16.1	34.1	– 162.3	2017
– 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
– 4.5	– 6.1	– 0.0	– 0.0	0.7	0.4	– 3.2	– 0.1	1.7	1.4	11.7	5.9	40.3	2021 Nov.
14.3	5.4	0.0	0.0	– 2.4	– 2.0	– 2.0	0.2	– 14.2	1.4	– 127.3	– 4.6	– 63.4	Dec.
– 2.7	– 2.6	– 0.0	– 0.0	4.7	2.0	0.7	– 0.0	13.4	– 2.3	146.6	– 18.3	39.8	2022 Jan.
– 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	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.
– 3.3	– 3.5	– 0.0	– 0.0	3.6	– 3.5	0.6	– 0.1	16.8	5.0	25.6	9.2	23.2	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	0.6	– 0.0	– 0.0	– 1.6	– 1.9	1.7	0.3	7.7	0.2	1.6	8.0	110.4	July

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

IV. Banks

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

€ billion

End of month	Number of reporting institutions	Balance sheet total [1]	Cash in hand and credit balances with central banks	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)					Participating interests	Other assets [1]
				Total	of which:		Total	of which:					
					Balances and loans	Securities issued by banks		Loans		Bills	Securities issued by non-banks		
								for up to and including 1 year	for more than 1 year				
All categories of banks													
2023 Feb.	1,385	10,825.7	74.4	3,673.4	3,187.8	481.7	4,976.6	485.3	3,779.4	0.2	693.0	96.1	2,005.1
Mar.	1,385	10,617.5	72.8	3,630.6	3,143.2	483.4	4,983.5	488.3	3,777.1	0.2	701.1	96.4	1,834.2
Apr.	1,384	10,627.8	74.6	3,618.8	3,128.7	485.3	4,991.8	492.5	3,782.2	0.2	699.8	96.9	1,845.7
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
Commercial banks [6]													
2023 June	241	4,906.4	25.1	1,649.2	1,559.6	89.2	1,624.4	316.2	1,039.4	0.1	259.5	31.8	1,576.0
July	241	5,071.0	31.4	1,680.5	1,590.2	89.4	1,626.3	322.7	1,043.3	0.1	251.2	31.8	1,701.0
Big banks [7]													
2023 June	3	2,471.9	12.1	652.6	619.2	33.4	743.9	154.4	454.6	0.0	131.3	26.1	1,037.2
July	3	2,545.3	18.3	675.3	641.6	33.8	741.7	155.8	456.0	0.0	126.4	26.2	1,083.7
Regional banks and other commercial banks													
2023 June	131	1,911.1	8.6	646.6	593.8	52.4	727.9	112.2	491.8	0.1	119.2	4.1	523.8
July	131	2,015.0	9.7	665.3	612.2	52.3	733.4	118.5	494.4	0.1	115.9	4.0	602.5
Branches of foreign banks													
2023 June	107	523.5	4.4	350.0	346.6	3.4	152.6	49.6	93.0	–	9.0	1.6	14.9
July	107	510.7	3.4	339.8	336.5	3.3	151.2	48.4	92.9	–	8.9	1.6	14.7
Landesbanken													
2023 June	6	931.8	3.6	355.8	301.8	53.4	434.4	46.6	346.7	0.0	36.1	9.6	128.4
July	6	937.7	10.0	357.1	302.9	53.3	435.8	47.3	347.5	0.0	35.3	9.6	125.2
Savings banks													
2023 June	358	1,548.9	21.7	269.0	150.5	118.6	1,216.7	54.1	994.3	–	167.7	16.3	25.2
July	356	1,551.9	20.7	271.1	152.9	118.2	1,218.7	54.7	996.0	–	167.5	16.3	25.1
Credit cooperatives													
2023 June	727	1,155.7	13.8	207.4	97.8	109.1	885.1	34.7	730.8	0.0	119.6	19.9	29.6
July	724	1,157.6	12.2	210.3	100.8	108.9	885.9	34.0	732.9	0.0	119.0	20.0	29.3
Mortgage banks													
2023 June	7	222.3	0.2	16.9	10.0	6.8	199.9	3.6	182.1	–	14.2	0.1	5.3
July	7	222.0	0.1	16.4	9.5	6.9	199.7	3.8	181.8	–	14.2	0.1	5.7
Building and loan associations													
2023 June	18	259.5	0.2	44.0	28.2	15.8	211.4	1.4	187.6	.	22.4	0.3	3.7
July	18	259.5	0.2	43.7	27.9	15.8	211.6	1.3	188.0	.	22.3	0.3	3.8
Banks with special, development and other central support tasks													
2023 June	18	1,615.1	5.9	1,001.1	905.4	92.7	432.1	22.0	314.5	0.0	91.5	19.5	156.5
July	18	1,605.9	13.0	984.9	889.3	92.6	433.4	22.7	315.2	–	91.0	19.4	155.3
Memo item: Foreign banks [8]													
2023 June	138	2,448.5	11.7	891.9	853.6	37.9	701.3	151.6	415.8	0.1	127.2	4.3	839.2
July	138	2,562.9	10.7	890.8	852.1	37.8	706.0	157.3	417.7	0.1	124.1	4.2	951.1
of which: Banks majority-owned by foreign banks [9]													
2023 June	31	1,925.0	7.3	541.9	507.0	34.5	548.8	102.0	322.9	0.1	118.2	2.7	824.3
July	31	2,052.2	7.4	551.0	515.7	34.5	554.7	108.8	324.8	0.1	115.2	2.7	936.4

***** Assets and liabilities of monetary financial institutions (MFIs) in Germany. The assets and liabilities of foreign branches, of money market funds (which are also classified as MFIs) and of the Bundesbank are not included. For the definitions of the respective items, see the footnotes to Table IV.3. **1** Owing to the Act Modernising Accounting Law (Gesetz zur Modernisierung des Bilanzrechts) of 25 May 2009, derivative financial instruments in the trading portfolio (trading portfolio derivatives) within the meaning of Section 340e (3) sentence 1 of the German Commercial Code (Handelsgesetzbuch) read in conjunction with Section 35 (1) number 1a of the Credit Institution Accounting Regulation (Verordnung über die Rechnungslegung der Kreditinstitute) are classified under "Other assets and liabilities" as of the December 2010 reporting date. Trading portfolio derivatives are listed separately in the Statistical Series Banking statistics, in Tables I.1 to I.3. **2** For building and loan associations: including deposits under savings

IV. Banks

Deposits of banks (MFIs)			Deposits of non-banks (non-MFIs)											
	of which:			of which:										
					Time deposits [2]			Savings deposits [4]						
Total	Sight deposits	Time deposits	Total	Sight deposits	for up to and including 1 year	for more than 1 year [2]	Memo item: Liabilities arising from repos [3]	Total	of which: At 3 months' notice	Bank savings bonds	Bearer debt securities out-standing [5]	Capital including published reserves, partici-pation rights capital, funds for general banking risks	Other liabi-lities [1]	End of month
All categories of banks														
2,312.9	740.8	1,572.0	4,615.5	2,906.1	486.7	655.8	78.5	521.1	495.5	45.8	1,296.2	592.4	2,008.6	2023 Feb.
2,270.4	713.0	1,557.4	4,579.8	2,856.6	496.6	662.4	76.8	512.3	485.1	52.1	1,312.4	596.4	1,858.4	Mar.
2,270.3	681.4	1,588.9	4,590.6	2,840.7	520.8	666.9	82.4	503.5	474.9	58.7	1,308.3	598.5	1,860.2	Apr.
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	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
2,212.4	717.3	1,495.1	4,591.0	2,786.1	572.0	672.5	81.2	480.7	444.1	79.7	1,335.1	610.3	2,056.8	July
Commercial banks [6]														
1,144.2	540.6	603.5	1,833.7	1,194.3	288.8	246.3	72.0	84.4	74.3	20.0	202.9	210.8	1,514.7	2023 June
1,171.1	555.5	615.6	1,847.1	1,192.5	302.8	245.8	79.1	84.7	72.1	21.3	205.1	212.2	1,635.5	July
Big banks [7]														
406.4	172.3	234.0	852.3	528.5	172.8	76.4	37.3	73.5	64.1	1.1	152.2	79.6	981.4	2023 June
427.1	186.2	240.9	861.1	529.6	180.1	76.2	42.9	74.2	62.4	1.1	154.1	79.6	1,023.4	July
Regional banks and other commercial banks														
455.8	208.5	247.2	774.6	521.3	74.6	149.2	34.6	10.7	9.9	18.8	49.9	114.1	516.7	2023 June
473.6	223.0	250.6	780.0	519.3	81.1	149.2	36.1	10.2	9.4	20.1	50.3	115.6	595.6	July
Branches of foreign banks														
282.1	159.8	122.3	206.9	144.5	41.3	20.7	0.0	0.3	0.3	0.1	0.8	17.1	16.7	2023 June
270.4	146.2	124.1	206.0	143.7	41.5	20.5	0.0	0.3	0.3	0.1	0.7	17.1	16.5	July
Landesbanken														
245.3	47.2	198.1	294.6	145.2	72.3	71.7	1.2	4.8	4.8	0.5	206.5	43.1	142.3	2023 June
252.6	50.2	202.3	295.5	144.6	74.6	71.1	1.6	4.7	4.7	0.6	207.7	43.1	138.8	July
Savings banks														
173.4	3.7	169.6	1,163.0	806.0	60.5	15.1	–	242.5	225.8	38.9	19.4	140.3	52.8	2023 June
175.7	4.6	171.2	1,161.3	799.7	64.7	15.4	–	238.3	221.4	43.2	19.8	140.8	54.3	July
Credit cooperatives														
163.3	3.7	159.6	846.1	576.8	74.4	26.3	–	155.9	149.2	12.8	8.1	104.8	33.4	2023 June
163.7	3.7	160.1	846.3	570.2	81.4	27.9	–	152.6	145.5	14.2	8.1	104.9	34.6	July
Mortgage banks														
44.4	3.5	40.8	56.3	2.9	6.9	46.4	0.5	–	–	.	105.7	8.9	7.0	2023 June
42.8	3.5	39.3	55.7	2.8	6.6	46.2	0.4	–	–	.	107.0	8.9	7.5	July
Building and loan associations														
36.8	3.0	33.9	194.8	3.9	2.1	188.2	–	0.4	0.4	0.2	6.1	13.0	8.8	2023 June
37.5	3.6	33.9	194.2	3.8	2.0	187.8	–	0.4	0.4	0.2	6.1	13.0	8.7	July
Banks with special, development and other central support tasks														
368.1	97.3	270.8	199.3	77.4	43.2	78.3	0.1	–	–	.	783.2	87.2	177.3	2023 June
369.0	96.2	272.8	190.9	72.5	39.9	78.3	0.2	–	–	.	781.3	87.2	177.4	July
Memo item: Foreign banks [8]														
696.1	368.5	327.5	764.7	519.9	121.4	102.4	40.1	11.5	11.1	9.5	49.6	99.0	839.2	2023 June
701.8	368.9	332.9	761.7	511.6	126.3	102.2	42.1	11.0	10.6	10.5	50.0	100.3	949.1	July
of which: Banks majority-owned by foreign banks [9]														
414.0	208.7	205.3	557.8	375.4	80.1	81.7	40.1	11.2	10.8	9.5	48.8	81.9	822.5	2023 June
431.4	222.6	208.8	555.7	368.0	84.8	81.7	42.0	10.7	10.3	10.4	49.3	83.2	932.7	July

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

IV. Banks

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

€ billion

Period	Cash in hand (euro area banknotes and coins)	Credit balances with the Bundesbank	Lending to domestic banks (MFIs)						Lending to domestic non-banks (non-MFIs)				
			Total	Credit balances and loans	Bills	Negotiable money market paper issued by banks	Securities issued by banks	Memo item: Fiduciary loans	Total	Loans	Bills	Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks [1]
													End of year or month *
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 Feb.	47.2	1,094.0	1,453.6	1,204.6	–	0.3	248.7	10.0	3,826.5	3,426.0	0.2	5.0	395.3
Mar.	49.5	1,086.3	1,442.6	1,195.1	–	0.3	247.3	10.0	3,853.8	3,449.0	0.2	3.3	401.3
Apr.	50.4	1,200.5	1,360.3	1,112.8	–	0.6	246.9	9.9	3,866.6	3,470.0	0.2	3.5	392.9
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
													Changes *
2014	+ 0.4	– 4.3	– 119.3	– 87.1	+ 0.0	+ 0.4	– 32.6	+ 0.1	+ 36.7	+ 20.6	– 0.1	– 0.6	+ 16.8
2015	+ 0.3	+ 73.7	– 80.7	– 4.3	– 0.0	– 0.4	– 75.9	– 0.1	+ 68.9	+ 54.1	– 0.0	– 0.3	+ 15.1
2016	+ 6.5	+ 129.1	+ 48.1	+ 66.9	–	– 0.9	– 17.9	+ 0.4	+ 43.7	+ 62.8	– 0.1	– 0.1	– 18.9
2017	+ 6.1	+ 108.4	+ 50.3	+ 70.4	– 0.0	+ 0.0	– 20.1	– 0.1	+ 57.0	+ 70.2	+ 0.0	+ 0.4	– 13.6
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 Feb.	– 0.2	+ 28.0	+ 13.1	+ 11.5	–	– 0.4	+ 2.0	– 0.1	+ 15.1	+ 18.4	+ 0.0	+ 1.9	– 5.2
Mar.	+ 2.3	– 7.8	– 10.9	– 9.5	–	– 0.0	– 1.4	– 0.0	+ 27.3	+ 23.0	– 0.0	– 1.7	+ 6.0
Apr.	+ 0.9	+ 114.2	– 82.3	– 82.3	–	+ 0.3	– 0.4	– 0.0	+ 13.1	+ 21.3	+ 0.0	+ 0.2	– 8.4
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

***** 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] Total	Sight deposits [4]	Time deposits [4]	Redis-counted bills [5]	Memo item: Fiduciary loans	Deposits of domestic non-banks (non-MFIs) Total	Sight de-posits	Time deposits [6]	Savings de-posits [7]	Bank savings bonds [8]	Memo item: Fiduciary loans	Period
End of year or month *														
–	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
–	25.7	78.7	1,369.7	140.5	1,229.2	0.0	16.6	4,037.8	2,704.5	748.5	560.9	23.9	33.8	2022 Feb.
–	25.8	78.7	1,367.7	137.7	1,230.1	0.0	16.5	4,033.7	2,695.6	755.2	559.0	23.9	33.8	Mar.
–	25.9	78.7	1,384.4	140.6	1,243.8	0.0	16.7	4,046.7	2,705.6	759.4	557.9	23.8	33.8	Apr.
–	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	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	1,159.9	134.9	1,025.0	0.0	14.6	4,180.1	2,582.2	1,042.8	475.9	79.1	36.7	July
Changes *														
–	– 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
–	+ 0.0	+ 0.1	+ 6.0	+ 3.3	+ 2.7	– 0.0	+ 0.2	+ 11.9	+ 13.6	– 1.6	+ 0.1	– 0.2	– 0.2	2022 Feb.
–	+ 0.1	+ 0.0	– 1.9	– 2.8	+ 0.8	–	– 0.0	– 4.1	– 9.0	+ 6.6	– 1.8	+ 0.0	–	Mar.
–	+ 0.2	– 0.0	+ 16.7	+ 3.0	+ 13.7	–	+ 0.2	+ 13.0	+ 9.5	+ 4.2	– 0.6	– 0.1	+ 0.0	Apr.
–	+ 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	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	+ 10.3	+ 0.9	+ 9.4	–	– 0.0	+ 3.8	– 18.7	+ 22.9	– 7.3	+ 7.0	+ 0.2	July

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		
End of year or month *														
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 Feb.	0.5	1,222.3	998.7	734.3	264.4	1.6	222.0	3.6	923.5	615.2	191.4	423.7	9.4	298.9
Mar.	0.5	1,224.2	999.2	729.8	269.4	1.0	224.1	3.6	906.5	597.4	171.8	425.6	10.3	298.9
Apr.	0.6	1,229.5	1,003.6	734.1	269.6	1.6	224.3	3.6	914.4	612.0	180.9	431.1	13.1	289.2
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
Changes *														
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 Feb.	+ 0.2	+ 23.2	+ 22.1	+ 20.8	+ 1.2	+ 0.4	+ 0.7	+ 0.0	+ 12.7	+ 5.2	+ 4.6	+ 0.5	− 0.8	+ 8.4
Mar.	− 0.0	− 0.0	− 1.5	− 5.8	+ 4.3	− 0.6	+ 2.1	+ 0.0	− 18.3	− 18.9	− 20.1	+ 1.2	+ 0.8	− 0.2
Apr.	+ 0.1	− 9.7	− 10.2	− 4.6	− 5.6	+ 0.6	− 0.1	+ 0.0	− 1.7	+ 6.8	+ 6.8	+ 0.0	+ 2.8	− 11.3
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	+ 20.2	+ 19.5	+ 15.0	+ 4.5	+ 0.5	+ 0.2	+ 0.0	+ 3.0	+ 10.5	+ 9.6	+ 0.9	+ 0.7	− 8.2

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

IV. Banks

Memo item: Fiduciary loans	Participating interests in foreign banks and enterprises	Deposits of foreign banks (MFIs)						Deposits of foreign non-banks (non-MFIs)						Period
				Time deposits (including bank savings bonds)						Time deposits (including savings deposits and bank savings bonds)				
		Total	Sight deposits	Total	Short-term	Medium and long-term	Memo item: Fiduciary loans	Total	Sight deposits	Total	Short-term	Medium and long-term	Memo item: Fiduciary loans	
End of year or month *														
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	16.0	1,130.4	640.4	490.0	349.8	140.2	0.0	361.2	194.5	166.7	87.0	79.7	0.1	2022 Feb.
11.1	15.7	1,113.8	632.7	481.1	349.8	131.3	0.0	361.6	200.0	161.6	82.0	79.6	0.1	Mar.
11.1	15.7	1,113.7	600.6	513.2	381.7	131.4	0.0	384.6	201.5	183.2	102.6	80.6	0.1	Apr.
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	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	1,052.5	582.4	470.1	311.1	159.0	0.0	410.9	203.9	207.0	107.9	99.1	0.3	July
Changes *														
+ 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	+ 33.4	+ 5.7	+ 27.8	+ 28.3	– 0.5	–	+ 21.2	+ 17.0	+ 4.2	+ 5.0	– 0.8	–	2022 Feb.
– 0.1	– 0.3	– 18.3	– 8.5	– 9.8	– 0.7	– 9.1	–	– 0.1	+ 5.3	– 5.4	– 5.3	– 0.1	– 0.0	Mar.
+ 0.0	– 0.1	– 13.2	– 39.6	+ 26.4	+ 27.6	– 1.1	–	+ 19.2	– 0.6	+ 19.8	+ 19.1	+ 0.6	–	Apr.
– 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	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	+ 29.1	+ 18.5	+ 10.7	+ 9.5	+ 1.1	–	+ 0.4	– 1.3	+ 1.7	+ 1.1	+ 0.6	– 0.0	July

IV. Banks

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

€ billion

Period	Lending to domestic non-banks, total		Short-term lending							Medium- and long-term	
				to enterprises and households			to general government				to enter-
	including negotiable money market paper, securities, equalisation claims	excluding negotiable money market paper, securities, equalisation claims	Total	Total	Loans and bills	Negotiable money market paper	Total	Loans	Treasury bills	Total	Total
	End of year or month *										
2013	3,131.6	2,693.2	269.1	217.7	217.0	0.6	51.4	50.8	0.6	2,862.6	2,328.6
2014	3,167.3	2,712.6	257.5	212.7	212.1	0.6	44.8	44.7	0.1	2,909.8	2,376.8
2015	3,233.9	2,764.4	255.5	207.8	207.6	0.2	47.8	47.5	0.2	2,978.3	2,451.4
2016	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0
2017	3,332.6	2,894.4	241.7	210.9	210.6	0.3	30.7	30.3	0.4	3,090.9	2,640.0
2018	3,394.5	2,990.4	249.5	228.0	227.6	0.4	21.5	21.7	− 0.2	3,145.0	2,732.8
2019	3,521.5	3,119.5	260.4	238.8	238.4	0.4	21.6	18.7	2.9	3,261.1	2,866.9
2020	3,647.0	3,245.3	243.3	221.6	221.2	0.4	21.6	18.0	3.6	3,403.8	3,013.0
2021	3,798.1	3,392.7	249.7	232.2	231.9	0.3	17.5	15.2	2.3	3,548.4	3,174.6
2022	4,015.6	3,613.3	296.4	279.8	279.4	0.4	16.7	14.3	2.3	3,719.2	3,359.9
2022 Feb.	3,826.5	3,426.2	267.4	246.9	246.1	0.8	20.5	16.3	4.2	3,559.1	3,195.3
Mar.	3,853.8	3,449.2	273.6	254.8	254.0	0.8	18.9	16.3	2.5	3,580.1	3,209.5
Apr.	3,866.6	3,470.2	277.5	257.9	257.0	0.9	19.6	17.1	2.5	3,589.1	3,226.2
May	3,886.7	3,489.1	280.1	262.5	261.5	1.0	17.6	15.4	2.2	3,606.6	3,242.6
June	3,906.6	3,513.5	290.8	271.4	270.5	0.9	19.5	16.6	2.8	3,615.7	3,255.8
July	3,945.0	3,539.3	291.4	271.8	270.9	0.8	19.6	16.8	2.8	3,653.7	3,293.5
Aug.	3,976.0	3,574.4	305.0	287.3	286.4	0.8	17.7	14.7	3.1	3,671.0	3,314.3
Sep.	3,993.6	3,595.5	311.0	292.8	292.2	0.6	18.2	15.2	3.0	3,682.6	3,329.1
Oct.	4,014.1	3,611.8	308.7	288.9	288.4	0.5	19.9	16.1	3.8	3,705.3	3,347.5
Nov.	4,025.7	3,625.4	310.7	292.9	292.6	0.4	17.7	14.5	3.2	3,715.0	3,359.0
Dec.	4,015.6	3,613.3	296.4	279.8	279.4	0.4	16.7	14.3	2.3	3,719.2	3,359.9
2023 Jan.	4,016.2	3,622.5	303.2	282.5	281.9	0.5	20.7	17.0	3.8	3,713.1	3,360.2
Feb.	4,030.2	3,629.5	297.8	279.9	279.2	0.7	18.0	15.8	2.2	3,732.4	3,371.2
Mar.	4,030.5	3,634.8	305.0	285.1	284.4	0.7	19.9	16.3	3.6	3,725.5	3,369.3
Apr.	4,032.5	3,641.3	304.1	283.3	282.8	0.6	20.8	18.2	2.6	3,728.4	3,374.4
May	4,039.0	3,650.6	299.7	281.0	280.2	0.8	18.7	17.4	1.3	3,739.3	3,388.0
June	4,042.1	3,645.7	300.3	280.5	279.6	0.9	19.8	17.8	2.0	3,741.8	3,388.7
July	4,048.7	3,653.9	299.4	277.4	276.6	0.9	21.9	19.6	2.3	3,749.3	3,395.5
	Changes *										
2014	+ 36.7	+ 20.5	− 11.6	− 4.5	− 4.5	− 0.0	− 7.1	− 6.5	− 0.6	+ 48.3	+ 52.5
2015	+ 68.9	+ 54.1	+ 1.6	− 1.3	− 0.9	− 0.4	+ 2.9	+ 2.8	+ 0.1	+ 67.2	+ 73.9
2016	+ 43.7	+ 62.7	− 5.2	− 0.3	− 0.4	+ 0.1	− 4.9	− 4.8	− 0.2	+ 48.9	+ 79.8
2017	+ 57.0	+ 70.2	− 6.5	+ 5.6	+ 5.6	+ 0.0	− 12.1	− 12.4	+ 0.3	+ 63.5	+ 103.4
2018	+ 71.5	+ 105.3	+ 6.6	+ 15.8	+ 15.7	+ 0.1	− 9.2	− 8.6	− 0.6	+ 65.0	+ 102.0
2019	+ 126.7	+ 129.1	+ 11.7	+ 11.6	+ 11.6	+ 0.0	+ 0.1	− 3.0	+ 3.1	+ 115.0	+ 132.8
2020	+ 123.2	+ 123.6	− 19.6	− 19.8	− 19.8	− 0.0	+ 0.2	− 0.5	+ 0.7	+ 142.8	+ 145.6
2021	+ 152.2	+ 147.8	+ 8.8	+ 13.8	+ 13.8	− 0.1	− 4.9	− 2.8	− 2.1	+ 143.4	+ 157.9
2022	+ 216.7	+ 220.0	+ 47.6	+ 48.5	+ 48.5	+ 0.0	− 0.9	− 0.9	+ 0.0	+ 169.1	+ 184.8
2022 Feb.	+ 15.1	+ 18.4	+ 6.2	+ 6.0	+ 5.8	+ 0.2	+ 0.2	− 1.5	+ 1.7	+ 9.0	+ 14.9
Mar.	+ 27.3	+ 23.0	+ 6.2	+ 7.9	+ 7.9	− 0.0	− 1.6	+ 0.1	− 1.7	+ 21.0	+ 14.2
Apr.	+ 13.1	+ 21.4	+ 3.9	+ 3.1	+ 3.0	+ 0.1	+ 0.7	+ 0.7	+ 0.0	+ 9.3	+ 17.0
May	+ 20.1	+ 18.8	+ 2.6	+ 4.6	+ 4.5	+ 0.0	− 2.0	− 1.7	− 0.3	+ 17.5	+ 16.4
June	+ 19.9	+ 24.5	+ 10.8	+ 8.9	+ 9.0	− 0.1	+ 1.9	+ 1.3	+ 0.6	+ 9.1	+ 13.2
July	+ 36.1	+ 23.5	+ 0.2	+ 0.1	+ 0.1	− 0.0	+ 0.1	+ 0.2	− 0.1	+ 35.8	+ 35.6
Aug.	+ 30.9	+ 35.1	+ 13.7	+ 15.5	+ 15.5	+ 0.0	− 1.9	− 2.1	+ 0.3	+ 17.2	+ 20.8
Sep.	+ 16.5	+ 20.0	+ 4.8	+ 4.4	+ 4.6	− 0.2	+ 0.5	+ 0.6	− 0.1	+ 11.7	+ 14.8
Oct.	+ 20.7	+ 16.6	− 2.0	− 3.6	− 3.5	− 0.1	+ 1.6	+ 0.8	+ 0.8	+ 22.7	+ 18.5
Nov.	+ 12.0	+ 13.9	+ 2.2	+ 4.4	+ 4.5	− 0.1	− 2.1	− 1.5	− 0.6	+ 9.7	+ 11.8
Dec.	− 9.6	− 11.7	− 13.9	− 12.8	− 12.7	− 0.0	− 1.1	− 0.2	− 0.9	+ 4.2	+ 1.8
2023 Jan.	+ 0.6	+ 9.2	+ 6.7	+ 2.6	+ 2.4	+ 0.2	+ 4.1	+ 2.6	+ 1.4	− 6.1	+ 0.3
Feb.	+ 13.3	+ 6.3	− 6.0	− 3.2	− 3.3	+ 0.1	− 2.8	− 1.2	− 1.6	+ 19.3	+ 11.0
Mar.	+ 0.9	+ 6.0	+ 7.6	+ 5.7	+ 5.7	− 0.0	+ 1.9	+ 0.5	+ 1.4	− 6.7	− 1.8
Apr.	+ 2.1	+ 6.5	− 0.9	− 1.7	− 1.7	− 0.1	+ 0.9	+ 1.9	− 1.1	+ 3.0	+ 5.1
May	+ 6.5	+ 9.4	− 4.4	− 2.3	− 2.6	+ 0.3	− 2.1	− 0.8	− 1.2	+ 10.9	+ 13.6
June	+ 4.4	− 3.7	+ 1.7	+ 0.6	+ 0.6	+ 0.0	+ 1.1	+ 0.4	+ 0.7	+ 2.7	+ 0.9
July	+ 6.6	+ 8.3	− 1.0	− 3.1	− 3.1	− 0.0	+ 2.1	+ 1.9	+ 0.2	+ 7.5	+ 6.9

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

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

IV. Banks

lending												
prises and households					to general government							
Loans						Loans						
Total	Medium-term	Long-term	Securities	Memo item: Fiduciary loans	Total	Total	Medium-term	Long-term	Securities [1]	Equalisation claims [2]	Memo item: Fiduciary loans	Period
End of year or month *												
2,136.9	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
2,935.4	313.8	2,621.6	259.9	24.6	363.8	228.5	13.9	214.5	135.4	–	1.1	2022 Feb.
2,950.1	316.1	2,633.9	259.4	24.7	370.7	228.8	13.7	215.1	141.8	–	1.1	Mar.
2,966.8	317.3	2,649.5	259.4	24.9	362.9	229.5	13.7	215.8	133.5	–	1.0	Apr.
2,983.1	319.7	2,663.4	259.5	25.1	364.0	229.1	13.7	215.4	134.9	–	1.0	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
Changes *												
+ 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
+ 14.8	+ 1.0	+ 13.8	+ 0.1	+ 0.0	– 6.0	– 0.7	– 0.0	– 0.6	– 5.3	–	– 0.0	2022 Feb.
+ 14.7	+ 2.3	+ 12.4	– 0.5	+ 0.1	+ 6.8	+ 0.4	– 0.2	+ 0.6	+ 6.5	–	– 0.0	Mar.
+ 17.0	+ 1.5	+ 15.6	– 0.0	+ 0.2	– 7.7	+ 0.6	+ 0.0	+ 0.6	– 8.4	–	– 0.0	Apr.
+ 16.4	+ 2.5	+ 13.9	+ 0.1	+ 0.3	+ 1.1	– 0.4	– 0.0	– 0.3	+ 1.4	–	– 0.0	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

IV. Banks

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

billion €

Period	Total	of which: Mortgage loans, total	of which: Housing loans: Total	of which: Housing loans: Mortgage loans secured by residential real estate	of which: Housing loans: Other housing loans	Lending to enterprises and self-employed persons: Total	of which: Housing loans	Manufacturing	Electricity, gas and water supply; refuse disposal, mining and quarrying	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Agriculture, forestry, fishing and aquaculture	Transportation and storage; post and telecommunications	Financial intermediation (excluding MFIs) and insurance companies
	Lending to domestic enterprises and households (excluding holdings of negotiable money market paper and excluding securities portfolios) [1]													
	Lending, total													**End of year or quarter ***
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 Q2	3,268.7	1,636.4	1,731.4	1,412.8	318.5	1,784.8	494.5	160.2	132.6	104.4	153.4	57.0	56.4	200.2
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
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
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
	Short-term lending													
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 Q2	270.5	–	7.0	–	7.0	239.5	4.6	44.7	11.6	20.1	42.2	3.9	4.3	42.2
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
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
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
	Medium-term lending													
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 Q2	322.2	–	42.0	–	42.0	249.2	22.2	29.1	5.8	21.0	22.3	4.3	13.3	53.7
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
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
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
	Long-term lending													
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 Q2	2,675.9	1,636.4	1,682.3	1,412.8	269.5	1,296.0	467.7	86.5	115.2	63.4	88.9	48.8	38.8	104.4
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
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
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
	Lending, total													**Change during quarter ***
2022 Q2	+ 65.0	+ 22.2	+ 29.9	+ 20.5	+ 9.4	+ 42.7	+ 9.1	+ 9.4	– 1.7	+ 3.2	+ 8.2	+ 0.7	+ 1.5	+ 7.1
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
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
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
	Short-term lending													
2022 Q2	+ 16.6	–	+ 0.0	–	+ 0.0	+ 15.4	+ 0.1	+ 8.2	– 2.4	+ 0.6	+ 2.9	+ 0.3	+ 0.2	+ 4.2
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
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
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
	Medium-term lending													
2022 Q2	+ 6.4	–	+ 1.2	–	+ 1.2	+ 7.3	+ 1.2	+ 0.2	+ 0.2	+ 1.0	+ 0.3	+ 0.1	+ 1.6	+ 0.9
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
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
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
	Long-term lending													
2022 Q2	+ 42.0	+ 22.2	+ 28.7	+ 20.5	+ 8.1	+ 19.9	+ 7.9	+ 1.0	+ 0.4	+ 1.5	+ 4.9	+ 0.3	– 0.3	+ 2.1
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
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
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

* 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

Services sector (including the professions)				Memo items:		Lending to employees and other individuals					Lending to non-profit institutions		Period
	of which:							Other lending					
									of which:				
Total	Housing enterprises	Holding companies	Other real estate activities	Lending to self-employed persons [2]	Lending to craft enterprises	Total	Housing loans	Total	Instalment loans [3]	Debit balances on wage, salary and pension accounts	Total	of which: Housing loans	
End of year or quarter *													**Lending, total**
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
920.4	322.8	68.0	211.5	494.9	49.4	1,467.0	1,232.4	234.6	184.6	7.3	16.9	4.5	2022 Q2
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	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	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	Q2
													Short-term lending
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
70.5	15.9	13.7	11.1	20.8	4.5	30.3	2.5	27.9	1.7	7.3	0.7	0.0	2022 Q2
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	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	–	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	–	Q2
													Medium-term lending
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
99.8	24.1	17.1	26.6	29.9	3.2	72.5	19.8	52.7	48.6	–	0.5	0.1	2022 Q2
103.6	25.2	17.7	27.5	30.4	6.4	73.0	20.1	52.9	48.7	–	0.5	0.1	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	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	Q2
													Long-term lending
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
750.0	282.8	37.3	173.8	444.2	41.7	1,364.2	1,210.1	154.1	134.4	–	15.7	4.4	2022 Q2
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	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	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	Q2
Change during quarter *													**Lending, total**
+ 14.4	+ 7.4	+ 1.6	+ 1.8	+ 5.8	+ 0.4	+ 22.2	+ 20.8	+ 1.4	+ 0.4	+ 0.3	+ 0.1	+ 0.0	2022 Q2
+ 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	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	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	Q2
													Short-term lending
+ 1.4	+ 0.6	– 0.3	+ 0.6	+ 0.4	+ 0.1	+ 1.1	– 0.1	+ 1.2	+ 0.1	+ 0.3	+ 0.0	– 0.0	2022 Q2
+ 3.1	– 0.0	+ 1.3	+ 0.1	– 0.1	– 0.1	+ 0.5	+ 0.0	+ 0.4	+ 0.0	+ 0.1	– 0.1	–	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	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	–	Q2
													Medium-term lending
+ 3.0	+ 1.3	+ 1.6	– 0.6	– 0.1	– 0.0	– 0.9	+ 0.1	– 1.0	– 1.1	–	+ 0.0	– 0.0	2022 Q2
+ 3.2	+ 1.0	+ 0.6	+ 0.9	+ 0.1	+ 0.0	– 0.1	– 0.0	– 0.1	– 0.2	–	+ 0.0	+ 0.0	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	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	Q2
													Long-term lending
+ 10.0	+ 5.5	+ 0.3	+ 1.8	+ 5.4	+ 0.3	+ 22.0	+ 20.8	+ 1.3	+ 1.4	–	+ 0.1	+ 0.1	2022 Q2
+ 12.0	+ 5.2	+ 1.2	+ 2.9	+ 4.3	+ 0.3	+ 20.0	+ 18.2	+ 1.7	+ 1.7	–	+ 0.2	+ 0.1	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	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	Q2

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

IV. Banks

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

€ billion

Period	Deposits, total	Sight deposits	Time deposits [1,2]				Savings deposits [3]	Bank savings bonds [4]	Memo item:		
			Total	for up to and including 1 year	for more than 1 year [2]				Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos
					Total	for up to and including 2 years	for more than 2 years				
	Domestic non-banks, total										**End of year or month ***
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 Aug.	4,134.3	2,766.8	792.0	226.8	565.1	50.4	514.7	550.6	25.0	33.0	17.5	1.4
Sep.	4,149.9	2,755.6	823.1	263.8	559.3	45.5	513.8	545.2	25.9	33.2	18.3	1.0
Oct.	4,168.4	2,748.7	849.3	290.1	559.3	45.6	513.7	542.2	28.1	33.6	18.3	1.6
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	4,180.1	2,582.2	1,042.8	468.5	574.3	65.8	508.5	475.9	79.1	36.7	19.9	3.5
												Changes *
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 Aug.	+ 48.1	+ 37.8	+ 11.8	+ 13.1	− 1.3	− 0.4	− 0.9	− 2.4	+ 0.9	+ 0.0	+ 0.2	+ 0.2
Sep.	+ 15.6	− 11.4	+ 31.3	+ 37.0	− 5.7	− 4.9	− 0.8	− 5.3	+ 0.9	+ 0.2	+ 0.8	− 0.4
Oct.	+ 17.4	− 8.0	+ 26.2	+ 26.3	− 0.1	+ 0.0	− 0.1	− 3.1	+ 2.2	+ 0.4	+ 0.0	+ 0.5
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	+ 22.9	+ 23.2	− 0.3	+ 1.4	− 1.7	− 7.3	+ 7.0	+ 0.2	− 0.5	+ 0.7
	Domestic government											**End of year or month ***
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 Aug.	272.6	89.1	177.8	96.2	81.5	24.8	56.7	2.4	3.4	25.5	1.9	–
Sep.	273.0	86.6	180.6	104.6	76.0	20.0	56.1	2.3	3.5	25.7	1.9	–
Oct.	271.2	86.8	178.6	101.2	77.4	19.6	57.8	2.3	3.5	25.7	1.9	–
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	298.4	85.7	207.6	121.2	86.4	23.0	63.4	1.1	4.0	26.7	1.8	0.8
												Changes *
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 Aug.	+ 14.3	+ 11.1	+ 3.2	+ 3.2	− 0.0	+ 0.2	− 0.3	− 0.0	+ 0.0	+ 0.1	+ 0.0	−
Sep.	+ 0.4	− 2.4	+ 2.8	+ 8.3	− 5.5	− 4.9	− 0.6	− 0.0	+ 0.1	+ 0.2	− 0.0	−
Oct.	− 1.9	+ 0.2	− 2.1	− 3.4	+ 1.3	− 0.4	+ 1.7	− 0.1	+ 0.1	+ 0.0	+ 0.0	−
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	− 9.7	− 10.2	+ 0.6	+ 1.9	− 1.3	− 1.2	− 0.1	− 0.2	+ 0.0	+ 0.0	−	+ 0.4

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

1 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					
Domestic enterprises and households												**End of year or month ***
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 Aug.	3,861.7	2,677.7	614.2	130.6	483.6	25.6	458.0	548.2	21.6	7.5	15.6	1.4
Sep.	3,876.9	2,669.0	642.5	159.2	483.3	25.5	457.7	542.9	22.5	7.5	16.3	1.0
Oct.	3,897.2	2,661.9	670.8	188.9	481.9	25.9	455.9	539.9	24.6	7.9	16.4	1.6
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
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
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
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
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
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
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
July	3,881.7	2,496.5	835.2	347.3	487.9	42.8	445.1	474.9	75.1	10.0	18.0	2.7
												Changes *
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 Aug.	+ 33.8	+ 26.7	+ 8.6	+ 9.8	− 1.2	− 0.6	− 0.6	− 2.4	+ 0.9	− 0.1	+ 0.2	+ 0.2
Sep.	+ 15.1	− 8.9	+ 28.5	+ 28.7	− 0.2	− 0.0	− 0.2	− 5.3	+ 0.9	+ 0.0	+ 0.8	− 0.4
Oct.	+ 19.2	− 8.2	+ 28.3	+ 29.7	− 1.4	+ 0.4	− 1.8	− 3.0	+ 2.1	+ 0.4	+ 0.0	+ 0.5
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
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
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
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
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
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
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
July	+ 13.6	− 8.5	+ 22.2	+ 21.2	+ 1.0	+ 2.6	− 1.6	− 7.2	+ 7.0	+ 0.1	− 0.5	+ 0.3
of which: Domestic enterprises												**End of year or month ***
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 Aug.	1,205.4	826.9	365.4	96.1	269.3	16.8	252.4	5.1	8.0	1.9	12.6	1.4
Sep.	1,215.7	815.8	386.8	117.9	268.9	16.6	252.3	5.0	8.1	1.9	13.4	1.0
Oct.	1,232.8	809.3	410.4	143.0	267.4	16.7	250.7	4.9	8.2	1.9	13.3	1.6
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
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
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
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
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
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
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
July	1,188.8	727.3	447.7	192.5	255.1	18.6	236.5	3.7	10.1	2.1	14.6	2.7
												Changes *
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 Aug.	+ 36.6	+ 29.9	+ 6.6	+ 7.6	− 1.0	− 0.7	− 0.4	− 0.0	+ 0.2	− 0.0	+ 0.1	+ 0.2
Sep.	+ 10.2	− 11.4	+ 21.6	+ 21.8	− 0.2	− 0.2	− 0.0	− 0.1	+ 0.1	− 0.0	+ 0.7	− 0.4
Oct.	+ 16.0	− 7.6	+ 23.6	+ 25.1	− 1.5	+ 0.1	− 1.5	− 0.1	+ 0.1	+ 0.0	− 0.0	+ 0.5
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
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
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
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
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
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
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
July	+ 7.1	+ 0.6	+ 6.4	+ 7.4	− 1.1	+ 0.3	− 1.4	− 0.1	+ 0.2	+ 0.0	− 0.5	+ 0.3

4 Including liabilities arising from non-negotiable bearer debt securities.

IV. Banks

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

€ billion

Period	Deposits of domestic households and non-profit institutions, total	Sight deposits					Time deposits [1,2]				
		Total	by creditor group				Total	by creditor group			
			Domestic households			Domestic non-profit institutions		Domestic households			
			Total	Self-employed persons	Employees	Other individuals		Total	Self-employed persons	Employees	Other individuals
	End of year or month *										
2020	2,539.5	1,713.8	1,672.7	291.1	1,215.4	166.2	41.1	258.6	245.1	19.3	190.5	35.2
2021	2,623.6	1,807.1	1,762.4	308.6	1,288.4	165.4	44.7	249.8	237.8	18.2	185.6	33.9
2022	2,688.7	1,854.7	1,809.9	307.3	1,342.5	160.1	44.8	284.8	268.7	31.2	200.5	37.1
2023 Feb.	2,680.1	1,824.9	1,780.9	300.0	1,325.3	155.6	44.0	312.6	295.4	38.1	218.1	39.2
Mar.	2,666.0	1,798.0	1,754.4	290.0	1,310.9	153.5	43.5	328.0	309.7	42.2	227.2	40.2
Apr.	2,681.6	1,803.5	1,761.0	291.7	1,315.1	154.3	42.4	340.2	321.6	45.2	235.5	40.9
May	2,683.5	1,789.3	1,746.6	290.0	1,304.9	151.7	42.7	357.0	337.2	48.7	246.6	41.9
June	2,686.4	1,778.3	1,736.0	282.4	1,302.6	151.1	42.3	371.7	351.9	52.1	256.8	43.1
July	2,692.8	1,769.2	1,728.2	285.8	1,293.2	149.1	41.0	387.5	367.2	56.1	267.2	43.9
	Changes *											
2021	+ 84.7	+ 93.8	+ 90.3	+ 17.3	+ 73.7	− 0.6	+ 3.5	− 8.6	− 7.2	− 1.1	− 4.7	− 1.3
2022	+ 66.5	+ 48.0	+ 47.8	− 1.5	+ 54.1	− 4.7	+ 0.1	+ 35.4	+ 31.4	+ 12.9	+ 17.2	+ 1.2
2023 Feb.	+ 0.1	− 10.9	− 10.9	− 5.3	− 4.1	− 1.5	− 0.0	+ 13.1	+ 12.5	+ 3.6	+ 8.0	+ 0.9
Mar.	− 14.1	− 26.8	− 26.3	− 10.4	− 14.4	− 1.5	− 0.5	+ 15.2	+ 14.1	+ 4.0	+ 9.1	+ 1.0
Apr.	+ 15.6	+ 5.5	+ 6.6	+ 1.6	+ 4.1	+ 0.9	− 1.1	+ 12.2	+ 11.9	+ 3.0	+ 8.2	+ 0.8
May	+ 1.9	− 14.1	− 14.4	− 1.8	− 10.3	− 2.4	+ 0.3	+ 16.8	+ 15.5	+ 3.5	+ 11.1	+ 1.0
June	+ 2.9	− 10.9	− 10.4	− 7.6	− 2.2	− 0.6	− 0.5	+ 14.5	+ 14.7	+ 3.3	+ 10.1	+ 1.3
July	+ 6.5	− 9.1	− 7.9	+ 3.4	− 9.3	− 1.9	− 1.2	+ 15.8	+ 15.3	+ 4.0	+ 10.4	+ 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

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

€ billion

Period	Deposits												
	Domestic government, total	Federal Government and its special funds [1]						State governments					
		Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds [2]	Memo item: Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds [2]	Memo item: Fiduciary loans
				for up to and including 1 year	for more than 1 year					for up to and including 1 year	for more than 1 year		
	End of year or month *												
2020	229.5	48.6	4.8	7.2	36.5	0.0	11.3	46.5	21.2	11.4	13.2	0.7	14.1
2021	210.1	43.5	4.2	3.2	36.0	0.1	11.7	47.4	21.7	13.8	11.3	0.6	14.1
2022	279.8	66.8	7.9	24.2	34.6	0.1	11.4	53.8	17.1	25.2	10.9	0.5	15.9
2023 Feb.	317.8	82.5	16.4	29.5	36.6	0.0	11.4	70.3	24.2	34.2	11.4	0.5	16.1
Mar.	308.9	73.3	13.4	23.3	36.6	0.0	11.4	67.7	22.7	33.5	11.1	0.5	15.4
Apr.	295.1	65.9	10.3	19.2	36.4	0.0	11.4	61.6	18.2	32.1	10.9	0.5	15.4
May	300.1	62.4	9.7	16.4	36.2	0.0	11.4	59.5	18.6	29.6	10.8	0.5	15.5
June	308.1	64.0	13.8	13.8	36.5	0.0	11.1	70.0	23.9	34.9	10.7	0.5	15.5
July	298.4	61.5	11.6	13.5	36.3	0.0	11.1	68.6	21.6	36.0	10.7	0.4	15.5
	Changes *												
2021	− 17.9	− 5.0	− 0.5	− 4.1	− 0.4	+ 0.0	+ 0.3	+ 1.0	+ 0.6	+ 2.3	− 1.8	− 0.1	+ 0.0
2022	+ 69.1	+ 23.0	+ 3.5	+ 20.9	− 1.4	− 0.0	− 0.3	+ 6.4	− 4.6	+ 11.3	− 0.3	− 0.1	+ 1.8
2023 Feb.	+ 18.3	+ 8.7	+ 0.9	+ 5.8	+ 2.0	− 0.0	+ 0.0	+ 4.7	+ 2.0	+ 2.9	− 0.2	− 0.0	+ 0.0
Mar.	− 8.9	− 9.2	− 3.0	− 6.2	− 0.0	− 0.0	+ 0.0	− 2.5	− 1.4	− 0.7	− 0.4	− 0.0	− 0.0
Apr.	− 14.1	− 7.4	− 3.1	− 4.0	− 0.2	−	− 0.0	− 6.4	− 4.5	− 1.7	− 0.2	+ 0.0	+ 0.0
May	+ 5.0	− 3.5	− 0.5	− 2.8	− 0.1	− 0.0	− 0.0	− 2.1	+ 0.5	− 2.5	− 0.1	− 0.0	+ 0.1
June	+ 8.0	+ 1.6	+ 4.1	− 2.7	+ 0.2	−	− 0.2	+ 10.5	+ 5.3	+ 5.3	− 0.1	− 0.0	+ 0.0
July	− 9.7	− 2.5	− 2.1	− 0.2	− 0.1	−	+ 0.0	− 1.3	− 2.3	+ 1.1	− 0.1	− 0.0	+ 0.0

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

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Domestic non-profit institutions	Savings deposits [3] by maturity: up to and including 1 year	Savings deposits [3] by maturity: more than 1 year [2] Total	of which: up to and including 2 years	of which: more than 2 years	Savings deposits [3] Total	Savings deposits [3] Domestic households	Savings deposits [3] Domestic non-profit institutions	Bank savings bonds [4]	Memo item: Fiduciary loans	Memo item: Subordinated liabilities (excluding negotiable debt securities) [5]	Memo item: Liabilities arising from repos	Period
End of year or month *												
13.5	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
17.2	91.4	221.3	13.3	207.9	510.0	505.2	4.8	32.6	7.8	3.2	–	2023 Feb.
18.3	104.3	223.7	15.5	208.2	501.5	496.9	4.6	38.6	7.8	3.3	–	Mar.
18.6	114.5	225.7	17.3	208.4	493.1	488.6	4.5	44.9	7.7	3.3	–	Apr.
19.9	128.7	228.4	19.5	208.8	485.3	481.0	4.4	51.8	7.7	3.3	–	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
Changes *												
– 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
+ 0.6	+ 11.3	+ 1.8	+ 1.4	+ 0.4	– 6.6	– 6.5	– 0.1	+ 4.5	+ 0.3	+ 0.0	–	2023 Feb.
+ 1.1	+ 12.8	+ 2.4	+ 2.2	+ 0.2	– 8.5	– 8.3	– 0.2	+ 5.9	– 0.0	+ 0.0	–	Mar.
+ 0.3	+ 10.2	+ 2.0	+ 1.8	+ 0.2	– 8.4	– 8.3	– 0.1	+ 6.3	– 0.0	+ 0.0	–	Apr.
+ 1.3	+ 14.1	+ 2.7	+ 2.2	+ 0.5	– 7.8	– 7.6	– 0.2	+ 7.0	– 0.0	+ 0.0	–	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

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

Local government and local government associations (including municipal special-purpose associations) Total	Sight deposits	Time deposits [3] for up to and including 1 year	Time deposits [3] for more than 1 year	Savings deposits and bank savings bonds [2,4]	Memo item: Fiduciary loans	Social security funds Total	Sight deposits	Time deposits for up to and including 1 year	Time deposits for more than 1 year	Savings deposits and bank savings bonds [2]	Memo item: Fiduciary loans	Period
End of year or month *												
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
76.6	42.9	15.4	14.0	4.3	0.0	88.5	17.9	44.3	25.7	0.7	–	2023 Feb.
73.9	39.1	16.6	14.0	4.2	0.0	94.0	17.4	50.5	25.4	0.7	–	Mar.
73.6	38.7	16.8	14.1	4.0	0.0	94.0	18.4	48.2	26.7	0.7	–	Apr.
80.2	43.7	18.2	14.3	4.0	0.0	98.1	20.1	50.8	26.4	0.8	–	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
Changes *												
+ 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
+ 5.2	+ 3.4	+ 1.8	+ 0.1	– 0.1	–	– 0.3	+ 0.5	– 1.6	+ 0.8	– 0.0	–	2023 Feb.
– 2.6	– 3.8	+ 1.2	+ 0.1	– 0.1	–	+ 5.4	– 0.5	+ 6.2	– 0.3	+ 0.0	–	Mar.
– 0.3	– 0.4	+ 0.2	+ 0.1	– 0.2	–	– 0.1	+ 1.0	– 2.3	+ 1.3	– 0.0	–	Apr.
+ 6.5	+ 5.0	+ 1.4	+ 0.2	– 0.1	–	+ 4.1	+ 1.7	+ 2.6	– 0.3	+ 0.0	–	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

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

IV. Banks

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

€ billion

Period	Savings deposits [1]									Bank savings bonds, [3] sold to			
		of residents					of non-residents				domestic non-banks		
			at 3 months' notice		at more than 3 months' notice				Memo item: Interest credited on savings deposits	non-banks, total		of which: With maturities of more than 2 years	foreign non-banks
	Total	Total	Total	of which: Special savings facilities [2]	Total	of which: Special savings facilities [2]	Total	of which: At 3 months' notice			Total		
	End of year or month *												
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 Mar.	512.3	507.2	480.6	229.4	26.7	18.4	5.0	4.5	0.1	52.1	51.7	22.9	0.4
Apr.	503.5	498.6	470.4	214.3	28.2	20.1	4.9	4.4	0.1	58.7	58.3	23.7	0.4
May	495.5	490.6	460.2	210.0	30.4	22.3	4.9	4.3	0.1	65.9	65.4	24.5	0.5
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
	Changes *												
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 Mar.	− 8.8	− 8.7	− 10.3	− 3.9	+ 1.6	+ 1.7	− 0.1	− 0.1	.	+ 6.3	+ 6.2	+ 0.8	+ 0.0
Apr.	− 8.7	− 8.6	− 10.1	− 4.7	+ 1.5	+ 1.6	− 0.1	− 0.1	.	+ 6.6	+ 6.6	+ 0.8	+ 0.0
May	− 8.1	− 8.0	− 10.2	− 4.2	+ 2.2	+ 2.2	− 0.1	− 0.1	.	+ 7.2	+ 7.1	+ 0.9	+ 0.1
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

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

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

€ billion

Period	Negotiable bearer debt securities and money market paper										Non-negotiable bearer debt securities and money market paper [6]		Subordinated	
		of which:				with maturities of								
						up to and including 1 year		more than 1 year up to and including 2 years						
	Total	Floating rate bonds [1]	Zero coupon bonds [1,2]	Foreign currency bonds [3,4]	Certificates of deposit	Total	of which: without a nominal guarantee [5]	Total	of which: without a nominal guarantee [5]	more than 2 years	Total	of which: with maturities of more than 2 years	negotiable debt securities	non-negotiable debt securities
	End of year or month *													
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 Mar.	1,274.7	86.0	14.3	300.0	95.3	111.6	1.4	34.2	3.6	1,128.9	0.8	0.8	37.7	0.1
Apr.	1,270.7	85.9	13.6	282.8	91.5	107.1	1.4	33.1	3.7	1,130.4	0.8	0.8	37.6	0.1
May	1,305.4	85.9	13.4	299.8	104.6	121.4	1.5	35.8	3.8	1,148.3	0.8	0.8	36.7	0.1
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
	Changes *													
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 Mar.	+ 16.5	− 8.2	+ 0.1	− 0.3	+ 10.6	+ 13.2	+ 0.0	+ 2.3	+ 0.0	+ 1.0	− 0.0	+ 0.0	− 0.3	−
Apr.	− 4.1	− 0.1	− 0.7	− 17.2	− 3.8	− 4.6	+ 0.0	− 1.1	+ 0.1	+ 1.6	− 0.0	− 0.0	− 0.1	−
May	+ 34.7	+ 0.1	− 0.2	+ 17.0	+ 13.1	+ 14.3	+ 0.1	+ 2.6	+ 0.1	+ 17.8	+ 0.0	+ 0.0	− 0.9	−
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	−

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

IV. Banks

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

€ billion

End of year/month	Number of associations	Balance sheet total [1]	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)				Deposits of banks (MFIs) [6]		Deposits of non-banks (non-MFIs)		Bearer debt securities outstanding	Capital (including published reserves) [8]	Memo item: New contracts entered into in year or month [9]
			Credit balances and loans (excluding building loans) [2]	Building loans [3]	Bank debt securities [4]	Building loans			Securities (including Treasury bills and Treasury discount paper) [5]	Deposits under savings and loan contracts	Sight and time deposits	Deposits under savings and loan contracts	Sight and time deposits [7]			
						Loans under savings and loan contracts	Interim and bridging loans	Other building loans								
All building and loan associations																
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 May	18	260.2	29.7	0.0	15.7	12.7	134.8	40.7	22.5	1.8	35.5	184.9	10.4	6.1	13.0	8.4
June	18	259.5	28.3	0.1	15.8	13.1	135.0	40.8	22.4	1.7	35.1	184.5	10.3	6.1	13.0	8.3
July	18	259.5	28.0	0.1	15.8	13.6	134.9	40.8	22.3	1.5	36.0	183.9	10.3	6.1	13.0	8.0
Private building and loan associations																
2023 May	10	183.6	15.4	0.0	8.3	8.9	104.7	34.7	9.0	0.9	33.0	119.2	10.1	6.1	8.9	5.7
June	10	182.9	14.1	0.0	8.4	9.2	104.9	34.8	8.9	0.8	32.4	118.9	9.9	6.1	8.9	5.6
July	10	182.8	13.7	0.1	8.5	9.5	104.7	34.7	8.9	0.7	33.1	118.5	9.9	6.1	8.9	5.3
Public building and loan associations																
2023 May	8	76.5	14.3	0.0	7.5	3.8	30.1	6.0	13.5	0.9	2.5	65.7	0.3	–	4.1	2.8
June	8	76.6	14.2	0.0	7.4	4.0	30.2	6.1	13.5	0.8	2.7	65.6	0.3	–	4.1	2.7
July	8	76.7	14.2	0.0	7.3	4.2	30.2	6.1	13.4	0.8	2.9	65.5	0.3	–	4.1	2.7

Trends in building and loan association business

€ billion

Period	Changes in deposits under savings and loan contracts			Capital promised		Capital disbursed						Disbursement commitments outstanding at end of period		Interest and repayments received on building loans [11]		Memo item: Housing bonuses received [13]
							Allocations									
							Deposits under savings and loan contracts		Loans under savings and loan contracts [10]		Newly granted interim and bridging loans and other building loans					
	Amounts paid into savings and loan accounts [10]	Interest credited on deposits under savings and loan contracts	Repayments of deposits under cancelled savings and loan contracts	Total	of which: Net allocations [12]	Total	Total	of which: Applied to settlement of interim and bridging loans	Total	of which: Applied to settlement of interim and bridging loans		Total	of which: Under allocated contracts	Total	of which: Repayments during quarter	
All building and loan associations																
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 May	2.5	0.1	0.6	4.2	3.2	4.1	2.1	0.3	0.7	0.3	1.3	14.6	7.1	0.4		0.0
June	2.3	0.1	0.6	4.6	3.5	4.3	2.2	0.4	0.8	0.3	1.4	14.3	7.2	0.4	1.0	0.0
July	2.1	0.1	0.5	4.6	3.5	4.4	2.3	0.4	0.8	0.4	1.3	14.1	7.2	0.4	.	0.0
Private building and loan associations																
2023 May	1.6	0.0	0.3	2.9	2.1	2.9	1.4	0.2	0.4	0.3	1.0	9.8	3.8	0.3		0.0
June	1.5	0.0	0.3	3.2	2.4	3.0	1.5	0.3	0.5	0.3	1.1	9.7	4.0	0.3	0.7	0.0
July	1.3	0.1	0.3	3.2	2.4	3.2	1.6	0.3	0.5	0.3	1.0	9.5	3.9	0.3	.	0.0
Public building and loan associations																
2023 May	0.9	0.0	0.3	1.3	1.1	1.2	0.7	0.1	0.2	0.1	0.3	4.8	3.3	0.1		0.0
June	0.8	0.0	0.3	1.4	1.1	1.3	0.7	0.1	0.3	0.1	0.3	4.7	3.2	0.1	0.3	0.0
July	0.8	0.0	0.2	1.4	1.2	1.3	0.7	0.1	0.3	0.1	0.3	4.6	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: German banks (MFIs) with foreign branches and/or foreign subsidiaries	Number of: foreign branches [1] and/or foreign subsidiaries	Balance sheet total [7]	Lending to banks (MFIs): Total	Lending to banks (MFIs): Credit balances and loans: Total	Lending to banks (MFIs): Credit balances and loans: German banks	Lending to banks (MFIs): Credit balances and loans: Foreign banks	Lending to banks (MFIs): Money market paper, securities [2,3]	Lending to non-banks (non-MFIs): Total	Lending to non-banks (non-MFIs): Loans: Total	Lending to non-banks (non-MFIs): Loans: to German non-banks	Lending to non-banks (non-MFIs): Loans: to foreign non-banks	Lending to non-banks (non-MFIs): Money market paper, securities [2]	Other assets [7]: Total	Other assets [7]: of which: Derivative financial instruments in the trading portfolio
Foreign branches															**End of year or month ***
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 Sep.	50	208	1,889.5	536.3	522.4	354.4	168.0	13.9	563.5	488.9	10.6	478.3	74.6	789.8	632.4
Oct.	50	207	1,873.5	533.0	519.9	359.7	160.2	13.1	562.1	487.8	11.2	476.5	74.4	778.4	625.8
Nov.	50	207	1,757.8	511.2	498.6	347.3	151.3	12.6	548.7	475.2	10.5	464.7	73.6	697.9	526.6
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
															Changes *
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
2022 Oct.	± 0	− 1	− 15.2	− 1.6	− 0.8	+ 5.3	− 6.1	− 0.8	+ 3.0	+ 2.7	+ 0.6	+ 2.1	+ 0.3	− 10.6	− 6.0
Nov.	± 0	−	− 113.5	− 17.9	− 17.5	− 12.4	− 5.0	− 0.4	− 0.4	− 0.8	− 0.8	− 0.0	+ 0.5	− 78.3	− 97.0
Dec.	− 3	− 5	− 131.0	− 46.9	− 48.7	− 31.7	− 17.0	+ 1.8	− 23.6	− 19.9	− 0.7	− 19.2	− 3.7	− 49.6	− 11.9
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
Foreign subsidiaries															**End of year or month ***
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 Sep.	11	33	260.5	53.0	47.9	20.8	27.1	5.2	149.3	126.0	13.1	112.9	23.3	58.2	0.0
Oct.	11	33	258.2	53.0	47.0	19.3	27.7	6.0	149.1	127.0	13.3	113.7	22.0	56.1	0.0
Nov.	11	33	258.2	58.1	49.5	19.4	30.1	8.6	148.4	127.0	13.4	113.6	21.4	51.7	0.0
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
															Changes *
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
2022 Oct.	−	−	− 1.2	+ 0.6	− 0.4	− 1.5	+ 1.1	+ 1.0	+ 0.3	+ 1.5	+ 0.2	+ 1.4	− 1.2	− 2.1	± 0.0
Nov.	−	−	+ 1.7	+ 5.4	+ 2.6	+ 0.1	+ 2.6	+ 2.8	+ 0.7	+ 1.4	+ 0.1	+ 1.2	− 0.7	− 4.4	± 0.0
Dec.	−	− 1	+ 0.2	+ 4.1	+ 3.0	+ 1.2	+ 1.8	+ 1.1	− 1.7	− 1.6	− 0.2	− 1.5	− 0.0	− 2.2	± 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

***** 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									Money market paper and debt securities outstanding [5]	Working capital and own funds	Other liabilities [6,7]		Period
	of banks (MFIs)			of non-banks (non-MFIs)									
					German non-banks [4]								
Total	Total	German banks	Foreign banks	Total	Total	Shortterm	Medium and longterm	Foreign non-banks			Total	of which: Derivative financial instruments in the trading portfolio	
End of year or month *												**Foreign branches**	
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
1,072.5	661.9	480.1	181.8	410.6	11.3	9.5	1.9	399.3	89.6	55.4	672.1	629.1	2022 Sep.
1,054.2	645.1	466.6	178.5	409.1	10.7	8.9	1.8	398.4	85.7	66.2	667.4	622.7	Oct.
1,041.1	639.9	457.8	182.1	401.2	10.2	8.6	1.6	391.0	82.6	65.5	568.6	523.8	Nov.
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	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
Changes *													
+ 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
− 15.9	− 14.5	− 13.4	− 1.1	− 1.4	− 0.6	− 0.6	− 0.1	− 0.8	− 3.0	+ 10.9	− 4.7	− 6.4	2022 Oct.
− 7.9	− 0.5	− 8.8	+ 8.3	− 7.4	− 0.5	− 0.3	− 0.2	− 6.9	− 0.9	− 0.8	− 98.8	− 98.9	Nov.
− 94.3	− 63.2	− 22.6	− 40.6	− 31.1	+ 0.2	+ 0.3	− 0.1	− 31.3	− 19.6	− 2.4	− 11.2	− 10.9	Dec.
+ 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
End of year or month *												**Foreign subsidiaries**	
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
191.4	68.3	37.1	31.2	123.0	7.7	5.3	2.3	115.4	14.8	20.0	34.4	0.0	2022 Sep.
188.7	68.1	37.5	30.6	120.6	7.4	5.1	2.3	113.2	13.8	20.3	35.4	0.0	Oct.
190.2	68.8	38.7	30.1	121.5	7.1	4.8	2.3	114.4	13.1	20.4	34.4	0.0	Nov.
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	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
Changes *													
+ 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
− 2.0	+ 0.0	+ 0.4	− 0.4	− 2.0	− 0.3	− 0.2	− 0.0	− 1.7	− 1.0	+ 0.3	+ 1.4	± 0.0	2022 Oct.
+ 2.7	+ 0.6	+ 1.2	− 0.6	+ 2.1	− 0.3	− 0.3	− 0.0	+ 2.4	− 0.7	+ 0.1	− 0.4	± 0.0	Nov.
+ 0.4	− 0.9	− 0.1	− 0.8	+ 1.3	− 0.2	− 0.2	+ 0.0	+ 1.5	+ 0.3	− 0.2	− 0.3	± 0.0	Dec.
− 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

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

V. Minimum reserves

1. Reserve maintenance in the euro area

€ billion

Maintenance period beginning in [1]	Reserve base [2]	Required reserves before deduction of lump-sum allowance [3]	Required reserves after deduction of lump-sum allowance [4]	Current accounts [5]	Excess reserves (without deposit facility) [6]	Deficiencies [7]
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 June p	16,548.3	165.5	165.1	177.4	12.3	0.1
July	.	.	.	.	.	.
Aug. p	16,563.5	165.6	165.3	...	...	...

2. Reserve maintenance in Germany

€ billion

Maintenance period beginning in [1]	Reserve base [2]	German share of euro area reserve base as a percentage	Required reserves before deduction of lump-sum allowance [3]	Required reserves after deduction of lump-sum allowance [4]	Current accounts [5]	Excess reserves (without deposit facility) [6]	Deficiencies [7]
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 June p	4,503,620	27.2	45,036	44,902	48,416	3,514	43
July	.	.	.	.	.	.	.
Aug. p	4,535,644	27.4	45,356	45,223	...	...	...

a) Required reserves of individual categories of banks

€ billion

Maintenance period beginning in [1]	Big banks	Regional banks and other commercial banks	Branches of foreign banks	Landesbanken and savings banks	Credit cooperatives	Mortgage banks	Banks with special, development and other central support tasks
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 June	9,115	7,335	2,952	14,343	8,193	137	2,403
July	.	.	.	.	.	.	.
Aug.	9,142	7,079	3,458	14,163	8,176	141	2,538

b) Reserve base by subcategories of liabilities

€ billion

Maintenance period beginning in [1]	Liabilities (excluding savings deposits, deposits with building and loan associations and repos) to non-MFIs with agreed maturities of up to 2 years	Liabilities (excluding repos and deposits with building and loan associations) with agreed maturities of up to 2 years to MFIs that are resident in euro area countries but not subject to minimum reserve requirements	Liabilities (excluding repos and deposits with building and loan associations) with agreed maturities of up to 2 years to banks in non-euro area countries	Savings deposits with agreed periods of notice of up to 2 years	Liabilities arising from bearer debt securities issued with agreed maturities of up to 2 years and bearer money market paper after deduction of a standard amount for bearer debt certificates or deduction of such paper held by the reporting institution
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 June	3,380,000	16,017	446,421	499,682	119,057
July	.	.	.	.	.
Aug.	3,396,556	16,278	455,301	484,000	130,799

1 The reserve maintenance period starts on the settlement day of the main refinancing operation immediately following the meeting of the Governing Council of the ECB for which the discussion on the monetary policy stance is scheduled. **2** Article 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)). **3** Amount after applying the reserve ratio to the reserve base. The reserve ratio for liabilities with agreed maturities of up to two years was 2% between 1 January 1999 and 17 January 2012. Since 18 January 2012, it has stood at 1%. **4** Article 6(2) of the Regulation (EU) 2021/378 of the European Central Bank on the application of minimum reserve requirements. **5** Average credit balances of credit institutions at national central banks. **6** Average credit balances less required reserves after deduction of the lump-sum allowance. **7** Required reserves after deduction of the lump-sum allowance.

VI. Interest rates

1. ECB interest rates / basic rates of interest

% per annum

ECB interest rates										Basic rates of interest			
		Main refinancing operations					Main refinancing operations						
Applicable from	Deposit facility	Fixed rate	Minimum bid rate	Marginal lending facility	Applicable from	Deposit facility	Fixed rate	Minimum bid rate	Marginal lending facility	Applicable from	Basic rate of interest as per Civil Code [1]	Applicable from	Basic rate of interest as per Civil Code [1]
2011 Apr. 13	0.50	1.25	–	2.00	2016 Mar. 16	– 0.40	0.00	–	0.25	2006 Jan. 1	1.37	2012 Jan. 1	0.12
July 13	0.75	1.50	–	2.25						July 1	1.95		
Nov. 9	0.50	1.25	–	2.00	2019 Sep. 18	– 0.50	0.00	–	0.25			2013 Jan. 1	– 0.13
Dec. 14	0.25	1.00	–	1.75						2007 Jan. 1	2.70	July 1	– 0.38
					2022 July 27	0.00	0.50	–	0.75	July 1	3.19		
2012 July 11	0.00	0.75	–	1.50	Sep. 14	0.75	1.25	–	1.50			2014 Jan. 1	– 0.63
					Nov. 2	1.50	2.00	–	2.25	2008 Jan. 1	3.32	July 1	– 0.73
2013 May 8	0.00	0.50	–	1.00	Dec. 21	2.00	2.50	–	2.75	July 1	3.19		
Nov. 13	0.00	0.25	–	0.75								2015 Jan. 1	– 0.83
					2023 Feb. 8	2.50	3.00	–	3.25	2009 Jan. 1	1.62		
2014 June 11	– 0.10	0.15	–		Mar. 22	3.00	3.50	–	3.75	July 1	0.12	2016 July 1	– 0.88
Sep. 10	– 0.20	0.05	–	2.00	May 10	3.25	3.75	–	4.00				
				2.25	June 21	3.50	4.00	–	4.25	2011 July 1	0.37	2023 Jan. 1	1.62
2015 Dec. 9	– 0.30	0.05	–	2.00	Aug. 2	3.75	4.25	–	4.50			July 1	3.12

2. Eurosystem monetary policy operations allotted through tenders *

			Fixed rate tenders	Variable rate tenders			
Date of Settlement	Bid amount	Allotment amount	Fixed rate	Minimum bid rate	Marginal rate [1]	Weighted average rate	Running for … days
	€ million		% per annum				
Main refinancing operations							
2023 Aug. 2	7 367	7 367	4.25	–	–	–	7
Aug. 9	5 691	5 691	4.25	–	–	–	7
Aug. 16	5 152	5 152	4.25	–	–	–	7
Aug. 23	5 891	5 891	4.25	–	–	–	7
Aug. 30	7 036	7 036	4.25	–	–	–	7
Sep. 6	3 946	3 946	4.25	–	–	–	7
Sep. 13	3 966	3 966	4.25	–	–	–	7
Long-term refinancing operations							
2023 June 29	4 327	4 327	[2] …	–	–	–	91
July 27	3 165	3 165	[2] …	–	–	–	91
Aug. 31	2 205	2 205	[2] …	–	–	–	91

***** Source: ECB. **1** Lowest or highest interest rate at which funds were allotted or collected. **2** Interest payment on the maturity date; the rate will be fixed at: 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	€STR [1]	EURIBOR ® [2]				
		One-week funds	One-month funds	Three-month funds	Six-month funds	Twelve-month funds
2023 Jan.	1.902	1.89	1.98	2.35	2.86	3.34
Feb.	2.275	2.30	2.37	2.64	3.14	3.53
Mar.	2.572	2.57	2.71	2.91	3.27	3.65
Apr.	2.900	2.88	2.96	3.18	3.52	3.76
May	3.080	3.09	3.15	3.37	3.68	3.86
June	3.238	3.25	3.34	3.54	3.83	4.01
July	3.402	3.40	3.47	3.67	3.94	4.15
Aug.	3.642	3.63	3.63	3.78	3.94	4.07

***** 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:
https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/euro_short-term_rate/html/index.en.html

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 publishes the €STR since 2 October 2019. Transactions are reported by euro area banks subject to reporting obligations in compliance with Money Market Statistical Reporting Regulation. Monthly averages are calculations by Deutsche Bundesbank. **2** Monthly averages are own calculations by Deutsche Bundesbank based on Euribor® daily rates calculated by the European Money Markets Institute (EMMI). These are unweighted averages. Information on the methodology of Euribor® daily rates are available below. Please be aware that commercial use of these data is only possible with a licence agreement with the European Money Markets Institute (EMMI). Information on its terms of use are available under the link below.
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VI. Interest rates

4. Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) *
a) Outstanding amounts o

End of month	Households' deposits				Non-financial corporations' deposits			
	with an agreed maturity of							
	up to 2 years		over 2 years		up to 2 years		over 2 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2022 July	0.24	40,392	0.86	217,843	0.04	72,141	0.86	24,213
Aug.	0.30	42,949	0.86	217,606	0.17	79,349	0.92	24,813
Sep.	0.46	50,096	0.86	217,608	0.52	95,994	0.97	24,605
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	222,528	0.92	227,182	3.01	168,779	1.24	21,499

End of month	Housing loans to households 3						Loans to households for consumption and other purposes 4,5					
	with a maturity of											
	up to 1 year 6		over 1 year and up to 5 years		over 5 years		up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2022 July	2.28	3,687	1.70	27,244	1.70	1,508,724	6.58	46,813	3.39	77,074	3.27	333,017
Aug.	2.43	3,713	1.76	27,275	1.70	1,515,561	6.75	47,402	3.41	76,990	3.29	334,182
Sep.	2.61	3,627	1.86	27,290	1.70	1,522,592	6.95	48,339	3.46	77,011	3.32	333,384
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	25,707	1.83	1,547,325	9.44	47,254	4.35	76,472	3.90	331,334

End of month	Loans to non-financial corporations with a maturity of					
	up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2022 July	2.07	194,397	1.69	218,875	1.66	854,793
Aug.	2.24	209,826	1.74	226,447	1.68	861,022
Sep.	2.63	211,369	2.00	230,393	1.80	865,922
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	194,722	4.09	251,312	2.35	887,112

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

VI. Interest rates

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

Reporting period	Households' deposits											
	Overnight		with an agreed maturity of						redeemable at notice [8] of			
			up to 1 year		over 1 year and up to 2 years		over 2 years		up to 3 months		over 3 months	
	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million
2022 July	– 0.00	1,854,420	0.31	3,227	0.83	776	0.75	1,128	0.07	530,302	0.15	22,255
Aug.	0.00	1,852,118	0.49	4,742	1.04	925	0.95	1,582	0.08	527,959	0.16	22,201
Sep.	0.01	1,854,045	0.84	7,457	1.49	915	1.29	1,289	0.09	522,685	0.19	22,155
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

Reporting period	Non-financial corporations' deposits							
	Overnight		with an agreed maturity of					
			up to 1 year		over 1 year and up to 2 years		over 2 years	
	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
2022 July	– 0.07	604,802	– 0.11	26,039	1.15	678	1.90	1,466
Aug.	– 0.01	636,259	0.07	51,099	0.92	467	.	.
Sep.	0.03	615,838	0.62	73,349	1.93	494	2.75	1,111
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	550,589	3.34	79,832	3.53	614	3.26	252

Reporting period	Loans to households											
	Loans for consumption [4] with an initial rate fixation of											
	Total (including charges)	Total		of which: Renegotiated loans [9]		floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 years		
	Annual percentage rate of charge [10] % p.a.	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
2022 July	6.15	6.12	9,064	6.97	1,771	8.76	314	4.80	2,968	6.65	5,782
Aug.	6.33	6.31	8,927	7.25	1,765	8.79	349	4.92	2,931	6.88	5,647
Sep.	6.43	6.43	8,562	7.37	1,613	8.64	346	4.96	2,922	7.09	5,294
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	1,610	10.91	295	7.04	2,974	8.94	5,359

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

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 households for other purposes [5] with an initial rate fixation of									
	Total		of which: Renegotiated loans [9]		floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 years	
	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
Loans to households										
2022 July	2.62	4,606	1.97	1,195	2.06	1,980	3.24	629	2.97	1,997
Aug.	2.94	4,474	2.33	777	2.24	1,627	3.48	730	3.30	2,117
Sep.	2.95	4,255	2.51	1,090	2.60	2,250	3.39	610	3.33	1,395
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	4,175	4.57	1,249	5.37	1,854	5.12	934	4.31	1,387
of which: Loans to sole proprietors										
2022 July	2.76	2,994	.	.	2.21	1,252	3.36	474	3.08	1,268
Aug.	2.94	2,573	.	.	2.38	1,063	3.68	435	3.19	1,075
Sep.	3.09	2,843	.	.	2.76	1,446	3.53	465	3.37	932
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	3,051	.	.	5.45	1,424	5.48	593	4.37	1,034

Erhebungszeitraum	Loans to households (cont'd)													
	Housing loans [3] with an initial rate fixation of													
	Total (including charges)	Total		of which: Renegotiated loans [9]		floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 year and up to 10 years		over 10 years	
	Annual percentage rate of charge [10] % p.a.	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
Total loans													
2022 July	2.85	2.80	21,054	2.48	3,828	2.33	2,814	2.64	1,592	2.73	8,023	3.04	8,626
Aug.	2.89	2.84	18,491	2.57	3,215	2.55	2,488	2.78	1,512	2.74	6,880	3.04	7,610
Sep.	3.08	3.01	16,113	2.81	2,719	2.73	2,186	2.93	1,366	2.96	5,969	3.18	6,593
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	14,334	4.03	2,844	5.20	1,949	4.37	1,469	3.71	5,352	3.82	5,564
of which: Collateralised loans [11]													
2022 July	.	2.69	9,711	.	.	2.19	1,031	2.51	802	2.63	3,794	2.91	4,084
Aug.	.	2.74	8,203	.	.	2.36	820	2.63	711	2.68	3,215	2.92	3,457
Sep.	.	2.90	7,168	.	.	2.54	746	2.80	638	2.84	2,725	3.05	3,059
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	6,591	.	.	5.08	728	4.20	661	3.63	2,384	3.72	2,818

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 12 and overdrafts 13 Credit card debt 14		of which: Revolving loans 12 and overdrafts 13		of which: Extended credit card debt		Revolving loans 12 and overdrafts 13 Credit card debt 14		of which: Revolving loans 12 and overdrafts 13	
	Effective interest rate 1 % 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 July	7.04	37,549	6.98	28,881	14.80	4,246	2.68	93,897	2.69	93,495
Aug.	7.17	38,113	7.17	29,170	14.94	4,305	2.73	96,714	2.74	96,288
Sep.	7.31	39,138	7.36	30,018	14.97	4,359	3.04	97,298	3.05	96,819
Oct.	7.78	38,898	7.74	30,031	15.66	4,479	3.39	97,186	3.40	96,732
Nov.	8.44	38,580	8.20	27,368	15.61	6,475	3.74	97,850	3.76	97,371
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
Feb.	9.40	38,538	9.32	27,356	16.60	6,475	4.63	98,285	4.65	97,859
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
May	9.98	38,906	10.10	27,431	17.19	6,478	5.61	99,175	5.63	98,709
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

Reporting period	Loans to non-financial corporations (cont'd)															
	Total		of which: Renegotiated loans 9		Loans up to €1 million 15 with an initial rate fixation of: floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years		Loans over €1 million 15 with an initial rate fixation of: floating rate or up to 1 year 9		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % p.a.	Volume 7 € million	Effective interest rate 1 % p.a.	Volume 7 € million	Effective interest rate 1 % p.a.	Volume 7 € million	Effective interest rate 1 % p.a.	Volume 7 € million	Effective interest rate 1 % p.a.	Volume 7 € million	Effective interest rate 1 % p.a.	Volume 7 € million	Effective interest rate 1 % p.a.	Volume 7 € million	Effective interest rate 1 % p.a.	Volume 7 € million
Total loans																
2022 July	1.89	80,810	1.76	22,550	1.95	10,057	3.12	1,435	2.91	1,400	1.66	53,206	2.43	3,997	2.50	10,715
Aug.	1.97	87,373	1.54	20,380	2.17	9,306	3.36	1,327	2.96	1,241	1.80	64,748	2.47	2,987	2.56	7,764
Sep.	2.67	99,740	2.23	28,861	2.60	10,891	3.85	1,435	3.19	1,075	2.61	75,992	2.99	3,670	2.96	6,677
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	5.07	86,605	4.89	28,604	6.39	10,770	6.54	1,840	4.35	1,167	4.92	61,863	5.35	4,155	3.94	6,810
of which: Collateralised loans 11																
2022 July	2.00	11,739	.	.	2.03	487	2.84	102	2.67	398	1.64	7,081	2.99	1,130	2.41	2,541
Aug.	2.20	7,929	.	.	2.25	501	2.97	91	2.74	319	2.02	4,945	2.99	603	2.30	1,470
Sep.	.	.	.	.	2.86	608	3.37	78	3.01	299	.	.	3.16	1,131	2.99	1,712
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	4.91	11,569	.	.	5.44	491	4.92	127	3.98	325	4.94	7,242	5.87	1,612	3.94	1,772

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 [1]	Debt securities	Loans [2]	Shares and other equity	Investment fund shares/units	Financial derivatives	Technical reserves [3]	Non-financial assets	Remaining assets
Insurance corporations										
2020 Q3	2,561.3	311.1	476.9	373.8	410.1	819.8	4.4	67.1	39.0	58.9
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
Life insurance										
2020 Q3	1,378.1	188.4	243.6	225.7	66.0	599.5	3.0	13.6	20.6	17.6
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
Non-life insurance										
2020 Q3	697.6	109.3	139.2	83.3	82.6	206.1	0.4	38.5	12.1	26.3
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
Reinsurance [4]										
2020 Q3	485.6	13.5	94.1	64.9	261.4	14.3	1.0	15.0	6.3	15.1
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
Pension funds [5]										
2020 Q3	638.5	91.1	59.6	50.2	10.1	394.7	0.2	11.6	18.5	2.5
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	664.9	65.7	55.0	41.8	13.2	454.3	0.0	13.5	18.8	2.6

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** Accounts receivable to monetary financial institutions, including registered bonds, borrower's note loans and registered Pfandbriefe. **2** Including deposits retained on assumed reinsurance as well as registered bonds, borrower's note loans and registered Pfandbriefe. **3** Including reinsurance recoverables and claims of pension funds on pension managers. **4** Not including the reinsurance business conducted by primary insurers, which is included there. **5** The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes and occupational pension schemes for the self-employed. Social security funds are not included.

VII. Insurance corporations and pension funds

2. Liabilities

€ billion

End of year/quarter	Total	Debt securities issued	Loans [1]	Shares and other equity	Technical reserves			Financial derivatives	Remaining liabilities	Net worth [6]
					Total [2]	Life/ pension entitlements [3]	Non-life			
Insurance corporations										
2020 Q3	2,561.3	34.3	80.0	515.8	1,785.6	1,549.2	236.4	1.7	144.0	–
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	–
Life insurance										
2020 Q3	1,378.1	3.9	19.5	136.8	1,164.7	1,164.7	–	0.5	52.7	–
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	–
Non-life insurance										
2020 Q3	697.6	1.2	9.6	151.9	482.1	362.3	119.8	0.1	52.7	–
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	–
Reinsurance [4]										
2020 Q3	485.6	29.2	50.9	227.1	138.8	22.1	116.7	1.0	38.6	–
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	–
Pension funds [5]										
2020 Q3	638.5	–	1.6	27.8	510.5	509.9	–	0.3	9.2	89.0
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	664.9	–	1.8	24.7	578.9	578.6	–	0.1	11.4	48.1

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					Purchases				
		Domestic debt securities [1]					Residents				
	Sales = total purchases	Total	Bank debt securities	Corporate bonds (non-MFIs) [2]	Public debt securities	Foreign debt securities [3]	Total [4]	Credit institutions including building and loan associations [5]	Deutsche Bundesbank	Other sectors [6]	Non-residents [7]
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 Aug.	15,672	22,057	2,780	2,225	17,052	– 6,385	– 3,617	– 10,189	– 726	7,298	19,289
Sep.	9,558	15,007	32,705	3,897	– 21,595	– 5,449	18,638	7,491	– 3,147	14,294	– 9,080
Oct.	– 1,614	– 3,868	– 6,143	– 2,570	4,846	2,254	17,813	4,260	3,619	9,934	– 19,427
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	27,453	27,963	969	7	26,987	– 511	1,496	– 8,514	324	9,686	25,956

€ million

Period	Shares						
		Sales		Purchases			
				Residents			
	Sales = total purchases	Domestic shares [8]	Foreign shares [9]	Total [10]	Credit institutions [5]	Other sectors [11]	Non-residents [12]
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 Aug.	– 1,603	87	– 1,690	1,049	165	884	– 2,652
Sep.	– 986	1,166	– 2,152	– 12,004	– 529	– 11,475	11,018
Oct.	– 1,785	154	– 1,939	– 4,007	– 1,588	– 2,419	2,222
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	4,650	478	4,172	1,797	– 136	1,933	2,852

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

VIII. Capital market

2. Sales of debt securities issued by residents *

€ million, nominal value

Period	Total	Bank debt securities 1					Corporate bonds (non-MFIs) 2	Public debt securities
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special-purpose credit institutions	Other bank debt securities		
Gross sales								
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 3	1,206,483	717,002	29,059	7,621	511,222	169,103	73,371	416,108
2017 3	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 6	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
2022 Nov.	152,777	70,448	2,969	91	55,905	11,482	20,625	61,705
Dec.	80,590	49,026	2,329	979	39,181	6,538	11,536	20,028
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	121,569	53,803	2,876	130	43,766	7,031	14,133	53,632
of which: Debt securities with maturities of more than four years 4								
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 3	375,859	173,900	24,741	5,841	78,859	64,460	47,818	154,144
2017 3	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 6	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
2022 Nov.	34,411	7,379	1,895	–	2,006	3,478	9,336	17,696
Dec.	6,561	2,256	54	4	711	1,488	304	4,000
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	34,136	10,123	430	2	7,955	1,736	2,298	21,715
Net sales 5								
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 3	21,951	10,792	2,176	– 12,979	16,266	5,327	18,177	– 7,020
2017 3	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 6	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
2022 Nov.	37,459	– 2,300	– 2,165	– 944	– 2,680	3,488	6,015	33,744
Dec.	– 42,448	– 23,318	– 3,643	– 3,697	– 16,193	216	– 1,825	– 17,306
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	30,257	691	– 53	110	– 511	1,146	– 697	30,263

***** For definitions, see the explanatory notes in Statistical Series - Securities Issues Statistics on pages 43 f. **1** Excluding registered bank debt securities. **2** Including cross-border financing within groups from January 2011. **3** Sectoral reclassification of debt securities. **4** Maximum maturity according to the terms of issue. **5** Gross sales less redemptions. **6** 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	Total	Bank debt securities					Corporate bonds (non-MFIs)	Public debt securities
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special-purpose credit institutions	Other bank debt securities		
2012	3,285,422	1 1,414,349	145,007	147,070	574,163	1 548,109	1 220,456	1 1,650,617
2013	3,145,329	1,288,340	127,641	109,290	570,136	481,273	221,851	1,635,138
2014	3,111,308	1,231,445	121,328	85,434	569,409	455,274	232,342	1,647,520
2015	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377
2016 1	3,068,111	1,164,965	132,775	62,701	633,578	335,910	275,789	1,627,358
2017 1	3,090,708	1,170,920	141,273	58,004	651,211	320,432	2 302,543	1,617,244
2018	3,091,303	1,194,160	161,088	51,439	670,062	1 311,572	1 2 313,527	1,583,616
2019	2 3,149,373	1,222,911	174,188	47,712	696,325	304,686	2 342,325	1,584,136
2020 4	2 3,545,200	2 1,174,817	183,980	55,959	687,710	2 247,169	2 379,342	1,991,040
2021	3,781,975	1,250,777	202,385	63,496	731,068	253,828	414,791	2,116,406
2022	3,930,390	1,302,028	225,854	54,199	761,047	260,928	441,234	2,187,127
2022 Nov.	3,981,275	1,333,432	229,589	57,912	784,494	261,438	444,010	2,203,833
Dec.	3,930,390	1,302,028	225,854	54,199	761,047	260,928	441,234	2,187,127
2023 Jan.	3,948,426	1,313,581	232,105	52,647	763,260	265,568	444,529	2,190,316
Feb.	3,963,852	1,320,844	229,851	54,180	764,148	272,666	442,389	2,200,618
Mar.	4,005,403	1,335,447	227,451	52,890	777,696	277,410	440,399	2,229,557
Apr.	3,977,194	1,330,812	228,764	52,910	772,714	276,424	436,591	2,209,790
May	4,027,974	1,364,889	230,966	53,237	799,875	280,811	439,299	2,223,786
June	4,052,214	1,354,415	230,474	53,223	788,438	282,281	446,780	2,251,019
July	4,076,591	1,353,000	230,443	53,389	786,385	282,783	445,947	2,277,643
Breakdown by remaining period to maturity 3								**Position at end-July 2023**
bis unter 2	1 228 454	500 267	59 023	19 013	327 951	94 281	84 972	643 215
2 bis unter 4	744 212	316 635	69 166	15 691	162 527	69 251	76 441	351 135
4 bis unter 6	612 906	219 121	51 398	6 391	116 855	44 476	70 056	323 729
6 bis unter 8	434 930	131 369	24 434	5 211	74 935	26 789	42 653	260 908
8 bis unter 10	300 388	82 164	14 259	2 873	49 433	15 598	29 233	188 991
10 bis unter 15	245 827	58 389	7 973	3 841	36 767	9 808	31 435	156 003
15 bis unter 20	113 535	14 246	3 423	283	8 424	2 116	14 755	84 534
20 und darüber	396 339	30 811	768	87	9 493	20 463	96 401	269 128

***** 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 2
			cash payments and exchange of convertible bonds 1	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 3 4	183,461	1,673	2,411	2,419	542	– 858	– 65	– 2,775	1,950,224
2020 4	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
2022 Nov.	186,351	– 57	31	13	–	–	–	– 102	1,918,565
Dec.	199,789	13,437	13,584	–	–	–	–	– 147	1,858,963
2023 Jan.	199,778	– 11	16	–	–	–	– 0	– 27	2,027,004
Feb.	198,334	162	149	–	50	–	– 0	– 37	2,064,749
Mar.	198,157	– 185	178	–	–	–	–	– 363	2,080,189
Apr.	198,426	267	431	–	–	– 0	– 6	– 157	2,086,578
May	198,497	71	153	–	–	– 0	–	– 82	2,048,166
June	198,505	8	422	–	–	– 262	– 17	– 135	2,061,065
July	198,406	– 99	52	–	–	– 0	– 89	– 62	2,113,570

***** 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-Mit teilungen 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]						
		Public debt securities				Public debt securities			Bank debt securities		
							Listed Federal securities				
	Total	Total	of which: Listed Federal debt securities	Bank debt securities	Total	Total	Total	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	Corporate bonds (non-MFIs)
	% 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	0.0	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	– 0.1	– 0.2	– 0.3	– 0.3	0.1	0.3	2.5
2020	0.1	– 0.3	– 0.5	0.1	– 0.2	– 0.4	– 0.5	– 0.5	– 0.0	0.1	1.7
2021	0.0	– 0.2	– 0.3	0.1	– 0.1	– 0.3	– 0.4	– 0.4	– 0.1	0.2	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 Jan.	2.69	2.32	2.32	2.88	2.65	2.34	2.23	2.19	3.06	2.95	4.15
Feb.	2.86	2.67	2.67	3.33	2.82	2.52	2.41	2.37	3.21	3.07	4.15
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

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

€ million

Period	Sales								Purchases					
		Open-end domestic mutual funds [1] (sales receipts)							Residents					
			Mutual funds open to the general public							Credit institutions including building and loan associations [2]		Other sectors [3]		
				of which:										
	Sales = total purchases	Total	Total	Money market funds	Securities-based funds	Real estate funds	Specialised funds	Foreign funds [4]	Total	Total	of which: Foreign mutual fund shares	Total	of which: Foreign mutual fund shares	Non-residents [5]
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
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 Jan.	14,093	8,014	2,506	– 218	2,185	557	5,508	6,079	13,890	– 4,078	– 672	17,968	6,751	203
Feb.	13,837	10,533	2,090	– 167	2,077	137	8,444	3,304	12,862	– 426	– 507	13,288	3,811	975
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	3,340	– 247	96	3,587	2,141	28
May	8,348	6,261	1,228	– 144	1,301	21	5,035	2,087	8,074	– 49	42	8,123	2,045	274
June	– 1,800	– 2,213	– 312	– 31	– 628	271	– 1,901	413	– 437	85	– 19	– 522	432	– 1,363
July	16,871	6,405	433	280	69	90	5,972	10,467	17,812	– 437	– 167	18,249	10,634	– 941

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	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1
Acquisition of financial assets									
Currency and deposits	96.82	46.19	67.90	26.03	13.90	− 26.90	51.95	28.96	− 25.80
Debt securities	2.99	3.11	4.12	1.16	0.64	− 0.10	3.52	0.05	4.43
Short-term debt securities	1.27	2.27	1.23	1.12	0.39	− 1.94	3.00	− 0.22	1.92
Long-term debt securities	1.72	0.85	2.88	0.05	0.25	1.84	0.53	0.26	2.51
Memo item:									
Debt securities of domestic sectors	1.38	1.34	3.40	− 0.64	0.34	0.98	1.65	0.43	3.82
Non-financial corporations	− 0.17	0.74	0.87	− 0.57	0.17	− 0.17	0.74	0.14	0.76
Financial corporations	0.12	1.08	1.78	0.56	0.44	0.73	0.66	− 0.05	1.44
General government	1.44	− 0.48	0.74	− 0.63	− 0.27	0.43	0.25	0.34	1.63
Debt securities of the rest of the world	1.61	1.78	0.72	1.80	0.31	− 1.08	1.88	− 0.38	0.60
Loans	− 7.35	63.01	44.17	35.29	4.29	16.30	31.37	− 7.78	28.55
Short-term loans	− 4.27	44.68	27.96	18.60	2.69	12.28	27.97	− 14.97	20.00
Long-term loans	− 3.09	18.34	16.22	16.69	1.60	4.02	3.40	7.19	8.55
Memo item:									
Loans to domestic sectors	− 0.12	10.10	22.99	16.16	8.25	2.92	14.54	− 2.72	37.02
Non-financial corporations	− 12.27	7.11	23.94	13.38	2.44	5.52	8.47	7.51	29.88
Financial corporations	11.58	2.38	− 1.29	2.63	5.73	− 2.68	5.98	− 10.31	7.13
General government	0.57	0.61	0.34	0.15	0.08	0.08	0.08	0.08	0.00
Loans to the rest of the world	− 7.23	52.92	21.18	19.13	− 3.97	13.38	16.83	− 5.07	− 8.47
Equity and investment fund shares	100.72	166.19	117.27	43.95	40.46	47.34	3.31	26.15	0.40
Equity	87.95	144.41	117.12	35.66	38.25	49.16	5.55	24.16	− 0.94
Listed shares of domestic sectors	− 77.97	15.33	44.06	16.59	6.03	7.40	34.33	− 3.70	− 10.61
Non-financial corporations	− 78.06	16.89	43.77	18.30	5.58	7.12	34.91	− 3.84	− 10.53
Financial corporations	0.09	− 1.56	0.29	− 1.70	0.46	0.28	− 0.58	0.13	− 0.07
Listed shares of the rest of the world	5.01	5.11	5.53	0.70	− 0.26	3.16	0.08	2.55	− 7.75
Other equity [1]	160.91	123.97	67.52	18.37	32.47	38.60	− 28.86	25.31	17.41
Investment fund shares	12.77	21.78	0.16	8.29	2.22	− 1.82	− 2.24	1.99	1.34
Money market fund shares	3.79	0.66	− 0.38	1.73	− 1.22	− 0.42	− 1.12	2.37	− 0.80
Non-MMF investment fund shares	8.99	21.12	0.53	6.56	3.44	− 1.40	− 1.12	− 0.38	2.14
Insurance technical reserves	0.37	18.01	1.61	4.47	4.99	− 1.20	− 1.00	− 1.19	6.30
Financial derivatives	− 27.54	15.54	29.09	− 1.09	21.27	28.28	10.09	− 30.54	0.21
Other accounts receivable	59.32	71.29	27.54	53.16	− 11.30	− 36.19	− 54.45	129.48	85.66
Total	225.34	383.33	291.71	162.97	74.25	27.54	44.79	145.13	99.74
External financing									
Debt securities	36.89	20.86	14.16	− 1.12	10.95	3.77	1.37	− 1.93	1.38
Short-term securities	− 4.40	2.51	− 0.36	− 1.02	3.85	1.21	− 2.73	− 2.69	− 0.16
Long-term securities	41.29	18.35	14.52	− 0.10	7.10	2.56	4.10	0.76	1.54
Memo item:									
Debt securities of domestic sectors	18.06	9.14	5.87	1.76	5.64	1.62	0.19	− 1.58	1.74
Non-financial corporations	− 0.17	0.74	0.87	− 0.57	0.17	− 0.17	0.74	0.14	0.76
Financial corporations	19.80	9.09	4.48	2.59	5.34	1.86	− 0.75	− 1.97	0.41
General government	− 0.22	0.09	− 0.07	− 0.10	− 0.01	− 0.08	0.01	0.01	− 0.00
Households	− 1.35	− 0.79	0.59	− 0.15	0.14	0.01	0.19	0.24	0.57
Debt securities of the rest of the world	18.83	11.73	8.28	− 2.87	5.31	2.15	1.18	− 0.35	− 0.36
Loans	96.76	135.74	181.21	71.37	34.58	41.22	67.15	38.27	15.31
Short-term loans	− 2.80	81.44	105.44	29.93	29.26	21.74	46.53	7.91	− 18.11
Long-term loans	99.56	54.30	75.78	41.44	5.32	19.48	20.62	30.35	33.42
Memo item:									
Loans from domestic sectors	38.42	77.53	157.66	40.57	37.71	36.35	59.41	24.18	48.92
Non-financial corporations	− 12.27	7.11	23.94	13.38	2.44	5.52	8.47	7.51	29.88
Financial corporations	15.00	56.63	118.38	24.23	33.71	28.07	36.60	20.00	24.15
General government	35.68	13.79	15.34	2.96	1.57	2.77	14.34	− 3.33	− 5.11
Loans from the rest of the world	58.34	58.21	23.55	30.79	− 3.14	4.87	7.73	14.08	− 33.61
Equity	60.37	61.44	15.39	20.38	3.11	8.99	3.48	− 0.19	− 3.47
Listed shares of domestic sectors	− 62.25	26.37	57.07	24.51	12.91	10.14	33.32	0.70	− 13.14
Non-financial corporations	− 78.06	16.89	43.77	18.30	5.58	7.12	34.91	− 3.84	− 10.53
Financial corporations	3.46	− 2.39	2.29	− 0.67	5.17	− 1.43	− 4.47	3.01	− 0.62
General government	0.26	− 0.09	0.76	0.04	0.18	0.24	0.25	0.10	− 1.18
Households	12.08	11.96	10.24	6.84	1.98	4.21	2.63	1.43	− 0.82
Listed shares of the rest of the world	10.09	18.96	− 9.57	− 6.63	− 12.75	− 2.10	8.05	− 2.78	3.95
Other equity [1]	112.54	16.11	− 32.10	2.50	2.95	0.95	− 37.89	1.88	5.72
Insurance technical reserves	5.83	4.25	4.25	1.06	1.06	1.06	1.06	1.06	1.06
Financial derivatives and employee stock options	0.54	14.32	− 14.10	0.93	− 2.28	− 0.27	1.80	− 13.34	− 3.57
Other accounts payable	22.28	136.29	63.75	49.28	13.84	11.85	20.34	17.73	9.28
Total	222.68	372.91	264.67	141.90	61.26	66.62	95.20	41.59	19.99

1 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	2021	2022				2023
				Q4	Q1	Q2	Q3	Q4	Q1
Financial assets									
Currency and deposits	717.4	727.5	795.3	727.5	731.7	698.7	767.4	795.3	744.3
Debt securities	51.5	54.3	53.8	54.3	53.4	51.3	53.7	53.8	58.8
Short-term debt securities	4.8	7.1	8.4	7.1	7.5	5.6	8.6	8.4	10.3
Long-term debt securities	46.7	47.2	45.5	47.2	45.9	45.7	45.1	45.5	48.5
Memo item:									
Debt securities of domestic sectors	22.1	23.3	24.7	23.3	23.0	23.0	24.1	24.7	28.7
Non-financial corporations	4.7	5.3	5.8	5.3	5.2	4.9	5.5	5.8	6.5
Financial corporations	13.4	14.5	15.0	14.5	14.6	14.7	14.9	15.0	16.6
General government	4.0	3.5	3.9	3.5	3.2	3.5	3.6	3.9	5.6
Debt securities of the rest of the world	29.4	31.0	29.2	31.0	30.4	28.2	29.7	29.2	30.1
Loans	725.1	780.5	827.2	780.5	785.9	806.5	840.9	827.2	855.2
Short-term loans	571.1	611.2	640.8	611.2	614.9	629.8	660.0	640.8	660.1
Long-term loans	154.0	169.2	186.3	169.2	171.0	176.7	180.9	186.3	195.0
Memo item:									
Loans to domestic sectors	412.5	422.6	445.5	422.6	430.8	433.7	448.3	445.5	482.6
Non-financial corporations	327.6	334.7	358.7	334.7	337.2	342.7	351.1	358.7	388.5
Financial corporations	76.9	79.3	78.0	79.3	85.0	82.4	88.3	78.0	85.2
General government	7.9	8.5	8.9	8.5	8.6	8.7	8.8	8.9	8.9
Loans to the rest of the world	312.7	357.9	381.6	357.9	355.1	372.7	392.6	381.6	372.6
Equity and investment fund shares	2,572.7	2,921.5	2,707.2	2,921.5	2,845.3	2,785.3	2,756.1	2,707.2	2,783.1
Equity	2,368.0	2,681.3	2,494.6	2,681.3	2,613.1	2,567.9	2,544.3	2,494.6	2,563.9
Listed shares of domestic sectors	307.0	393.0	331.2	393.0	350.1	305.0	307.5	331.2	361.1
Non-financial corporations	298.9	384.9	324.4	384.9	342.4	298.2	301.7	324.4	353.7
Financial corporations	8.1	8.0	6.7	8.0	7.7	6.8	5.7	6.7	7.4
Listed shares of the rest of the world	66.6	71.5	69.7	71.5	67.0	66.8	65.4	69.7	64.1
Other equity [1]	1,994.4	2,216.8	2,093.8	2,216.8	2,196.0	2,196.1	2,171.4	2,093.8	2,138.8
Investment fund shares	204.7	240.2	212.6	240.2	232.3	217.5	211.9	212.6	219.2
Money market fund shares	7.0	7.6	7.2	7.6	6.4	6.0	4.9	7.2	6.5
Non-MMF investment fund shares	197.7	232.6	205.4	232.6	225.9	211.5	207.0	205.4	212.7
Insurance technical reserves	62.1	64.8	41.0	64.8	47.8	45.2	42.8	41.0	47.2
Financial derivatives	30.9	106.0	92.2	106.0	147.8	164.4	199.0	92.2	65.3
Other accounts receivable	1,243.9	1,456.5	1,520.4	1,456.5	1,493.1	1,519.1	1,531.0	1,520.4	1,574.4
Total	5,403.7	6,111.0	6,037.1	6,111.0	6,105.0	6,070.5	6,191.0	6,037.1	6,128.2
Liabilities									
Debt securities	238.3	252.3	228.7	252.3	245.3	229.7	226.7	228.7	231.2
Short-term securities	7.1	9.6	9.3	9.6	13.4	14.7	12.0	9.3	9.1
Long-term securities	231.2	242.7	219.4	242.7	231.8	215.1	214.7	219.4	222.1
Memo item:									
Debt securities of domestic sectors	96.1	100.6	90.7	100.6	98.6	92.5	90.3	90.7	93.2
Non-financial corporations	4.7	5.3	5.8	5.3	5.2	4.9	5.5	5.8	6.5
Financial corporations	78.2	83.2	73.4	83.2	81.7	76.7	73.8	73.4	74.4
General government	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3
Households	12.8	11.8	11.3	11.8	11.2	10.6	10.7	11.3	11.9
Debt securities of the rest of the world	142.3	151.7	137.9	151.7	146.7	137.2	136.4	137.9	138.0
Loans	2,270.6	2,403.4	2,587.9	2,403.4	2,439.9	2,485.5	2,559.6	2,587.9	2,602.7
Short-term loans	830.0	903.1	1,011.2	903.1	933.5	959.0	1,010.0	1,011.2	991.1
Long-term loans	1,440.5	1,500.3	1,576.7	1,500.3	1,506.4	1,526.5	1,549.6	1,576.7	1,611.6
Memo item:									
Loans from domestic sectors	1,391.8	1,470.5	1,627.8	1,470.5	1,508.8	1,542.6	1,603.2	1,627.8	1,675.0
Non-financial corporations	327.6	334.7	358.7	334.7	337.2	342.7	351.1	358.7	388.5
Financial corporations	962.2	1,020.3	1,138.5	1,020.3	1,054.8	1,080.3	1,118.1	1,138.5	1,160.7
General government	102.0	115.6	130.7	115.6	116.9	119.6	133.9	130.7	125.8
Loans from the rest of the world	878.8	932.9	960.2	932.9	931.1	942.9	956.4	960.2	927.7
Equity	3,260.9	3,689.0	2,988.1	3,689.0	3,391.9	2,994.2	2,843.1	2,988.1	3,264.2
Listed shares of domestic sectors	739.9	924.8	760.4	924.8	840.0	733.3	691.4	760.4	854.2
Non-financial corporations	298.9	384.9	324.4	384.9	342.4	298.2	301.7	324.4	353.7
Financial corporations	171.9	210.3	151.1	210.3	194.3	161.8	138.1	151.1	182.0
General government	56.3	69.9	69.2	69.9	70.0	70.7	61.4	69.2	78.9
Households	212.8	259.7	215.7	259.7	233.3	202.6	190.2	215.7	239.6
Listed shares of the rest of the world	995.6	1,126.3	824.1	1,126.3	984.0	795.9	732.0	824.1	942.8
Other equity [1]	1,525.5	1,637.9	1,403.6	1,637.9	1,567.9	1,465.0	1,419.7	1,403.6	1,467.2
Insurance technical reserves	283.1	287.4	291.6	287.4	288.4	289.5	290.6	291.6	292.7
Financial derivatives and employee stock options	83.4	137.9	62.6	137.9	143.5	137.1	161.0	62.6	34.0
Other accounts payable	1,275.8	1,525.4	1,603.4	1,525.4	1,546.6	1,566.4	1,651.6	1,603.4	1,603.3
Total	7,412.1	8,295.5	7,762.2	8,295.5	8,055.6	7,702.4	7,732.5	7,762.2	8,028.1

1 Including unlisted shares.

IX. Financial accounts

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

€ billion

Item	2020	2021	2022	2021	2022				2023
				Q4	Q1	Q2	Q3	Q4	Q1
Acquisition of financial assets									
Currency and deposits	213.31	146.16	109.27	32.62	10.73	27.30	33.05	38.20	– 16.08
Currency	61.94	60.55	44.93	16.24	13.63	11.48	13.67	6.14	2.80
Deposits	151.36	85.61	64.34	16.38	– 2.90	15.81	19.37	32.06	– 18.88
Transferable deposits	165.34	90.84	47.63	16.35	– 0.99	23.73	20.48	4.41	– 60.51
Time deposits	1.29	– 5.09	32.66	– 0.17	0.16	– 4.31	6.22	30.59	45.14
Savings deposits (including savings certificates)	– 15.26	– 0.13	– 15.94	0.20	– 2.07	– 3.61	– 7.32	– 2.95	– 3.52
Debt securities	– 5.94	– 5.89	24.97	– 0.62	2.81	4.85	5.36	11.96	29.66
Short-term debt securities	0.08	0.31	1.99	0.03	– 0.02	0.05	0.17	1.79	7.86
Long-term debt securities	– 6.02	– 6.20	22.98	– 0.64	2.83	4.80	5.18	10.17	21.80
Memo item:									
Debt securities of domestic sectors	– 2.56	– 3.70	20.30	– 0.39	2.26	3.77	3.76	10.52	25.63
Non-financial corporations	– 1.32	– 0.83	0.49	– 0.16	0.08	– 0.02	0.21	0.23	0.53
Financial corporations	– 1.26	– 2.57	17.47	– 0.23	2.34	3.18	2.94	9.01	21.58
General government	0.02	– 0.30	2.35	0.00	– 0.16	0.61	0.61	1.29	3.53
Debt securities of the rest of the world	– 3.38	– 2.19	4.67	– 0.23	0.55	1.08	1.60	1.44	4.03
Equity and investment fund shares	90.18	136.54	78.00	42.10	30.64	22.35	9.21	15.82	13.45
Equity	48.53	31.76	27.00	14.30	7.82	10.01	3.98	5.19	1.34
Listed shares of domestic sectors	16.05	14.21	12.31	6.29	2.70	5.55	3.36	0.70	0.05
Non-financial corporations	11.92	12.64	9.91	6.12	1.97	3.90	2.68	1.36	– 1.09
Financial corporations	4.14	1.58	2.40	0.17	0.74	1.64	0.67	– 0.66	1.14
Listed shares of the rest of the world	23.29	10.87	8.70	5.26	3.47	2.46	– 0.45	3.22	0.54
Other equity [1]	9.19	6.68	5.98	2.76	1.64	2.01	1.07	1.26	0.75
Investment fund shares	41.65	104.79	51.01	27.80	22.82	12.34	5.23	10.63	12.12
Money market fund shares	0.09	0.18	0.82	0.18	– 0.02	0.28	0.12	0.44	0.44
Non-MMF investment fund shares	41.56	104.61	50.19	27.62	22.84	12.05	5.11	10.19	11.68
Non-life insurance technical reserves and provision for calls under standardised guarantees	18.34	20.31	– 0.49	5.60	4.49	– 1.86	– 1.31	– 1.81	6.37
Life insurance and annuity entitlements	47.71	51.63	31.69	11.00	6.57	5.62	12.12	7.39	1.42
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	33.69	27.36	49.78	10.57	15.74	12.87	8.92	12.25	12.36
Financial derivatives and employee stock options	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts receivable [2]	– 10.44	– 1.32	– 5.33	– 25.44	14.06	– 0.29	– 0.93	– 18.18	22.71
Total	386.85	374.80	287.90	75.84	85.04	70.83	66.41	65.60	69.88
External financing									
Loans	83.95	98.17	83.67	23.13	20.37	27.92	25.87	9.50	2.64
Short-term loans	– 5.61	0.86	2.59	– 1.61	0.66	1.09	0.74	0.10	0.74
Long-term loans	89.55	97.31	81.08	24.74	19.71	26.83	25.14	9.40	1.91
Memo item:									
Mortgage loans	85.72	99.89	79.69	25.21	19.24	26.63	23.30	10.53	2.88
Consumer loans	– 4.29	– 0.89	4.60	– 2.04	0.23	0.91	2.59	0.87	0.54
Entrepreneurial loans	2.51	– 0.83	– 0.61	– 0.04	0.91	0.39	– 0.01	– 1.90	– 0.78
Memo item:									
Loans from monetary financial institutions	83.17	94.32	82.56	23.91	20.70	27.94	24.46	9.45	1.80
Loans from financial corporations other than MFIs	0.78	3.85	1.11	– 0.78	– 0.33	– 0.02	1.41	0.05	0.84
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	0.63	– 0.94	0.80	1.18	1.93	– 0.59
Total	83.96	99.07	86.65	23.76	19.43	28.73	27.06	11.43	2.06

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

IX. Financial accounts

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

End of year/quarter; € billion

Item	2020	2021	2022	2021	2022				2023
				Q4	Q1	Q2	Q3	Q4	Q1
Financial assets									
Currency and deposits	2,860.4	3,005.5	3,116.9	3,005.5	3,017.3	3,047.4	3,084.0	3,116.9	3,099.6
Currency	324.5	385.1	430.0	385.1	398.7	410.2	423.9	430.0	432.8
Deposits	2,535.8	2,620.5	2,686.9	2,620.5	2,618.6	2,637.2	2,660.1	2,686.9	2,666.8
Transferable deposits	1,674.1	1,764.4	1,811.7	1,764.4	1,763.5	1,786.7	1,807.3	1,811.7	1,756.0
Time deposits	302.8	297.3	332.9	297.3	298.5	297.9	307.6	332.9	377.1
Savings deposits (including savings certificates)	558.9	558.8	542.3	558.8	556.7	552.6	545.3	542.3	533.8
Debt securities	113.3	109.6	125.1	109.6	109.5	107.8	110.4	125.1	156.9
Short-term debt securities	1.6	1.8	3.9	1.8	1.7	1.7	1.9	3.9	11.7
Long-term debt securities	111.7	107.8	121.2	107.8	107.7	106.1	108.5	121.2	145.2
Memo item:									
Debt securities of domestic sectors	76.7	75.3	88.4	75.3	75.2	74.7	76.1	88.4	116.1
Non-financial corporations	10.9	9.8	9.5	9.8	9.4	8.9	8.9	9.5	10.1
Financial corporations	63.3	63.2	74.6	63.2	63.8	63.3	64.2	74.6	98.2
General government	2.6	2.2	4.2	2.2	2.0	2.5	3.0	4.2	7.8
Debt securities of the rest of the world	36.6	34.3	36.7	34.3	34.3	33.1	34.3	36.7	40.8
Equity and investment fund shares	1,536.4	1,900.5	1,730.9	1,900.5	1,841.4	1,694.5	1,661.2	1,730.9	1,822.9
Equity	801.8	968.0	874.9	968.0	927.8	845.3	828.2	874.9	930.2
Listed shares of domestic sectors	243.3	296.0	255.8	296.0	271.0	236.1	223.2	255.8	281.6
Non-financial corporations	204.0	250.4	207.9	250.4	224.7	195.1	183.3	207.9	231.0
Financial corporations	39.2	45.6	47.9	45.6	46.3	41.0	39.9	47.9	50.6
Listed shares of the rest of the world	180.6	249.3	213.7	249.3	241.1	210.7	210.2	213.7	226.7
Other equity [1]	378.0	422.7	405.3	422.7	415.7	398.5	394.8	405.3	421.9
Investment fund shares	734.6	932.5	856.0	932.5	913.6	849.3	833.0	856.0	892.7
Money market fund shares	2.3	2.5	3.3	2.5	2.5	2.8	2.9	3.3	3.7
Non-MMF investment fund shares	732.2	930.0	852.7	930.0	911.1	846.5	830.1	852.7	888.9
Non-life insurance technical reserves and provision for calls under standardised guarantees	412.2	432.5	41.3	432.5	50.2	46.8	44.0	41.3	47.5
Life insurance and annuity entitlements	1,112.1	1,162.2	1,087.0	1,162.2	1,276.4	1,152.8	1,096.9	1,087.0	1,112.5
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	956.8	986.2	1,118.9	986.2	1,124.1	1,115.0	1,110.8	1,118.9	1,126.3
Financial derivatives and employee stock options	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts receivable [2]	27.9	27.5	26.5	27.5	26.0	27.8	27.5	26.5	27.0
Total	7,019.0	7,624.0	7,246.6	7,624.0	7,444.8	7,192.1	7,134.7	7,246.6	7,392.6
Liabilities									
Loans	1,923.8	2,024.3	2,111.8	2,024.3	2,045.4	2,074.6	2,102.7	2,111.8	2,114.5
Short-term loans	53.2	53.0	55.5	53.0	53.7	54.8	55.8	55.5	56.6
Long-term loans	1,870.6	1,971.3	2,056.3	1,971.3	1,991.7	2,019.8	2,047.0	2,056.3	2,057.9
Memo item:									
Mortgage loans	1,447.5	1,549.3	1,632.3	1,549.3	1,569.5	1,597.8	1,621.3	1,632.3	1,636.2
Consumer loans	226.1	224.5	228.9	224.5	224.9	225.5	228.1	228.9	229.7
Entrepreneurial loans	250.2	250.5	250.6	250.5	251.1	251.3	253.4	250.6	248.6
Memo item:									
Loans from monetary financial institutions	1,824.6	1,920.3	2,004.0	1,920.3	1,941.0	1,968.8	1,995.3	2,004.0	2,005.8
Loans from financial corporations other than MFIs	99.1	104.0	107.8	104.0	104.4	105.8	107.4	107.8	108.8
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	23.6	20.3	19.5	20.4	21.6	23.6	23.0
Total	1,943.3	2,044.6	2,135.4	2,044.6	2,064.9	2,095.0	2,124.4	2,135.4	2,137.6

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

X. Public finances in Germany

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

Period	General government	Central government	State government	Local government	Social security funds	General government	Central government	State government	Local government	Social security funds
	€ billion					As a percentage of GDP				
	Deficit/surplus [1]									
2017	+ 43.7	+ 7.9	+ 13.9	+ 10.7	+ 11.1	+ 1.3	+ 0.2	+ 0.4	+ 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
2019	+ 53.0	+ 21.5	+ 14.0	+ 8.4	+ 9.1	+ 1.5	+ 0.6	+ 0.4	+ 0.2	+ 0.3
2020 p	− 147.7	− 87.1	− 32.6	+ 6.9	− 34.8	− 4.3	− 2.6	− 1.0	+ 0.2	− 1.0
2021 p	− 129.7	− 144.2	+ 5.6	+ 6.2	+ 2.6	− 3.6	− 4.0	+ 0.2	+ 0.2	+ 0.1
2022 p	− 96.9	− 124.3	+ 14.4	+ 4.7	+ 8.3	− 2.5	− 3.2	+ 0.4	+ 0.1	+ 0.2
2021 H1 p	− 75.9	− 61.0	− 3.0	+ 1.3	− 13.2	− 4.3	− 3.5	− 0.2	+ 0.1	− 0.8
H2 p	− 53.8	− 83.2	+ 8.7	+ 4.9	+ 15.8	− 2.9	− 4.4	+ 0.5	+ 0.3	+ 0.8
2022 H1 p	− 4.6	− 36.2	+ 18.2	+ 5.8	+ 7.7	− 0.2	− 1.9	+ 1.0	+ 0.3	+ 0.4
H2 p	− 92.3	− 88.0	− 3.8	− 1.1	+ 0.6	− 4.7	− 4.4	− 0.2	− 0.1	+ 0.0
2023 H1 pe	− 42.1	− 39.2	− 3.1	− 6.8	+ 7.0	− 2.1	− 1.9	− 0.2	− 0.3	+ 0.3
	Debt level [2]									End of year or quarter
2017	2,130.5	1,361.7	616.8	168.3	0.8	65.2	41.7	18.9	5.2	0.0
2018	2,083.4	1,334.7	603.1	161.7	0.7	61.9	39.7	17.9	4.8	0.0
2019	2,068.8	1,312.7	612.6	160.3	0.7	59.5	37.8	17.6	4.6	0.0
2020 p	2,339.9	1,527.1	664.3	162.0	7.5	68.7	44.9	19.5	4.8	0.2
2021 p	2,494.6	1,679.8	665.1	164.1	0.4	69.0	46.4	18.4	4.5	0.0
2022 p	2,563.1	1,776.9	636.6	171.2	2.2	66.1	45.8	16.4	4.4	0.1
2021 Q1 p	2,368.9	1,552.6	667.5	162.0	16.2	69.6	45.6	19.6	4.8	0.5
Q2 p	2,418.8	1,602.7	667.8	163.2	21.2	69.1	45.8	19.1	4.7	0.6
Q3 p	2,452.5	1,630.6	673.1	162.6	24.3	68.9	45.8	18.9	4.6	0.7
Q4 p	2,494.6	1,679.8	665.1	164.1	0.4	69.0	46.4	18.4	4.5	0.0
2022 Q1 p	2,498.8	1,684.9	664.0	163.7	3.1	67.6	45.6	18.0	4.4	0.1
Q2 p	2,536.6	1,724.1	660.2	165.8	3.3	67.4	45.8	17.5	4.4	0.1
Q3 p	2,551.5	1,757.8	644.9	165.6	3.7	66.8	46.0	16.9	4.3	0.1
Q4 p	2,563.1	1,776.9	636.6	171.2	2.2	66.1	45.8	16.4	4.4	0.1
2023 Q1 p	2,589.0	1,799.7	633.2	173.4	3.0	65.7	45.7	16.1	4.4	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 [1]
	Total	of which: Taxes	Social contributions	Other	Total	of which: Social benefits	Compensation of employees	Intermediate consumption	Gross capital formation	Interest	Other		
	€ billion												
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 p	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 p	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 p	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
	As a percentage of GDP												
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 p	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 p	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 p	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
	Percentage growth rates												
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 p	− 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 p	+ 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 p	+ 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												
		of which:			of which: [3]											
	Total [4]	Taxes	Financial transactions [5]	Total [4]	Personnel expenditure	Current grants	Interest	Fixed asset formation	Financial transactions [5]	Deficit/ surplus	Revenue [6]	Expenditure	Deficit/ surplus	Revenue	Expenditure	Deficit/ surplus
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	530.7	21.0	69.3	26.1	− 134.5	769.2	777.1	− 7.9	1,701.5	1,843.9	− 142.4
2022 P	1,146.2	895.9	32.4	1,284.6	325.6	500.9	33.5	72.4	74.4	− 138.4	800.6	794.8	+ 5.9	1,774.0	1,906.5	− 132.5
2020 Q1	244.8	197.5	2.5	236.4	72.9	90.5	11.9	12.0	2.6	+ 8.4	P 168.3	P 175.7	P − 7.4	P 380.0	P 379.1	P + 0.9
Q2	215.6	158.1	2.7	275.4	72.2	119.1	8.6	15.4	3.4	− 59.8	P 175.9	P 187.0	P − 11.1	P 358.1	P 429.0	P − 70.9
Q3	227.5	181.4	4.0	282.1	72.4	101.9	1.4	18.3	34.3	− 54.5	P 181.1	P 195.0	P − 13.9	P 369.9	P 438.3	P − 68.4
Q4	259.3	201.9	4.5	315.4	81.4	109.2	5.9	22.8	19.6	− 56.1	P 186.0	P 189.6	P − 3.5	P 410.6	P 470.2	P − 59.6
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	272.3	207.0	13.3	303.4	78.1	117.0	10.8	17.7	10.8	− 31.0	P 194.0	P 197.6	P − 3.6	P 423.1	P 457.7	P − 34.6
Q4 P	314.6	244.5	9.0	409.6	89.7	139.0	6.5	27.5	55.6	− 95.0	210.5	198.1	+ 12.4	481.8	564.4	− 82.5

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	585.9	− 215.6	509.3	508.7	+ 0.5	308.0	303.4	+ 4.6
2022	399.6	515.6	− 116.0	534.3	523.7	+ 10.6	328.5	325.8	+ 2.7
2020 Q1	92.3	90.4	+ 1.9	105.6	99.7	+ 5.9	57.9	67.7	− 9.8
Q2	70.8	114.8	− 44.0	108.2	128.0	− 19.8	69.4	69.4	+ 0.1
Q3	83.7	105.4	− 21.7	112.9	113.7	− 0.8	67.5	72.6	− 5.1
Q4	94.5	161.5	− 67.0	127.4	146.3	− 18.9	100.3	83.5	+ 16.8
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	206.3	− 91.2	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

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.

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5. Central, state and local government: tax revenue

€ million

Period	Total	Central and state government and European Union				Local government [3]	Balance of untransferred tax shares [4]	Memo item: Amounts deducted in the Federal budget [5]
		Total	Central government [1]	State government [1]	European Union [2]			
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	...	186,597	94,492	82,961	9,144	...	...	8,959
2022 July	.	56,770	27,314	26,153	3,303	.	.	3,183
2023 July	.	65,445	32,791	29,498	3,157	.	.	3,378

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	Total [1]	Joint taxes								Local business tax transfers [8]	Central government taxes [9]	State government taxes [9]	EU customs duties	Memo item: Local government share in joint taxes
		Income taxes [2]					Value added taxes (VAT) [7]							
		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
2022 July	60,179	25,436	17,708	204	308	7,216	23,610	16,034	7,575	1,212	7,113	2,287	521	3,409
2023 July	69,269	30,941	20,130	– 185	– 282	11,278	26,792	20,301	6,491	1,245	7,689	2,104	498	3,824

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.

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7. Central, state and local government: individual taxes

€ million

Period	Central government taxes [1]								State government taxes [1]				Local government taxes		
	Energy tax	Solidarity surcharge	Tobacco tax	Insurance tax	Motor vehicle tax	Electricity tax	Alcohol tax	Other	Tax on the acquisition of land and buildings	Inheritance tax	Betting and lottery tax	Other	Total	of which: Local business tax [2]	of which: Real property taxes
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	...	...	...
2022 July	2,831	535	1,183	815	837	500	183	230	1,318	674	205	90	.	.	.
2023 July	3,038	550	1,403	911	783	579	188	237	988	841	183	92	.	.	.

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: Administrative assets
	Total	of which: Contributions [2]	of which: Payments from central government	Total	of which: Pension payments	of which: Pensioners' health insurance		Total	Deposits [4]	Securities	Equity interests, mortgages and other loans [5]	Real estate	
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
2020 Q1	80,578	55,999	24,436	82,622	70,829	5,346	– 2,045	40,840	38,636	1,848	300	56	3,966
Q2	82,098	57,515	24,413	82,875	70,889	5,346	– 777	39,779	37,975	1,446	304	55	3,949
Q3	82,689	58,109	24,418	86,497	74,054	5,591	– 3,808	36,898	35,197	1,333	313	55	3,925
Q4	88,978	64,375	24,412	86,605	73,879	5,576	+ 2,373	39,847	38,186	1,286	321	55	3,916
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

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
		of which:				of which:						
	Total [1]	Contri-butions	Insolvency compen-sation levy	Government funds	Total	Unemploy-ment benefit [2]	Short-time working benefits [3]	Job promotion [4]	Insolvency benefit payment	Adminis-trative expend-iture [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
2020 Q1	8,123	6,851	153	–	9,301	4,469	392	1,934	235	1,470	– 1,179	–
Q2	7,906	6,691	151	–	17,005	4,869	7,977	1,793	254	1,407	– 9,099	–
Q3	8,350	6,934	153	–	18,619	5,737	8,637	1,701	472	1,414	– 10,269	–
Q4	9,299	7,760	174	–	16,088	5,543	5,712	1,957	251	1,785	– 6,789	6,913
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	–

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, measures 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
		of which:			of which:							
	Total	Contri-butions	Central government funds [2]	Total	Hospital treatment	Pharma-ceuticals	Medical treatment	Dental treatment [3]	Remedies and therapeutic appliances	Sickness benefits	Adminis-trative expend-iture [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
2020 Q1	61,949	57,419	3,625	66,438	20,049	11,086	10,806	3,804	4,470	4,061	2,816	– 4,489
Q2	68,108	58,096	9,359	69,487	17,674	10,492	10,908	3,389	3,986	4,143	2,980	– 1,378
Q3	70,130	59,403	10,151	71,063	20,913	10,567	11,642	3,774	4,852	3,829	2,970	– 934
Q4	68,645	62,672	4,805	67,987	19,887	10,729	11,019	3,891	4,725	3,920	3,039	+ 658
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

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	
		of which:		of which:						
	Total	Contributions	Total	Non-cash care benefits	Inpatient care total 2	Nursing benefit	Contributions to pension insurance 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
2020 Q1	11,693	11,473	11,444	2,186	4,214	3,067	633	489	+	249
Q2	11,921	11,732	11,816	2,051	4,015	3,173	664	468	+	105
Q3	13,924	11,938	12,890	2,263	4,087	3,249	682	500	+	1,033
Q4	13,079	12,746	12,927	2,306	4,177	3,403	716	481	+	152
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

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 Including 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			
			of which:		of which:		of which:		of which:		of which:
	Total	Total	Debt securities	Total	Debt securities	Total	Debt securities	Total	Debt securities	Total	Debt securities
2016	2,161,570	205,391	191,880	585,456	223,407	211,515	111,843	48,630	14,181	1,110,579	1,012,275
2017	2,130,519	319,159	305,301	557,949	194,619	180,104	81,125	45,106	10,456	1,028,201	941,750
2018	2,083,367	364,731	350,487	516,113	167,506	186,346	89,794	44,124	8,724	972,053	892,223
2019	2,068,810	366,562	352,025	480,190	158,119	183,714	88,771	48,738	7,224	989,607	908,750
2020	2,339,934	522,392	507,534	517,602	157,828	191,231	99,840	41,093	8,372	1,067,616	996,418
2021	2,494,587	716,004	700,921	509,199	144,646	191,580	103,049	39,444	7,436	1,038,360	969,252
2022 p	2,563,081	741,363	726,147	521,043	126,890	210,888	126,042	43,796	8,972	1,045,990	980,812
2020 Q1	2,114,285	371,076	356,469	492,265	163,767	185,789	92,790	49,820	7,746	1,015,334	935,611
Q2	2,284,382	424,141	409,393	558,876	172,257	186,352	93,968	49,942	8,600	1,065,069	983,910
Q3	2,358,574	468,723	453,952	531,714	167,754	189,475	97,660	51,791	8,100	1,116,871	1,046,047
Q4	2,339,934	522,392	507,534	517,602	157,828	191,231	99,840	41,093	8,372	1,067,616	996,418
2021 Q1	2,368,916	561,443	546,539	491,995	162,961	190,136	99,333	50,869	8,060	1,074,473	1,010,644
Q2	2,418,789	620,472	605,429	494,443	151,182	189,992	99,734	39,995	7,700	1,073,887	1,008,537
Q3	2,452,516	669,659	654,600	496,368	152,068	191,571	101,742	41,857	8,069	1,053,061	987,742
Q4	2,494,587	716,004	700,921	509,199	144,646	191,580	103,049	39,444	7,436	1,038,360	969,252
2022 Q1 p	2,498,760	737,978	722,843	493,359	143,411	194,096	106,165	37,842	6,959	1,035,484	968,957
Q2 p	2,536,603	759,385	744,213	497,517	133,999	202,680	115,576	39,891	8,086	1,037,128	971,366
Q3 p	2,551,520	741,360	726,147	528,509	126,865	202,277	116,267	39,610	8,986	1,039,763	969,223
Q4 p	2,563,081	741,363	726,147	521,043	126,890	210,888	126,042	43,796	8,972	1,045,990	980,812
2023 Q1 p	2,589,018	741,587	726,326	495,838	129,371	209,058	124,774	49,918	16,123	1,092,617	1,029,687

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 [1]	Debt securities by original maturity: Short-term debt securities (up to one year)	Debt securities by original maturity: Long-term debt securities (more than one year)	Loans by original maturity: Short-term loans (up to one year)	Loans by original maturity: Long-term loans (more than one year)	Memo item: [2] Debt vis-à-vis other government subsectors	Memo item: [2] Claims vis-à-vis other government subsectors
General government								
2016	2,161,570	15,491	69,715	1,483,871	96,254	496,239	.	.
2017	2,130,519	14,298	48,789	1,484,462	88,841	494,129	.	.
2018	2,083,367	14,680	52,572	1,456,160	79,171	480,783	.	.
2019	2,068,810	14,449	56,350	1,458,540	64,464	475,007	.	.
2020 Q1	2,114,285	11,410	84,160	1,472,222	74,813	471,680	.	.
Q2	2,284,382	13,120	134,272	1,533,857	133,665	469,468	.	.
Q3	2,358,574	11,886	190,939	1,582,574	104,075	469,099	.	.
Q4	2,339,934	14,486	173,851	1,596,141	85,384	470,072	.	.
2021 Q1	2,368,916	12,283	190,022	1,637,516	62,725	466,371	.	.
Q2	2,418,789	13,065	182,660	1,689,923	69,272	463,869	.	.
Q3	2,452,516	13,565	192,481	1,711,741	70,629	464,100	.	.
Q4	2,494,587	17,743	195,420	1,729,884	88,684	462,855	.	.
2022 Q1 p	2,498,760	15,676	172,881	1,775,454	70,285	464,464	.	.
Q2 p	2,536,603	17,793	161,918	1,811,322	75,954	469,616	.	.
Q3 p	2,551,520	22,631	150,016	1,797,472	82,941	498,460	.	.
Q4 p	2,563,081	16,985	150,704	1,818,159	92,781	484,452	.	.
2023 Q1 p	2,589,018	14,913	145,846	1,880,435	86,529	461,294	.	.
Central government								
2016	1,365,579	15,491	55,208	1,123,853	50,004	121,022	556	8,567
2017	1,361,680	14,298	36,297	1,131,896	48,305	130,885	1,131	10,618
2018	1,334,661	14,680	42,246	1,107,140	43,067	127,528	933	9,975
2019	1,312,675	14,449	38,480	1,101,866	29,956	127,924	605	10,301
2020 Q1	1,340,794	11,410	56,679	1,103,934	40,120	128,652	605	8,119
Q2	1,487,263	13,120	109,217	1,139,510	96,960	128,457	585	7,026
Q3	1,550,507	11,886	166,559	1,178,687	64,470	128,905	605	11,713
Q4	1,527,062	14,486	154,498	1,180,683	48,414	128,981	609	14,521
2021 Q1	1,552,615	12,283	167,485	1,212,495	31,284	129,068	602	22,929
Q2	1,602,675	13,065	165,374	1,259,206	36,297	128,734	643	29,448
Q3	1,630,577	13,565	170,962	1,280,586	37,116	128,348	687	31,382
Q4	1,679,842	17,743	176,428	1,300,416	57,806	127,448	640	8,080
2022 Q1 p	1,684,879	15,676	155,119	1,340,340	41,903	131,841	531	10,451
Q2 p	1,724,097	17,793	147,674	1,373,617	47,652	137,362	604	10,552
Q3 p	1,757,787	22,631	144,987	1,369,630	56,254	164,285	768	13,203
Q4 p	1,776,883	16,985	146,974	1,391,710	71,867	149,348	8,826	9,159
2023 Q1 p	1,799,711	14,913	140,484	1,456,149	60,887	127,278	3,686	10,642
State government								
2016	642,291	–	14,515	361,996	20,482	245,298	11,273	1,694
2017	616,790	–	12,543	354,688	19,790	229,769	14,038	2,046
2018	603,143	–	10,332	351,994	19,250	221,567	14,035	1,891
2019	612,559	–	17,873	360,495	19,076	215,115	14,934	1,826
2020 Q1	626,402	–	27,484	372,021	16,329	210,568	12,292	1,783
Q2	648,455	–	25,056	398,404	17,267	207,728	11,059	2,085
Q3	659,035	–	24,382	408,310	20,208	206,136	11,701	2,090
Q4	664,284	–	19,354	419,862	19,481	205,587	11,924	1,410
2021 Q1	667,504	–	22,538	429,641	14,367	200,958	10,942	1,998
Q2	667,750	–	17,287	435,726	16,169	198,568	12,454	2,047
Q3	673,140	–	21,521	436,506	16,312	198,801	11,414	2,119
Q4	665,104	–	18,994	434,930	14,313	196,866	12,441	1,766
2022 Q1 p	663,981	–	17,765	440,766	12,390	193,061	11,697	1,935
Q2 p	660,246	–	14,247	443,413	12,056	190,530	11,449	1,777
Q3 p	644,911	–	5,031	433,503	14,826	191,552	14,099	2,200
Q4 p	636,554	–	3,732	432,252	11,782	188,788	11,704	1,701
2023 Q1 p	633,211	–	5,366	430,184	11,800	185,861	12,020	2,365
Local government								
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	161,729	–	1	3,046	20,903	137,779	1,884	497
2019	160,250	–	–	2,996	19,607	137,647	1,856	532
2020 Q1	161,020	–	–	3,128	20,257	137,636	1,824	508
Q2	161,393	–	–	3,094	20,236	138,063	2,084	350
Q3	162,760	–	–	2,961	21,108	138,691	2,106	339
Q4	161,974	–	–	3,366	18,520	140,088	1,402	330
2021 Q1	161,985	–	–	3,121	18,025	140,839	2,009	320
Q2	163,157	–	–	3,121	19,079	140,957	2,070	313
Q3	162,609	–	–	3,000	18,311	141,298	2,127	306
Q4	164,118	–	–	3,241	17,978	142,899	1,768	293
2022 Q1 p	163,678	–	–	3,052	16,821	143,804	1,933	315
Q2 p	165,754	–	–	2,902	16,961	145,891	1,823	361
Q3 p	165,560	–	–	2,856	15,926	146,778	2,247	358
Q4 p	171,150	–	–	2,883	18,210	150,057	1,748	470
2023 Q1 p	173,432	–	–	2,883	18,525	152,024	2,355	487

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)	Total	Currency and deposits [1]	Debt securities by original maturity		Loans by original maturity		Memo item: [2]	
			Short-term debt securities (up to one year)	Long-term debt securities (more than one year)	Short-term loans (up to one year)	Long-term loans (more than one year)	Debt vis-à-vis other government subsectors	Claims vis-à-vis other government subsectors
Social security funds								
2016	1,232	–	–	–	562	670	89	3,044
2017	807	–	–	–	262	545	15	3,934
2018	704	–	–	–	388	316	16	4,506
2019	738	–	–	–	375	363	16	4,753
2020 Q1	806	–	–	–	287	519	16	4,328
Q2	1,015	–	–	–	581	433	16	4,284
Q3	4,640	–	–	–	4,210	430	3,956	4,226
Q4	7,480	–	–	–	7,128	352	6,931	4,606
2021 Q1	16,220	–	–	–	15,985	235	15,853	4,160
Q2	21,234	–	–	–	20,995	239	20,860	4,220
Q3	24,288	–	–	–	24,053	235	23,872	4,292
Q4	392	–	–	–	131	261	19	4,729
2022 Q1 p	3,104	–	–	–	2,863	240	2,720	4,181
Q2 p	3,320	–	–	–	3,078	242	2,939	4,124
Q3 p	3,686	–	–	–	3,439	247	3,311	4,665
Q4 p	2,196	–	–	–	1,589	607	1,424	12,372
2023 Q1 p	2,971	–	–	–	1,895	1,076	2,245	6,812

Source: Bundesbank calculations based on data from the Federal Statistical Office and the Federal Republic of Germany - Finance Agency. **1** Particularly liabilities resulting from coins in circulation. **2** Besides direct loan relationships, claims and debt vis-à-vis other government subsectors also comprise securities holdings purchased on the market. No entry for general government as debt and claims are consolidated between different government subsectors.

14. Maastricht debt of central government by instrument and category

€ million

Period (end of year or quarter)	Total [1]	Currency and deposits [2]		Debt securities									Loans [1]
		Total [1]	of which: [3] Federal day bond	Total [1]	of which: [3] Conventional Federal bonds (Bunds)	Conventional Federal notes (Bobls)	Conventional Federal Treasury notes (Schätze) [4]	Treasury discount paper (Bubills) [5]	Federal savings notes	Green Federal securities	Inflation-linked Federal securities [6]	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	1,361,680	14,298	966	1,168,193	693,687	203,899	91,013	10,037	289	.	72,855	4,720	179,190
2018	1,334,661	14,680	921	1,149,386	710,513	182,847	86,009	12,949	48	.	64,647	5,139	170,595
2019	1,312,675	14,449	–	1,140,346	719,747	174,719	89,230	13,487	.	.	69,805	6,021	157,880
2020	1,527,062	14,486	.	1,335,181	801,910	179,560	98,543	113,141	.	9,876	58,279	3,692	177,395
2021	1,679,842	17,743	.	1,476,844	892,464	190,839	103,936	153,978	.	21,627	65,390	6,722	185,255
2022 p	1,776,883	16,985	.	1,538,683	947,349	198,084	113,141	137,990	.	36,411	72,357	15,844	221,215
2020 Q1	1,340,794	11,410	.	1,160,613	721,343	182,095	91,084	23,572	.	.	71,028	5,310	168,772
Q2	1,487,263	13,120	.	1,248,728	774,587	178,329	95,622	79,987	.	.	56,061	3,752	225,416
Q3	1,550,507	11,886	.	1,345,246	790,288	191,388	99,276	127,478	.	6,050	57,144	3,737	193,375
Q4	1,527,062	14,486	.	1,335,181	801,910	179,560	98,543	113,141	.	9,876	58,279	3,692	177,395
2021 Q1	1,552,615	12,283	.	1,379,980	814,864	189,935	103,910	134,800	.	11,026	60,687	3,857	160,352
Q2	1,602,675	13,065	.	1,424,579	861,455	184,413	104,997	139,451	.	16,526	62,569	5,056	165,031
Q3	1,630,577	13,565	.	1,451,549	869,195	198,692	105,398	146,533	.	19,824	63,851	5,456	165,464
Q4	1,679,842	17,743	.	1,476,844	892,464	190,839	103,936	153,978	.	21,627	65,390	6,722	185,255
2022 Q1 p	1,684,879	15,676	.	1,495,459	911,280	204,534	108,702	140,427	.	23,961	67,776	7,809	173,744
Q2 p	1,724,097	17,793	.	1,521,291	937,949	198,472	111,343	138,495	.	29,425	70,217	11,209	185,014
Q3 p	1,757,787	22,631	.	1,514,617	918,838	208,509	111,675	137,740	.	35,527	71,498	12,879	220,539
Q4 p	1,776,883	16,985	.	1,538,683	947,349	198,084	113,141	137,990	.	36,411	72,357	15,844	221,215
2023 Q1 p	1,799,711	14,913	.	1,596,633	987,363	213,514	120,904	127,143	.	39,459	73,591	15,497	188,164

Sources: Federal Republic of Germany - Finance Agency, Federal Statistical Office, and Bundesbank calculations. **1** Comprises all of central government, i.e. all off-budget entities in addition to the core budget, including the government-owned bad bank FMS Wertmanagement and liabilities attributed to central government from an economic perspective under the European System of Accounts (ESA) 2010. **2** Particularly liabilities resulting from coins in circulation. **3** Issuances by the Federal Republic of Germany. Excluding issuers' holdings of own securities but including those held by other government entities. **4** Including medium-term notes issued by the Treuhand agency (expired in 2011). **5** Including Federal Treasury financing papers (expired in 2014). **6** 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	2020	2021	2022	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2
	Index 2015=100			Annual percentage change									
At constant prices, chained													
I. Origin of domestic product													
Production sector (excluding construction)	100.8	108.2	107.6	– 7.0	7.4	– 0.5	5.2	1.6	0.7	– 0.9	0.3	– 2.1	0.4
Construction	102.8	97.4	94.1	2.5	– 5.3	– 3.3	– 2.2	– 9.6	4.3	– 3.7	– 4.9	– 7.0	– 1.5
Wholesale/retail trade, transport and storage, hotel and restaurant services	101.6	102.8	106.3	– 7.1	1.2	3.3	0.6	3.1	8.3	5.1	1.6	– 0.9	0.5
Information and communication	120.7	130.1	136.5	0.2	7.8	5.0	7.9	7.2	5.1	4.1	6.8	3.8	3.2
Financial and insurance activities	94.4	100.8	105.0	– 0.9	6.8	4.2	8.7	5.5	4.6	3.0	2.9	6.3	2.2
Real estate activities	101.3	102.6	103.5	0.2	1.4	0.8	0.5	1.6	1.6	1.2	0.8	– 0.3	1.1
Business services [1]	104.9	109.7	112.5	– 5.1	4.6	2.6	5.6	4.8	6.7	1.5	1.0	1.0	0.2
Public services, education and health	105.5	106.8	109.6	– 1.2	1.2	2.7	– 0.7	1.5	2.6	2.4	2.5	3.1	1.5
Other services	90.2	90.3	95.7	–12.8	0.2	6.0	0.7	2.9	8.8	7.5	2.4	5.7	1.9
Gross value added	102.7	106.1	107.9	– 4.0	3.3	1.7	2.6	2.0	3.7	1.7	1.3	0.3	0.7
Gross domestic product [2]	103.0	106.3	108.2	– 3.8	3.2	1.8	2.4	1.6	4.3	1.6	1.2	0.2	0.1
II. Use of domestic product													
Private consumption [3]	100.9	102.4	106.4	– 5.9	1.5	3.9	2.0	4.1	8.4	6.0	1.8	0.2	0.2
Government consumption	113.9	117.5	119.3	4.1	3.1	1.6	1.7	1.5	4.5	1.6	0.1	0.1	– 3.4
Machinery and equipment	100.6	103.4	107.5	–11.1	2.8	4.0	– 2.8	– 3.0	0.9	0.7	9.5	4.9	7.1
Premises	112.9	110.0	108.0	3.9	– 2.6	– 1.8	– 2.4	– 5.9	3.2	– 3.6	– 1.6	– 4.8	– 3.4
Other investment [4]	114.3	116.7	115.8	– 4.0	2.1	– 0.7	2.8	1.4	– 1.6	– 1.3	– 1.3	1.0	– 0.8
Changes in inventories [5,6]	.	.	.	– 0.2	0.9	0.7	1.4	1.2	– 0.4	0.2	1.7	1.3	0.2
Domestic demand	105.8	108.4	111.8	– 3.1	2.5	3.2	2.7	2.9	5.3	3.2	3.1	1.2	– 0.4
Net exports [6]	.	.	.	– 1.0	0.9	– 1.2	– 0.1	– 1.1	– 0.7	– 1.5	– 1.8	– 0.9	0.3
Exports	102.0	111.8	115.5	– 9.3	9.7	3.3	7.4	7.3	4.6	3.7	5.3	– 0.2	1.8
Imports	108.4	118.0	125.9	– 8.3	8.9	6.6	8.8	11.5	7.1	7.8	10.3	1.8	1.2
Gross domestic product [2]	103.0	106.3	108.2	– 3.8	3.2	1.8	2.4	1.6	4.3	1.6	1.2	0.2	0.1
At current prices (€ billion)													
III. Use of domestic product													
Private consumption [3]	1,708.7	1,785.5	1,979.3	– 5.3	4.5	10.9	5.8	8.8	13.4	12.8	9.3	8.5	8.3
Government consumption	749.6	796.8	850.9	6.6	6.3	6.8	5.9	5.9	9.3	6.5	5.7	5.8	2.0
Machinery and equipment	217.1	227.5	253.4	–10.0	4.8	11.4	– 1.1	– 0.3	6.4	7.6	18.1	13.1	15.1
Premises	384.6	406.5	463.5	5.9	5.7	14.0	10.2	7.9	18.8	14.8	13.3	9.9	10.8
Other investment [4]	131.4	136.5	139.3	– 3.5	3.8	2.1	4.6	3.5	2.3	2.0	1.9	2.2	1.6
Changes in inventories [5]	14.6	69.4	114.1	.	.	.	.	.	.	.	.	.	.
Domestic use	3,206.1	3,422.2	3,800.5	– 1.9	6.7	11.1	8.3	10.1	12.9	12.2	11.3	8.1	5.5
Net exports	197.6	195.3	76.3	.	.	.	.	.	.	.	.	.	.
Exports	1,479.8	1,710.3	1,974.2	– 9.6	15.6	15.4	15.0	17.2	16.6	17.8	19.0	9.1	6.5
Imports	1,282.2	1,515.0	1,897.9	–10.4	18.2	25.3	19.9	27.9	26.8	29.6	33.3	13.4	4.2
Gross domestic product [2]	3,403.7	3,617.5	3,876.8	– 2.0	6.3	7.2	6.9	6.5	9.1	7.7	5.8	6.2	6.6
IV. Prices (2015=100)													
Private consumption	105.7	108.8	116.1	0.6	3.0	6.7	3.7	4.5	4.6	6.4	7.4	8.3	8.1
Gross domestic product	109.2	112.5	118.4	1.9	3.0	5.3	4.4	4.8	4.6	6.0	4.5	6.0	6.5
Terms of trade	102.8	99.8	95.0	2.0	– 2.9	– 4.9	– 2.8	– 4.7	– 5.9	– 5.5	– 6.5	– 1.9	1.6
V. Distribution of national income													
Compensation of employees	1,853.6	1,918.3	2,023.6	– 0.1	3.5	5.5	4.7	4.6	6.8	5.5	4.3	5.4	6.6
Entrepreneurial and property income	712.1	851.0	867.4	– 7.1	19.5	1.9	13.0	16.6	4.6	– 0.5	3.8	– 0.6	10.9
National income	2,565.7	2,769.3	2,890.9	– 2.2	7.9	4.4	7.2	7.8	6.1	3.7	4.2	3.7	8.0
Memo item: Gross national income	3,500.9	3,756.8	4,027.6	– 2.9	7.3	7.2	8.4	7.8	9.6	7.6	5.8	6.0	6.4

Source: Federal Statistical Office; figures computed in August 2023. **1** Professional, scientific, technical, administration and support service activities. **2** Gross value added plus taxes on products (netted with subsidies on products). **3** Including non-profit institutions serving households. **4** Intellectual property rights (inter alia, computer soft ware and entertainment, literary or artistic originals) and cultivated assets. **5** Including net increase in valuables. **6** Contribution of growth to GDP.

XI. Economic conditions in Germany

2. Output in the production sector *

Adjusted for working-day variations **o**

	Production sector, total	of which: Construction	of which: Energy	Industry: Total	Industry: of which: by main industrial grouping: Intermediate goods	Capital goods	Durable goods	Non-durable goods	Industry: of which: by economic sector: Manufacture of basic metals and fabricated metal products	Manufacture of computers, electronic and optical products and electrical equipment	Macinery and equipment	Motor vehicels, trailers and semi-trailers
2015 = 100												
% 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 Q2	97.5	115.0	82.7	95.6	101.8	89.6	105.5	97.2	98.1	111.2	94.1	75.0
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 **x**	97.3	113.9	66.1	96.9	96.3	97.0	101.8	96.8	95.7	116.1	95.3	88.8
2022 July **2**	99.1	121.0	82.2	96.6	102.2	91.5	101.4	97.4	97.5	115.5	95.4	75.9
Aug. **2**	91.5	110.4	78.1	89.2	95.0	81.7	98.2	96.7	90.0	112.0	89.4	60.2
Sep.	103.4	118.1	78.7	102.8	102.2	101.6	116.6	105.9	100.3	126.1	104.6	89.6
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. **x**	96.3	112.5	73.1	95.4	96.1	94.2	104.1	95.5	95.7	113.7	91.8	87.1
May **x**	96.4	113.8	64.2	96.0	95.7	96.5	98.4	94.5	95.1	114.3	93.2	90.5
June **x**	99.1	115.4	61.1	99.2	97.1	100.3	103.0	100.3	96.4	120.4	101.0	88.7
July **2,x,p**	97.0	121.1	65.3	95.3	96.3	93.4	96.5	98.8	94.4	115.5	93.9	79.6
Annual percentage change												
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 Q2	− 1.5	− 2.7	+ 1.1	− 1.4	− 3.4	− 0.6	+ 2.5	+ 0.7	− 3.5	+ 2.3	− 1.4	+ 0.3
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 **x**	− 0.3	− 0.9	− 20.0	+ 1.3	− 5.4	+ 8.2	− 3.5	− 0.4	− 2.4	+ 4.4	+ 1.3	+ 18.3
2022 July **2**	− 1.3	− 2.1	+ 5.7	− 1.5	− 3.2	+ 0.5	− 0.9	− 3.6	− 3.8	+ 5.3	− 2.7	+ 3.1
Aug. **2**	+ 1.6	− 2.0	− 2.6	+ 2.6	− 2.9	+ 9.7	+ 7.3	− 1.6	− 1.3	+ 7.1	+ 3.4	+ 30.9
Sep.	+ 3.3	− 3.0	− 5.9	+ 5.3	− 1.4	+ 13.4	+ 4.4	+ 0.4	− 0.9	+ 11.8	+ 5.0	+ 36.6
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. **x**	+ 0.7	+ 0.3	− 18.1	+ 2.4	− 5.1	+ 10.2	− 1.2	+ 0.5	− 1.7	+ 5.7	+ 3.1	+ 22.5
May **x**	± 0.0	− 0.2	− 20.7	+ 1.6	− 5.5	+ 10.0	− 6.2	− 2.3	− 2.5	+ 3.5	+ 1.6	+ 22.6
June **x**	− 1.5	− 2.8	− 21.4	± 0.0	− 5.5	+ 4.8	− 3.0	+ 0.4	− 3.0	+ 4.1	− 0.6	+ 10.6
July **2,x,p**	− 2.1	+ 0.1	− 20.6	− 1.3	− 5.8	+ 2.1	− 4.8	+ 1.4	− 3.2	± 0.0	− 1.6	+ 4.9

Source of the unadjusted figures: Federal Statistical Office. ***** For explanatory notes, see Statistical Series - Seasonally adjusted business statistics, Tabels III.1.a to III.1.c **o** 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 **o**

Period	Industry		of which: Intermediate goods		Capital goods		Consumer goods		of which: Durable goods		Non-durable goods	
	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change
Total												
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	117.5	+ 11.2	146.5	+ 17.8	107.9	+ 8.3
2022	126.2	+ 5.8	138.4	+ 11.1	118.3	+ 1.7	129.0	+ 9.8	164.8	+ 12.5	117.2	+ 8.6
2022 July	127.7	– 0.3	143.6	+ 12.3	118.9	– 7.5	120.7	– 5.2	149.9	– 0.7	111.0	– 7.1
Aug.	114.5	+ 7.6	128.4	+ 11.1	104.9	+ 4.8	122.2	+ 9.9	161.0	+ 18.9	109.4	+ 5.9
Sep.	123.7	+ 0.9	132.0	+ 6.2	117.1	– 4.6	134.4	+ 17.9	166.4	+ 19.5	123.9	+ 17.2
Oct.	125.5	+ 7.1	134.8	+ 8.0	119.3	+ 6.3	129.0	+ 7.7	173.5	+ 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	– 0.1	122.8	+ 5.7
Dec.	121.3	– 1.9	127.6	+ 6.2	118.6	– 6.5	112.0	– 2.2	139.8	– 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	– 13.1	120.6	– 6.9
Apr.	115.9	– 6.1	128.6	– 10.0	107.6	– 1.9	118.6	– 13.0	156.3	– 17.2	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	153.2	– 9.0	120.6	– 3.8
July p	115.9	– 9.2	120.4	– 16.2	112.4	– 5.5	122.0	+ 1.1	128.4	– 14.3	120.0	+ 8.1
From the domestic market												
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 July	124.5	– 3.3	143.8	+ 14.0	110.1	– 16.7	110.5	– 8.9	124.7	+ 7.5	105.7	– 14.1
Aug.	110.2	+ 5.5	125.0	+ 12.1	97.9	– 0.5	108.2	+ 2.1	121.3	+ 9.4	103.7	– 0.7
Sep.	120.7	+ 9.7	128.9	+ 9.2	112.9	+ 8.2	125.7	+ 21.9	123.5	+ 16.3	126.4	+ 23.9
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 p	113.9	– 8.5	118.6	– 17.5	110.8	+ 0.6	107.2	– 3.0	107.8	– 13.6	107.0	+ 1.2
From abroad												
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 July	130.2	+ 2.0	143.4	+ 10.4	124.2	– 1.7	128.6	– 2.5	170.2	– 4.9	115.1	– 1.4
Aug.	117.7	+ 9.1	132.0	+ 9.9	109.1	+ 7.9	133.1	+ 15.5	193.0	+ 24.4	113.7	+ 11.0
Sep.	125.9	– 4.8	135.4	+ 3.3	119.6	– 10.6	141.2	+ 15.4	200.9	+ 21.2	121.9	+ 12.4
Oct.	129.3	+ 9.1	136.0	+ 7.3	125.5	+ 10.6	134.5	+ 5.9	213.6	+ 25.5	109.0	– 3.6
Nov.	125.3	– 3.5	136.5	– 2.2	119.2	– 4.6	132.3	+ 0.6	166.8	– 5.0	121.2	+ 3.2
Dec.	125.7	– 1.1	127.7	– 1.5	124.6	– 1.5	127.4	+ 4.9	172.4	– 7.8	113.0	+ 12.5
2023 Jan.	129.1	– 7.3	141.2	– 6.0	122.7	– 8.9	135.6	+ 1.6	159.7	– 13.3	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	– 9.0	197.0	– 16.1	125.9	– 4.8
Apr.	114.6	– 7.0	124.3	– 15.8	108.1	– 1.4	130.7	– 7.2	186.4	– 18.9	112.7	+ 0.4
May	120.3	– 3.8	124.2	– 13.0	117.7	+ 2.4	126.5	– 8.7	151.4	– 28.5	118.5	+ 3.1
June	145.2	+ 9.9	137.1	– 7.5	148.8	+ 21.0	147.5	+ 1.9	193.5	– 3.8	132.7	+ 5.0
July p	117.5	– 9.8	122.3	– 14.7	113.3	– 8.8	133.5	+ 3.8	144.9	– 14.9	129.9	+ 12.9

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. **o** Using JDemetra+ 2.2.2 (X13).

XI. Economic conditions in Germany

4. Orders received by construction *

Adjusted for working-day variations **o**

Zeit	Total		Breakdown by type of construction										Breakdown by client **1**			
			Structural engineering													
			Total		Residential construction		Industrial construction		Public sector construction		Civil engineering		Industrial clients		Public sector **2**	
	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 June	175.2	+ 6.4	166.3	+ 0.7	177.9	+ 0.2	153.3	− 4.3	176.6	+ 24.0	185.6	+ 13.1	177.5	+ 6.5	171.0	+ 10.7
July	180.6	+ 12.9	179.3	+ 6.5	171.1	− 4.5	178.0	+ 8.7	211.5	+ 40.4	182.1	+ 21.2	190.1	+ 19.9	175.5	+ 17.1
Aug.	157.2	− 1.1	148.2	− 8.8	145.1	− 13.2	143.0	− 12.4	178.0	+ 23.6	167.6	+ 8.3	155.9	− 1.6	165.9	+ 7.4
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

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. **o** Using JDemetra+ 2.2.2 (X13). **1** Excluding residential construction. **2** Including road construction.

5. Retail trade turnover *

Adjusted for calendar variations **o**

Zeit	Total				of which:											
					In stores by enterprises main product range										Retail sale via mail order houses or via internet as well as other retail sale **2**	
					Food, beverages, tobacco **1**		Textiles, clothing, foodwear and leather goods		Information and communications equipment		Construction and flooring materials, household appliances, furniture		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles			
	At current prices		At 2015 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	2015 = 100	Annual percentage change
2019	115.0	+ 3.9	111.0	+ 3.3	112.2	+ 2.4	106.7	+ 1.0	108.9	+ 1.6	107.1	+ 4.0	118.8	+ 5.7	138.3	+ 8.3
2020	121.4	+ 5.6	115.9	+ 4.4	121.4	+ 8.2	81.9	− 23.2	106.9	− 1.8	117.1	+ 9.3	125.4	+ 5.6	169.0	+ 22.2
2021	124.7	+ 2.7	116.7	+ 0.7	121.7	+ 0.2	78.1	− 4.6	95.4	− 10.8	110.5	− 5.6	135.2	+ 7.8	189.9	+ 12.4
2022 **3**	134.3	+ 7.7	115.8	− 0.8	128.3	+ 5.4	102.9	+ 31.8	107.6	+ 12.8	122.8	+ 11.1	144.7	+ 7.0	188.6	− 0.7
2022 July	135.6	+ 8.0	116.1	− 1.3	130.9	+ 8.5	106.1	+ 3.3	100.2	− 0.9	122.0	+ 0.1	149.0	+ 9.3	182.0	+ 14.0
Aug.	130.2	+ 6.2	110.6	− 3.8	126.2	+ 10.0	98.5	− 2.0	98.5	− 2.4	114.3	− 3.7	142.9	+ 6.7	173.1	+ 4.3
Sep.	133.4	+ 10.7	112.0	− 0.2	125.3	+ 11.9	116.6	+ 16.5	108.7	+ 6.2	119.0	+ 4.9	144.7	+ 10.5	186.7	+ 9.2
Oct.	138.5	+ 6.4	115.0	− 4.6	132.7	+ 11.0	116.5	+ 1.5	111.8	+ 2.4	126.0	+ 0.1	145.5	+ 3.1	193.1	+ 1.4
Nov.	148.4	+ 5.8	123.6	− 4.8	133.6	+ 10.0	117.0	+ 11.4	137.1	+ 1.4	129.9	+ 0.1	156.6	+ 6.5	236.4	+ 0.6
Dec.	152.5	+ 4.8	126.7	− 5.7	147.0	+ 6.9	125.1	+ 28.2	149.4	+ 1.1	123.5	+ 1.1	161.2	+ 3.5	210.4	− 4.3
2023 Jan.	125.1	+ 3.7	104.4	− 5.8	123.7	+ 6.5	87.0	+ 21.7	112.2	+ 0.6	109.2	− 1.0	140.2	+ 1.1	171.8	− 5.4
Feb.	123.4	+ 4.3	101.8	− 5.5	123.9	+ 8.0	85.1	+ 17.7	100.3	+ 3.8	108.9	− 2.9	136.2	+ 4.0	165.9	− 3.1
Mar.	139.1	+ 1.0	113.5	− 7.3	138.5	+ 4.8	100.4	+ 7.3	104.8	+ 3.4	130.5	− 4.0	149.8	+ 2.7	183.4	− 4.5
Apr.	137.7	+ 4.0	111.8	− 4.0	137.8	+ 8.5	109.2	+ 7.2	93.5	− 0.4	128.9	− 1.8	147.2	+ 5.5	176.6	− 2.4
May	140.0	+ 4.7	113.6	− 1.9	139.2	+ 9.2	113.4	+ 3.5	89.2	− 0.2	130.1	+ 0.2	149.6	+ 6.8	179.4	− 0.8
June	137.3	+ 5.0	111.5	− 1.0	136.7	+ 7.7	119.3	+ 12.9	93.6	+ 0.9	121.0	+ 1.3	149.8	+ 5.9	172.3	− 1.3
July	139.0	+ 2.5	113.4	− 2.3	140.0	+ 7.0	112.2	+ 5.7	96.0	− 4.2	119.7	− 1.9	154.6	+ 3.8	177.4	− 2.5

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. **o** Using JDemetra+ 2.2.2 (X13). **1** Including stalls and markets. **2** Excluding stores, stalls and markets. **3** As of January 2022 figures are provisional, partially revised, and particularly uncertain in recent months due to estimates for missing reports.

XI. Economic conditions in Germany

6. Labour market *

Period	Employment [1]		Employment subject to social contributions [2]					Solely jobs exempt from social contributions [2]	Short-time workers [3]		Unemployment [4]		Unemployment rate in % [4,5]	Vacancies, thousands [4,6]
			Total		of which:					of which:		of which:		
	Thousands	Annual percentage change	Thousands	Annual percentage change	Production sector	Services excluding temporary employment	Temporary employment		Total	Cyclically induced	Total	Assigned to the legal category of the Third Book of the Social Security Code (SGB III)		
					Thousands									
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	[7] 2,267	827	[7] 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 Q2	44,723	− 1.1	33,415	+ 0.1	9,387	23,137	640	4,235	5,399	5,388	2,770	1,154	6.0	593
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	45,619	+ 0.9	[8] 34,610	[8] + 1.1	[8] 9,395	[8] 24,285	[8] 695	[8] 4,149	...	[8] 154	2,610	900	5.7	773
Q2	[9] 45,859	[9] + 0.7	[8] 34,680	[8] + 0.8	[8] 9,406	[8] 24,338	[8] 685	[8] 4,193	...	[8] 152	2,561	839	[10] 5.6	770
2020 Apr.	44,808	− 0.7	33,430	+ 0.1	9,396	23,141	643	4,194	6,007	5,995	2,644	1,093	5.8	626
May	44,672	− 1.3	33,328	− 0.3	9,367	23,083	624	4,206	5,726	5,715	2,813	1,172	6.1	584
June	44,688	− 1.4	33,323	− 0.3	9,355	23,084	629	4,260	4,464	4,452	2,853	1,197	6.2	570
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	3,294	2,901	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.	45,573	+ 1.0	34,550	+ 1.1	9,381	24,240	697	4,138	451	145	2,616	911	5.7	764
Feb.	45,613	+ 0.9	34,601	+ 1.0	9,392	24,279	692	4,148	441	157	2,620	910	5.7	778
Mar.	45,672	+ 0.9	[8] 34,655	[8] + 0.9	[8] 9,408	[8] 24,316	[8] 690	[8] 4,142	...	[8] 161	2,594	878	5.7	777
Apr.	45,766	+ 0.8	[8] 34,666	[8] + 0.9	[8] 9,406	[8] 24,329	[8] 682	[8] 4,172	...	[8] 144	2,586	855	5.7	773
May	45,875	+ 0.7	[8] 34,708	[8] + 0.8	[8] 9,409	[8] 24,358	[8] 685	[8] 4,214	...	[8] 150	2,544	829	[10] 5.5	767
June	[9] 45,936	[9] + 0.7	[8] 34,679	[8] + 0.7	[8] 9,399	[8] 24,338	[8] 686	[8] 4,247	...	[8] 163	2,555	833	5.5	769
July	[9] 45,923	[9] + 0.7	...	...	...	...	...	...	...	...	2,617	878	5.7	772
Aug.	...	...	...	...	...	...	...	...	...	...	2,696	910	5.8	771

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** Initial preliminary estimate by the Federal Statistical Office. **10** From May 2023, calculated on the basis of new labour force figures.

XI. Economic conditions in Germany

7. Prices

Period	Harmonised Index of Consumer Prices						Memo item: Consumer price index (national concept)	Construction price index	Index of producer prices of industrial products sold on the domestic market [3]	Index of producer prices of agricultural products [3]	Indices of foreign trade prices		HWWI Index of World Market Prices of Raw Materials [4]	
	Total	of which: Food [1,2]	of which: Non-energy industrial goods [1]	of which: Energy [1]	of which: Services [1]	of which: Actual rents for housing					Exports	Imports	Energy [5]	Other raw materials [6]
	2015 = 100						2020 = 100	2015 = 100					2020 = 100	
Index level														
2020	[7] 105.8	[7] 110.9	[7] 104.1	[7] 99.0	[7] 106.9	107.6	[7] 100.0	[7] 117.0	103.8	108.0	101.7	97.3	100.0	100.0
2021	[7] 109.2	[7] 114.1	[7] 106.7	[7] 109.0	[7] 109.0	109.0	[7] 103.1	[7] 127.0	114.7	117.5	107.4	110.4	220.7	137.6
2022	118.7	126.2	112.7	146.8	112.2	110.8	110.2	148.3	152.4	[8] 156.2	123.1	139.4	430.8	164.0
2021 Oct.	[7] 110.7	[7] 114.5	[7] 108.0	[7] 114.6	[7] 110.0	109.5	[7] 104.3		122.8	120.7	111.0	118.2	379.6	141.0
Nov.	[7] 111.0	[7] 114.9	[7] 108.4	[7] 116.7	[7] 109.5	109.5	[7] 104.5	[7] 132.2	123.8	125.6	111.9	121.7	351.0	144.6
Dec.	[7] 111.3	[7] 115.7	[7] 108.6	[7] 115.0	[7] 110.3	109.6	[7] 104.7		130.0	127.2	113.0	121.8	422.9	150.1
2022 Jan.	112.3	117.2	108.4	123.7	109.8	109.9	105.2		132.8	129.2	115.0	127.0	370.5	159.0
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	378.3	167.8
Mar.	116.1	119.1	110.4	146.1	110.6	110.2	108.1		141.2	153.6	120.7	135.9	552.9	188.4
Apr.	116.9	122.2	111.3	142.7	111.7	110.4	108.8		145.2	162.3	121.7	138.3	464.4	189.3
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	455.5	177.6
June	118.1	125.4	112.5	147.8	111.0	110.8	109.8		148.4	157.5	123.5	140.9	508.7	164.9
July	119.0	127.6	112.6	147.8	112.1	110.9	110.3		156.3	156.5	126.0	142.9	661.4	152.8
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	805.0	156.3
Sep.	122.1	130.9	114.5	158.8	113.9	111.2	112.7		172.5	[8] 164.7	127.9	147.8	689.1	154.1
Oct.	123.5	132.2	115.8	164.5	114.3	111.4	113.5		165.2	166.5	125.5	146.0	395.2	151.4
Nov.	123.5	133.6	116.3	163.5	113.7	111.6	113.7	155.4	158.7	165.7	124.9	139.4	436.2	147.3
Dec.	122.0	134.6	116.6	143.9	114.8	111.7	113.2		158.1	165.1	125.0	137.1	459.1	146.0
2023 Jan.	122.6	136.7	116.4	154.8	113.8	112.1	114.3		154.8	161.9	124.0	135.4	327.7	148.0
Feb.	123.8	139.5	117.0	154.9	115.0	112.2	115.2	159.7	152.8	160.6	123.8	132.2	296.2	150.4
Mar.	125.1	141.3	118.3	155.0	116.1	112.5	116.1		150.6	155.3	123.5	130.8	264.3	146.0
Apr.	125.8	141.1	119.0	156.1	117.1	112.6	116.6		151.1	151.8	123.0	128.6	263.3	142.2
May	125.6	141.1	119.3	154.0	116.9	112.8	116.5	161.0	149.0	148.4	122.5	126.8	221.3	136.6
June	126.1	141.2	119.5	153.7	117.8	113.0	116.8		148.6	149.6	122.4	124.8	221.7	136.9
July	126.7	141.2	118.8	153.6	119.6	113.2	117.1		147.0	150.7	122.0	124.1	218.9	135.0
Aug.	127.2	141.0	119.2	156.5	119.8	113.5	117.5	...	...	...	...	...	241.7	132.6
Annual percentage change														
2020	[7] + 0.4	[7] + 2.3	[7] − 0.1	[7] − 4.5	[7] + 1.2	+ 1.4	[7] + 0.5	[7] + 1.4	− 1.0	− 3.1	− 0.7	− 4.3	− 33.4	+ 1.3
2021	[7] + 3.2	[7] + 2.9	[7] + 2.5	[7] + 10.1	[7] + 2.0	+ 1.3	[7] + 3.1	[7] + 8.6	+ 10.5	+ 8.8	+ 5.6	+ 13.5	+ 120.7	+ 37.6
2022	+ 8.7	+ 10.6	+ 5.7	+ 34.7	+ 2.9	+ 1.7	+ 6.9	+ 16.8	+ 32.9	[8] + 32.9	+ 14.6	+ 26.3	+ 95.2	+ 19.2
2021 Oct.	[7] + 4.6	[7] + 3.9	[7] + 3.9	[7] + 18.1	[7] + 2.2	+ 1.4	[7] + 4.4		+ 18.4	+ 16.3	+ 9.5	+ 21.7	+ 258.5	+ 34.2
Nov.	[7] + 6.0	[7] + 4.2	[7] + 4.2	[7] + 21.6	[7] + 3.8	+ 1.3	[7] + 4.8	[7] + 14.0	+ 19.2	+ 20.9	+ 9.9	+ 24.7	+ 220.0	+ 34.1
Dec.	[7] + 5.7	[7] + 5.3	[7] + 5.0	[7] + 18.1	[7] + 3.2	+ 1.3	[7] + 4.9		+ 24.2	+ 22.1	+ 10.9	+ 24.0	+ 238.9	+ 31.2
2022 Jan.	+ 5.1	+ 4.4	+ 3.1	+ 20.6	+ 2.7	+ 1.4	+ 4.2		+ 25.0	+ 21.0	+ 11.9	+ 26.9	+ 159.3	+ 30.9
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	+ 156.5	+ 36.1
Mar.	+ 7.6	+ 5.3	+ 4.4	+ 37.6	+ 2.8	+ 1.5	+ 5.9		+ 30.9	+ 34.7	+ 15.9	+ 31.2	+ 255.6	+ 45.4
Apr.	+ 7.8	+ 6.7	+ 5.2	+ 34.5	+ 3.1	+ 1.6	+ 6.3		+ 33.5	+ 40.0	+ 16.0	+ 31.7	+ 186.8	+ 42.7
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	+ 157.6	+ 24.3
June	+ 8.2	+ 9.9	+ 5.6	+ 37.4	+ 1.7	+ 1.7	+ 6.7		+ 32.7	+ 33.8	+ 16.1	+ 29.9	+ 157.7	+ 18.0
July	+ 8.5	+ 11.5	+ 5.8	+ 35.6	+ 1.7	+ 1.6	+ 6.7		+ 37.2	+ 33.5	+ 17.0	+ 28.9	+ 201.2	+ 12.1
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	+ 240.8	+ 16.3
Sep.	+ 10.9	+ 14.4	+ 6.4	+ 44.2	+ 3.6	+ 1.7	+ 8.6		+ 45.8	[8] + 40.3	+ 16.8	+ 29.8	+ 131.9	+ 15.9
Oct.	+ 11.6	+ 15.5	+ 7.2	+ 43.5	+ 3.9	+ 1.7	+ 8.8		+ 34.5	+ 37.9	+ 13.1	+ 23.5	+ 4.1	+ 7.4
Nov.	+ 11.3	+ 16.3	+ 7.3	+ 40.1	+ 3.8	+ 1.9	+ 8.8	+ 17.5	+ 28.2	+ 31.9	+ 11.6	+ 14.5	+ 24.3	+ 1.9
Dec.	+ 9.6	+ 16.3	+ 7.4	+ 25.1	+ 4.1	+ 1.9	+ 8.1		+ 21.6	+ 29.8	+ 10.6	+ 12.6	+ 8.6	− 2.7
2023 Jan.	+ 9.2	+ 16.6	+ 7.4	+ 25.1	+ 3.6	+ 2.0	+ 8.7		+ 16.6	+ 25.3	+ 7.8	+ 6.6	− 11.6	− 6.9
Feb.	+ 9.3	+ 18.0	+ 7.2	+ 21.6	+ 4.4	+ 2.0	+ 8.7	+ 15.6	+ 13.5	+ 20.4	+ 6.6	+ 2.8	− 21.7	− 10.4
Mar.	+ 7.8	+ 18.6	+ 7.2	+ 6.1	+ 5.0	+ 2.1	+ 7.4		+ 6.7	+ 1.1	+ 2.3	− 3.8	− 52.2	− 22.5
Apr.	+ 7.6	+ 15.5	+ 6.9	+ 9.4	+ 4.8	+ 2.0	+ 7.2		+ 4.1	− 6.5	+ 1.1	− 7.0	− 43.3	− 24.9
May	+ 6.3	+ 13.6	+ 6.2	+ 5.0	+ 4.4	+ 2.0	+ 6.1	+ 8.9	+ 1.0	− 7.7	+ 0.1	− 9.1	− 51.4	− 23.1
June	+ 6.8	+ 12.6	+ 6.2	+ 4.0	+ 6.1	+ 2.0	+ 6.4		+ 0.1	− 5.0	− 0.9	− 11.4	− 56.4	− 17.0
July	+ 6.5	+ 10.7	+ 5.5	+ 3.9	+ 6.7	+ 2.1	+ 6.2		− 6.0	− 3.7	− 3.2	− 13.2	− 66.9	− 11.6
Aug.	+ 6.4	+ 9.2	+ 5.5	+ 5.3	+ 6.8	+ 2.2	+ 6.1	...	...	...	...	...	− 70.0	− 15.2

Sources: Eurostat; Federal Statistical Office and Bundesbank calculation based on data from the Federal Statistical Office; for the Index of World Market Prices of Raw Materials: HWWI. **1** The last data point is at times based on the Bundesbank's own estimates. **2** Including alcoholic beverages and tobacco. **3** Excluding value added tax. **4** For the euro area, in euro. **5** Coal, crude oil (Brent) and natural gas. **6** Food, beverages and tobacco as well as industrial raw materials. **7** Influenced by a temporary reduction of value added tax between July and December 2020. **8** From September 2022 onwards, provisional figures.

XI. Economic conditions in Germany

8. Households' income *

Period	Gross wages and salaries [1]		Net wages and salaries [2]		Monetary social benefits received [3]		Mass income [4]		Disposable income [5]		Saving [6]		Saving ratio [7]
	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	As percentage
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 Q1	389.3	7.5	261.8	7.0	134.8	– 2.3	396.6	3.7	542.4	3.7	77.5	– 31.5	14.3
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	416.6	7.0	285.7	9.1	143.9	6.8	429.7	8.4	581.3	7.2	77.8	0.3	13.4
Q2	429.5	7.6	287.5	9.6	141.6	7.3	429.1	8.8	580.7	6.7	64.7	15.7	11.1

Source: Federal Statistical Office; figures computed in August 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 [1]								Memo item: Wages and salaries per employee [3]	
	On an hourly basis		On a monthly basis							
			Total		Total excluding one-off payments		Basic pay rates [2]			
	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 Q1	110.8	4.3	110.8	4.2	108.9	2.2	115.5	1.5	113.4	5.6
Q2	109.9	2.0	109.9	1.9	109.3	2.2	116.6	2.2	115.6	4.0
Q3	120.9	2.6	120.9	2.5	120.9	2.5	116.9	2.2	118.5	2.9
Q4	130.1	2.0	130.1	2.0	130.1	2.0	117.8	2.4	132.6	4.2
2023 Q1	115.1	3.9	115.1	3.9	111.7	2.6	118.7	2.7	120.1	5.9
Q2	114.3	3.9	114.2	3.9	112.1	2.5	119.5	2.5	123.3	6.7
2023 Jan.	115.9	6.8	115.9	6.8	110.9	2.7	118.6	2.7	.	.
Feb.	117.6	6.5	117.6	6.5	113.4	2.6	118.6	2.7	.	.
Mar.	111.8	– 1.5	111.8	– 1.5	110.9	2.6	118.7	2.7	.	.
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	119.3	2.2	.	.
June	117.4	7.7	117.4	7.7	112.4	3.0	120.1	2.9	.	.
July	150.8	4.8	150.8	4.8	148.8	3.6	120.3	3.0	.	.

1 Current data are normally revised on account of additional reports. **2** Excluding one-off payments and covenants (capital formation benefits, special payments, such as annual bonuses, holiday pay, Christmas bonuses (13th monthly salary payment) and retirement provisions). **3** Source: Federal Statistical Office; figures computed in August 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						
			of which:				of which:				Liabilities					
												Long-term		Short-term		
															of which:	
	Total assets	Non-current assets	Intangible assets	Tangible assets	Financial assets	Current assets	Inventories	Trade receivables	Cash 1	Equity	Total	Total	of which: Financial debt	Total	Financial debt	Trade payables
	Total (€ billion)															
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	367.9	1,320.4	272.1	261.5	261.5	994.4	2,297.6	1,206.9	772.1	1,090.7	391.8	236.7
2022 p	3,432.3	2,057.2	713.5	804.4	368.5	1,375.1	326.0	268.1	244.3	1,133.7	2,298.6	1,195.7	760.3	1,102.8	331.7	273.2
2021 H1	3,017.6	1,877.0	649.3	745.0	343.7	1,140.6	256.2	242.3	238.5	906.9	2,110.7	1,178.6	763.1	932.1	330.3	206.9
H2	3,292.0	1,971.6	680.1	773.8	367.9	1,320.4	272.1	261.5	261.5	994.4	2,297.6	1,206.9	772.1	1,090.7	391.8	236.7
2022 H1	3,593.6	2,108.1	719.1	796.3	387.5	1,485.5	322.4	284.8	225.4	1,075.4	2,518.2	1,237.0	847.9	1,281.2	430.7	260.7
H2 p	3,432.3	2,057.2	713.5	804.4	368.5	1,375.1	326.0	268.1	244.3	1,133.7	2,298.6	1,195.7	760.3	1,102.8	331.7	273.2
	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	11.2	40.1	8.3	7.9	7.9	30.2	69.8	36.7	23.5	33.1	11.9	7.2
2022 p	100.0	59.9	20.8	23.4	10.7	40.1	9.5	7.8	7.1	33.0	67.0	34.8	22.2	32.1	9.7	8.0
2021 H1	100.0	62.2	21.5	24.7	11.4	37.8	8.5	8.0	7.9	30.1	70.0	39.1	25.3	30.9	10.9	6.9
H2	100.0	59.9	20.7	23.5	11.2	40.1	8.3	7.9	7.9	30.2	69.8	36.7	23.5	33.1	11.9	7.2
2022 H1	100.0	58.7	20.0	22.2	10.8	41.3	9.0	7.9	6.3	29.9	70.1	34.4	23.6	35.7	12.0	7.3
H2 p	100.0	59.9	20.8	23.4	10.7	40.1	9.5	7.8	7.1	33.0	67.0	34.8	22.2	32.1	9.7	8.0
	Groups with a focus on the production sector (€ billion) 2															
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	346.6	1,147.0	254.4	206.3	204.2	764.7	1,861.6	918.5	548.5	943.2	356.3	184.0
2022 p	2,731.4	1,538.5	461.6	591.8	346.7	1,192.9	307.5	209.0	186.4	880.2	1,851.2	912.8	534.4	938.5	291.1	215.0
2021 H1	2,392.8	1,398.3	416.6	551.0	322.5	994.6	240.6	190.9	190.1	703.5	1,689.4	892.3	543.2	797.1	294.2	162.1
H2	2,626.3	1,479.3	441.7	573.9	346.6	1,147.0	254.4	206.3	204.2	764.7	1,861.6	918.5	548.5	943.2	356.3	184.0
2022 H1	2,898.3	1,582.5	462.4	583.8	362.8	1,315.9	303.6	222.5	177.2	830.9	2,067.4	945.2	616.6	1,122.2	389.8	207.6
H2 p	2,731.4	1,538.5	461.6	591.8	346.7	1,192.9	307.5	209.0	186.4	880.2	1,851.2	912.8	534.4	938.5	291.1	215.0
	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	13.2	43.7	9.7	7.9	7.8	29.1	70.9	35.0	20.9	35.9	13.6	7.0
2022 p	100.0	56.3	16.9	21.7	12.7	43.7	11.3	7.7	6.8	32.2	67.8	33.4	19.6	34.4	10.7	7.9
2021 H1	100.0	58.4	17.4	23.0	13.5	41.6	10.1	8.0	7.9	29.4	70.6	37.3	22.7	33.3	12.3	6.8
H2	100.0	56.3	16.8	21.9	13.2	43.7	9.7	7.9	7.8	29.1	70.9	35.0	20.9	35.9	13.6	7.0
2022 H1	100.0	54.6	16.0	20.1	12.5	45.4	10.5	7.7	6.1	28.7	71.3	32.6	21.3	38.7	13.5	7.2
H2 p	100.0	56.3	16.9	21.7	12.7	43.7	11.3	7.7	6.8	32.2	67.8	33.4	19.6	34.4	10.7	7.9
	Groups with a focus on the services sector (€ billion)															
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 p	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 H1	624.7	478.7	232.6	194.1	21.2	146.1	15.5	51.4	48.4	203.4	421.3	286.4	219.9	135.0	36.1	44.8
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 p	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
	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 p	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 H1	100.0	76.6	37.2	31.1	3.4	23.4	2.5	8.2	7.8	32.6	67.4	45.8	35.2	21.6	5.8	7.2
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 p	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

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

XI. Economic conditions in Germany

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

Period	Revenues		Operating income before depreciation and amortisation (EBITDA 1)		Operating income before depreciation and amortisation (EBITDA 1) as a percentage of revenues					Operating income (EBIT)		Operating income (EBIT) as a percentage of revenues				
					Weighted average		Distribution 2					Weighted average		Distribution 2		
							First quartile	Median	Third quartile					First quartile	Median	Third quartile
	€ billion 3	Annual percentage change 4	€ billion 3	Annual percentage change 4	%	Annual change in percentage points 4	%	%	%	€ billion 3	Annual percentage change 4	%	Annual change in percentage points 4	%	%	%
Total																
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 6	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 p	2,430.3	20.8	324.6	7.8	13.4	– 1.6	6.2	11.8	18.4	170.8	4.0	7.0	– 1.1	1.6	6.5	12.4
2018 H1	848.2	– 0.1	120.8	– 2.1	14.2	– 0.3	5.1	10.6	18.2	72.7	– 5.3	8.6	– 0.5	1.7	6.4	12.5
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 p	1,282.4	18.4	163.7	10.9	12.8	– 0.9	5.5	11.6	18.9	86.0	10.2	6.7	– 0.5	1.7	6.7	12.9
Groups with a focus on the production sector 5																
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 6	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 p	1,956.4	21.6	222.7	4.6	11.4	– 1.9	6.8	11.3	16.4	117.1	– 4.0	6.0	– 1.6	1.8	6.3	10.7
2018 H1	681.9	– 0.1	94.9	– 3.4	13.9	– 0.5	7.0	10.9	16.7	60.0	– 5.9	8.8	– 0.6	2.9	6.8	11.5
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 p	1,034.8	19.7	112.0	12.8	10.8	– 0.7	5.9	10.7	16.7	58.2	9.3	5.6	– 0.5	1.3	6.3	11.4
Groups with a focus on the services sector																
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 6	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 p	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 H1	166.3	0.2	25.9	2.8	15.6	0.4	3.8	9.5	22.7	12.6	– 1.9	7.6	– 0.2	– 0.9	4.7	15.3
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 p	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

* Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. Excluding groups engaged in real estate activities. **1** Earnings before interest, taxes, depreciation and amortisation. **2** Quantile data are based on the groups' unweighted return on sales. **3** Annual figures do not always match the sum of the two half-year figures. See Quality report on consolidated financial statement statistics, p. 3. **4** Adjusted for substantial changes in the basis of consolidation of large groups and in the reporting sample. See 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	2022 Q4	2023 Q1	2023 Q2 r	2023 Arpil r	2023 May r	2023 June p
I. Current Account	+ 201,555	+ 351,748	− 100,626	+ 8,516	+ 32,220	+ 27,321	+ 3,013	− 12,461	+ 36,769
1. Goods									
Receipts	2,177,403	2,493,451	2,929,483	775,677	737,065	740,356	228,281	250,705	261,370
Expenditure	1,846,539	2,219,306	3,008,746	768,244	686,809	659,610	213,616	227,363	218,631
Balance	+ 330,862	+ 274,146	− 79,264	+ 7,433	+ 50,257	+ 80,746	+ 14,665	+ 23,342	+ 42,739
2. Services									
Receipts	883,410	1,029,838	1,258,196	329,297	295,093	320,467	101,540	105,748	113,179
Expenditure	890,695	926,414	1,131,753	303,119	281,290	292,586	94,585	96,921	101,080
Balance	− 7,286	+ 103,423	+ 126,446	+ 26,179	+ 13,802	+ 27,880	+ 6,955	+ 8,827	+ 12,098
3. Primary income									
Receipts	733,848	856,413	948,766	261,644	259,035	268,270	82,988	85,928	99,354
Expenditure	698,616	722,662	927,128	247,471	248,597	315,935	89,200	121,814	104,921
Balance	+ 35,231	+ 133,751	+ 21,637	+ 14,173	+ 10,440	− 47,666	− 6,213	− 35,886	− 5,567
4. Secondary income									
Receipts	129,435	159,349	164,740	44,833	39,199	45,002	13,020	16,302	15,680
Expenditure	286,683	318,921	334,183	84,101	81,477	78,642	25,414	25,047	28,181
Balance	− 157,250	− 159,574	− 169,443	− 39,268	− 42,279	− 33,640	− 12,394	− 8,744	− 12,502
II. Capital account	+ 4,591	+ 51,732	+ 146,524	+ 22,555	+ 3,525	+ 6,011	+ 673	+ 1,115	+ 4,223
III. Financial account 1	+ 183,185	+ 377,580	+ 85,607	+ 58,615	+ 47,610	+ 70,341	− 29,781	+ 22,052	+ 78,070
1. Direct investment	− 217,132	+ 335,674	+ 232,193	− 14,759	+ 54,639	− 14,213	+ 8,950	− 36,528	+ 13,365
By resident units abroad the euro area	− 66,615	+ 243,047	− 57,545	− 265,500	+ 58,343	+ 43,595	+ 848	+ 19,641	+ 23,106
By non-resident units of the euro area	+ 150,518	− 92,628	− 289,741	− 250,741	+ 3,704	+ 57,807	− 8,102	+ 56,169	+ 9,740
2. Portfolio investment	+ 513,135	+ 321,215	− 290,271	+ 8,838	− 96,443	+ 78,264	+ 33,694	+ 58,816	− 14,246
By resident units abroad the euro area	+ 698,531	+ 794,327	− 229,900	+ 95,518	+ 61,565	+ 155,063	+ 40,390	+ 37,268	+ 77,405
Equity and investment fund shares	+ 321,263	+ 369,850	− 188,019	− 811	+ 32,175	+ 10,326	+ 16,983	+ 333	− 6,990
Short-term debt securities	+ 125,759	+ 119,360	− 108,725	+ 58,503	− 59,396	+ 93,954	+ 9,576	+ 17,946	+ 66,432
Long-term debt securities	+ 251,509	+ 305,114	+ 66,844	+ 37,825	+ 88,786	+ 50,784	+ 13,831	+ 18,990	+ 17,963
By non-resident units of the euro area	+ 185,394	+ 473,110	+ 60,371	+ 86,681	+ 158,007	+ 76,799	+ 6,696	− 21,548	+ 91,651
Equity and investment fund shares	+ 189,142	+ 641,855	+ 35,137	+ 111,458	+ 24,295	− 8,483	− 9,251	− 19,987	+ 20,755
Short-term debt securities	+ 116,321	+ 30,111	− 66,129	− 23,830	− 2,070	− 20,605	+ 4,444	− 11,693	− 13,356
Long-term debt securities	− 120,070	− 198,853	+ 91,362	− 947	+ 135,782	+ 105,886	+ 11,503	+ 10,131	+ 84,252
3. Financial derivatives and employee stock options	+ 16,737	+ 57,745	+ 62,512	− 4,106	+ 15,518	+ 6,961	+ 951	+ 13,307	− 7,297
4. Other investment	− 142,738	− 467,427	+ 63,209	+ 59,377	+ 92,355	− 2,574	− 71,527	− 14,902	+ 83,855
Eurosystem	− 205,598	− 449,195	+ 180,651	− 69,841	+ 167,664	+ 76,913	+ 87,972	+ 30,654	− 41,713
General government	− 15,336	− 80,350	− 51,039	+ 4,630	+ 4,459	− 1,865	− 1,753	− 4,497	+ 4,385
MFIs 2	+ 17,691	− 123,761	− 287,895	+ 75,957	− 10,704	− 55,688	− 143,015	− 1,215	+ 88,542
Enterprises and households	+ 60,505	+ 185,883	+ 221,493	+ 48,632	− 69,063	− 21,934	− 14,733	− 39,844	+ 32,643
5. Reserve assets	+ 13,182	+ 130,370	+ 17,964	+ 9,267	− 18,459	+ 1,902	− 1,849	+ 1,358	+ 2,393
IV. Net errors and omissions	− 22,963	− 25,899	+ 39,708	+ 27,544	+ 11,864	+ 37,008	− 33,468	+ 33,398	+ 37,078

***** Source: ECB, according to the international standards of the International Monetary Fund's Balance of Payments Manual (sixth edition). **1** Increase: + / decrease: -. **2** Excluding the Eurosystem.

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 [2]	Financial account [3]		Errors and omissions [4]
	Total	Goods		Services	Primary income	Secondary income			Total	of which: Reserve assets	
		Total	of which: Supplementary trade items [1]								
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	+ 162,033	+ 111,887	+ 9,999	− 31,036	+ 150,017	− 68,835	− 18,644	+ 227,707	+ 4,426	+ 84,319
2020 Q3	+ 62,279	+ 55,197	− 933	− 4,752	+ 22,659	− 10,824	− 2,450	+ 66,302	− 1,276	+ 6,473
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	+ 59,579	+ 34,428	+ 3,927	+ 3,038	+ 40,362	− 18,249	− 3,021	+ 78,775	+ 2,200	+ 22,216
Q2	+ 30,458	+ 27,027	+ 7,766	− 5,314	+ 22,259	− 13,513	− 4,780	+ 67,323	+ 597	+ 41,645
Q3	+ 19,883	+ 19,911	− 361	− 22,180	+ 39,507	− 17,356	− 5,860	− 30,017	+ 784	− 44,040
Q4	+ 52,112	+ 30,520	− 1,333	− 6,579	+ 47,889	− 19,718	− 4,984	+ 111,625	+ 845	+ 64,497
2023 Q1 r	+ 69,937	+ 55,177	− 1,396	− 6,692	+ 41,057	− 19,605	− 11,325	+ 99,813	+ 224	+ 41,200
Q2 r	+ 58,912	+ 55,857	− 983	− 14,337	+ 26,742	− 9,349	− 4,047	+ 63,794	+ 1,096	+ 8,929
2021 Feb.	+ 22,176	+ 18,147	+ 39	+ 1,739	+ 9,312	− 7,022	− 1,596	+ 22,939	+ 102	+ 2,360
Mar.	+ 33,795	+ 24,219	+ 441	+ 1,802	+ 12,206	− 4,432	+ 1,430	+ 32,038	− 460	− 3,186
Apr.	+ 24,445	+ 16,424	+ 441	+ 3,520	+ 8,407	− 3,905	− 897	+ 29,252	− 251	+ 5,705
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.	+ 16,699	+ 6,950	+ 803	+ 1,740	+ 14,181	− 6,173	− 417	+ 29,438	+ 309	+ 13,156
Feb.	+ 23,254	+ 15,092	+ 1,472	+ 2,099	+ 11,673	− 5,609	− 1,637	+ 48,042	+ 1,161	+ 26,424
Mar.	+ 19,626	+ 12,386	+ 1,653	− 801	+ 14,508	− 6,467	− 968	+ 1,295	+ 730	− 17,363
Apr.	+ 11,358	+ 5,271	+ 2,536	− 917	+ 12,425	− 5,421	− 1,556	+ 19,988	+ 83	+ 10,186
May	+ 3,627	+ 11,096	+ 4,323	− 1,959	− 3,881	− 1,628	− 2,724	+ 893	+ 161	− 10
June	+ 15,474	+ 10,661	+ 906	− 2,438	+ 13,715	− 6,464	− 501	+ 46,441	+ 353	+ 31,469
July	+ 7,849	+ 7,849	+ 382	− 6,089	+ 13,001	− 6,912	− 2,321	− 23,333	− 484	− 28,861
Aug.	+ 660	+ 2,096	− 567	− 9,555	+ 14,077	− 5,957	− 1,261	+ 16,672	+ 81	+ 17,273
Sep.	+ 11,374	+ 9,967	− 176	− 6,536	+ 12,429	− 4,486	− 2,277	− 23,355	+ 1,187	− 32,452
Oct.	+ 8,585	+ 6,243	− 34	− 5,287	+ 13,076	− 5,447	− 2,212	+ 44,969	+ 672	+ 38,596
Nov.	+ 18,533	+ 13,428	+ 731	− 2,077	+ 13,661	− 6,479	− 2,129	+ 466	+ 425	− 15,938
Dec.	+ 24,994	+ 10,849	− 2,030	+ 785	+ 21,152	− 7,792	− 643	+ 66,191	− 252	+ 41,839
2023 Jan. r	+ 16,964	+ 11,678	+ 233	− 1,534	+ 12,362	− 5,542	− 4,700	+ 12,744	− 341	+ 481
Feb. r	+ 22,466	+ 18,505	− 163	− 2,175	+ 12,175	− 6,039	− 1,789	+ 32,485	+ 143	+ 11,808
Mar. r	+ 30,508	+ 24,994	− 1,466	− 2,983	+ 16,520	− 8,023	− 4,835	+ 54,584	+ 423	+ 28,911
Apr. r	+ 22,352	+ 16,296	+ 301	− 3,330	+ 14,455	− 5,069	− 640	− 11,298	+ 88	− 33,010
May r	+ 8,169	+ 15,803	+ 281	− 6,134	− 1,421	− 79	− 2,309	+ 15,902	+ 45	+ 10,042
June r	+ 28,392	+ 23,757	− 1,566	− 4,874	+ 13,709	− 4,200	− 1,099	+ 59,190	+ 962	+ 31,897
July p	+ 18,693	+ 18,781	− 638	− 8,072	+ 13,383	− 5,399	− 4,159	+ 6,635	− 118	− 7,899

1 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. **2** Including net acquisition/disposal of non-produced non-financial assets. **3** Net lending: + / net borrowing: -. **4** 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 Feb.	Mar.	Apr.	May	June	July
All countries [1]	Exports	1,206,928	1,379,346	1,576,783	132,676	146,301	122,489	131,342	138,869	126,018
	Imports	1,026,502	1,204,050	1,494,510	115,953	123,740	108,923	117,739	116,639	107,937
	Balance	+ 180,427	+ 175,296	+ 82,273	+ 16,723	+ 22,561	+ 13,566	+ 13,602	+ 22,231	+ 18,081
I. European countries	Exports	824,921	949,744	1,074,139	90,667	98,385	84,127	89,377	93,743	84,274
	Imports	682,477	803,687	966,505	75,945	80,908	69,763	76,906	76,228	69,726
	Balance	+ 142,444	+ 146,057	+ 107,634	+ 14,721	+ 17,477	+ 14,364	+ 12,471	+ 17,515	+ 14,548
1. EU Member States (27)	Exports	635,741	751,322	861,164	72,967	76,917	68,565	71,587	75,516	67,386
	Imports	546,655	638,064	735,956	62,022	65,828	57,231	63,015	62,966	57,261
	Balance	+ 89,087	+ 113,259	+ 125,208	+ 10,945	+ 11,089	+ 11,334	+ 8,572	+ 12,550	+ 10,124
Euro area (20) countries	Exports	445,225	525,992	605,810	51,838	54,224	48,244	50,200	53,194	48,157
	Imports	372,855	440,248	507,572	41,256	43,994	38,065	42,294	41,770	38,481
	Balance	+ 72,370	+ 85,744	+ 98,238	+ 10,582	+ 10,230	+ 10,179	+ 7,906	+ 11,425	+ 9,676
of which:										
Austria	Exports	60,118	72,385	88,685	6,843	7,407	6,483	6,663	6,878	6,251
	Imports	40,454	47,492	57,642	4,698	5,097	4,503	4,850	4,895	4,434
	Balance	+ 19,663	+ 24,893	+ 31,043	+ 2,145	+ 2,310	+ 1,980	+ 1,813	+ 1,983	+ 1,818
Belgium and Luxembourg	Exports	48,824	58,080	69,637	5,950	6,079	5,406	5,694	6,149	5,851
	Imports	39,584	55,726	66,503	4,717	4,763	4,626	5,270	4,703	4,343
	Balance	+ 9,240	+ 2,354	+ 3,134	+ 1,232	+ 1,316	+ 781	+ 424	+ 1,446	+ 1,508
France	Exports	90,910	102,741	116,034	10,135	10,475	9,604	9,744	10,741	9,227
	Imports	56,364	61,921	69,279	6,216	6,575	5,581	5,904	6,285	5,572
	Balance	+ 34,546	+ 40,820	+ 46,755	+ 3,919	+ 3,900	+ 4,023	+ 3,840	+ 4,456	+ 3,655
Italy	Exports	60,634	75,526	87,505	7,858	8,018	6,534	7,180	7,370	6,827
	Imports	53,906	65,389	72,308	6,143	6,819	5,766	6,294	6,336	6,255
	Balance	+ 6,728	+ 10,137	+ 15,197	+ 1,715	+ 1,199	+ 769	+ 886	+ 1,034	+ 572
Netherlands	Exports	84,579	101,050	110,612	9,418	9,894	9,298	9,202	9,736	8,643
	Imports	87,024	105,113	119,517	8,658	9,552	8,082	9,036	9,455	8,547
	Balance	− 2,445	− 4,063	− 8,905	+ 760	+ 342	+ 1,215	+ 165	+ 281	+ 95
Spain	Exports	37,618	43,932	49,021	4,504	4,765	4,221	4,577	4,750	4,433
	Imports	31,281	34,180	37,408	3,368	3,719	3,046	3,753	3,315	3,011
	Balance	+ 6,337	+ 9,752	+ 11,613	+ 1,136	+ 1,046	+ 1,175	+ 824	+ 1,435	+ 1,421
Other EU Member States	Exports	190,517	225,331	255,354	21,129	22,693	20,321	21,388	22,322	19,229
	Imports	173,800	197,815	228,383	20,766	21,834	19,165	20,721	21,196	18,780
	Balance	+ 16,717	+ 27,515	+ 26,971	+ 363	+ 860	+ 1,155	+ 666	+ 1,126	+ 449
2. Other European countries	Exports	189,180	198,421	212,975	17,700	21,468	15,562	17,790	18,227	16,888
	Imports	135,822	165,623	230,550	13,924	15,080	12,532	13,891	13,262	12,465
	Balance	+ 53,358	+ 32,798	− 17,575	+ 3,777	+ 6,388	+ 3,030	+ 3,898	+ 4,965	+ 4,423
of which:										
Switzerland	Exports	56,265	60,638	70,628	5,699	6,517	4,913	5,559	5,746	5,352
	Imports	45,556	49,247	55,347	4,045	4,663	3,733	4,556	4,561	3,932
	Balance	+ 10,708	+ 11,391	+ 15,280	+ 1,654	+ 1,854	+ 1,180	+ 1,003	+ 1,185	+ 1,420
United Kingdom	Exports	67,086	65,002	73,787	6,316	7,559	5,598	6,476	6,779	6,220
	Imports	35,018	32,245	37,918	3,160	3,466	2,938	3,230	3,080	2,908
	Balance	+ 32,068	+ 32,757	+ 35,869	+ 3,156	+ 4,093	+ 2,660	+ 3,246	+ 3,699	+ 3,311
II. Non-European countries	Exports	380,292	427,430	497,588	41,651	47,537	37,995	41,581	44,747	41,336
	Imports	343,270	399,604	527,050	39,911	42,716	39,046	40,686	40,236	38,039
	Balance	+ 37,022	+ 27,827	− 29,463	+ 1,740	+ 4,820	− 1,051	+ 896	+ 4,511	+ 3,298
1. Africa	Exports	20,086	23,068	26,464	2,334	2,577	2,078	2,716	2,976	2,148
	Imports	18,758	26,241	33,549	2,606	2,989	2,758	2,951	2,872	2,161
	Balance	+ 1,328	− 3,173	− 7,085	− 272	− 411	− 680	− 235	+ 104	− 13
2. America	Exports	141,375	167,735	210,646	17,859	20,677	16,350	17,252	19,047	18,436
	Imports	94,005	101,525	130,591	10,390	11,942	10,543	10,670	10,480	10,532
	Balance	+ 47,370	+ 66,210	+ 80,055	+ 7,469	+ 8,735	+ 5,807	+ 6,582	+ 8,567	+ 7,904
of which:										
United States	Exports	103,476	121,980	156,191	13,129	14,611	11,952	12,508	13,777	13,620
	Imports	67,694	72,316	92,290	7,435	8,793	7,728	7,608	7,598	7,523
	Balance	+ 35,782	+ 49,664	+ 63,900	+ 5,694	+ 5,818	+ 4,224	+ 4,900	+ 6,178	+ 6,097
3. Asia	Exports	208,146	224,897	246,458	20,085	22,856	18,565	20,438	21,528	19,614
	Imports	226,646	267,604	355,479	26,277	27,230	25,199	26,447	26,494	24,804
	Balance	− 18,500	− 42,707	− 109,021	− 6,191	− 4,373	− 6,634	− 6,009	− 4,966	− 5,190
of which:										
Middle East	Exports	25,882	26,090	29,658	2,642	3,124	2,331	2,389	2,663	2,517
	Imports	6,721	7,509	12,803	1,508	1,682	1,577	1,597	1,062	1,100
	Balance	+ 19,161	+ 18,582	+ 16,855	+ 1,134	+ 1,441	+ 754	+ 792	+ 1,601	+ 1,416
Japan	Exports	17,396	18,245	20,514	1,747	1,942	1,536	1,659	1,794	1,742
	Imports	21,427	23,477	25,282	2,118	2,404	2,067	2,030	2,301	2,021
	Balance	− 4,032	− 5,232	− 4,768	− 371	− 461	− 531	− 371	− 507	− 279
People's Republic of China [2]	Exports	95,840	103,564	106,879	7,941	9,020	7,729	8,729	8,738	8,271
	Imports	117,373	142,964	192,006	12,949	13,028	12,051	12,880	13,750	12,430
	Balance	− 21,533	− 39,400	− 85,127	− 5,008	− 4,008	− 4,321	− 4,151	− 5,012	− 4,159
New industrial countries and emerging markets of Asia [3]	Exports	50,590	55,295	63,383	5,413	5,986	4,865	4,811	5,858	4,853
	Imports	48,222	55,441	70,583	5,647	5,965	5,828	6,076	5,457	5,225
	Balance	+ 2,368	− 146	− 7,200	− 233	+ 22	− 963	− 1,266	+ 401	− 372
4. Oceania and polar regions	Exports	10,685	11,731	14,019	1,372	1,426	1,002	1,175	1,196	1,139
	Imports	3,861	4,233	7,431	639	556	545	618	390	542
	Balance	+ 6,824	+ 7,497	+ 6,588	+ 734	+ 870	+ 457	+ 558	+ 806	+ 597

***** 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. **1** Including fuel and other supplies for ships and aircraft and other data not classifiable by region. **2** Excluding Hong Kong. **3** Brunei Darussalam, Hong Kong, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Taiwan and Thailand.

XII. External sector

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

€ million

Zeit	Services									Primary income		
		of which:										
	Total	Transport	Travel [1]	Financial services	Charges for the use of intellectual property	Telecommunications-, computer and information services	Other business services	Gouvernment goods and services [2]	Compensation of employees	Investment income	Other primary income [3]
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
2021 Q4	− 1,604	− 3,073	− 8,636	+ 2,551	+ 9,344	− 1,551	− 3,757	+ 763	+ 824	+ 43,098	+ 3,071
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
2022 Sep.	− 6,536	− 706	− 8,123	+ 679	+ 2,659	− 1,199	− 1,090	+ 457	− 7	+ 13,013	− 577
Oct.	− 5,287	− 315	− 7,710	+ 642	+ 2,127	− 1,050	− 108	+ 335	+ 93	+ 13,662	− 680
Nov.	− 2,077	− 836	− 3,469	+ 956	+ 1,859	− 371	− 1,446	+ 327	+ 74	+ 14,226	− 639
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 p	− 8,072	− 597	− 6,694	+ 625	+ 1,029	− 1,530	− 1,678	+ 193	− 55	+ 13,864	− 426

1 Since 2001 the sample results of a household survey have been used on the expenditure side. **2** Domestic public authorities' receipts from and expenditure on services, not included elsewhere; including the receipts from foreign military bases. **3** 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		
		General government			All sectors excluding general government [2]					
			of which:			of which:				
	Total	Total	Current international cooperation [1]	Current taxes on income, wealth, etc.	Total	Personal transfers between resident and non-resident households [3]	of which: Workers' remittances	Total	Non-produced non-financial assets	Capital transfers
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
2021 Q4	− 16,723	− 11,058	− 5,349	+ 2,135	− 5,664	.	− 1,543	+ 7	+ 963	− 956
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
2022 Sep.	− 4,486	− 2,589	− 587	+ 1,271	− 1,897	.	− 603	− 2,277	− 1,555	− 722
Oct.	− 5,447	− 3,509	− 1,505	+ 524	− 1,938	.	− 600	− 2,212	− 1,559	− 653
Nov.	− 6,479	− 4,468	− 1,623	+ 417	− 2,010	− 619	− 600	− 2,129	− 1,846	− 283
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 p	− 5,399	− 3,571	− 1,017	+ 534	− 1,828	.	− 564	− 4,159	− 3,546	− 613

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

XII. External sector

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

€ million

Item	2020	2021	2022	2022 Q4	2023 Q1 r	2023 Q2 r	2023 May r	2023 June r	2023 July p
I. Net domestic investment abroad (increase: +)	+ 724,008	+ 819,754	+ 328,088	− 66,050	+ 129,843	+ 38,191	+ 46,537	+ 33,308	+ 20,527
1. Direct investment	+ 134,017	+ 180,852	+ 169,006	+ 10,260	+ 27,888	+ 34,896	− 4,809	+ 31,076	− 2,396
Equity	+ 89,898	+ 121,136	+ 114,061	+ 32,688	+ 23,029	+ 23,725	+ 7,030	+ 7,642	+ 1,869
of which:									
Reinvestment of earnings 1	+ 17,533	+ 59,185	+ 69,943	+ 12,154	+ 16,481	+ 14,343	+ 1,306	+ 5,791	+ 5,847
Debt instruments	+ 44,119	+ 59,716	+ 54,945	− 22,429	+ 4,859	+ 11,172	− 11,839	+ 23,434	− 4,266
2. Portfolio investment	+ 166,417	+ 174,958	+ 16,697	+ 23,963	+ 78,923	+ 49,343	+ 15,459	+ 16,953	+ 12,172
Shares 2	+ 53,110	+ 46,753	− 16,698	− 9,357	+ 4,072	− 4,568	− 1,987	− 4,797	+ 2,216
Investment fund shares 3	+ 35,932	+ 116,401	+ 33,614	+ 18,537	+ 10,899	+ 4,737	+ 2,087	+ 413	+ 10,467
Short-term 4									
debt securities	+ 10,507	− 107	+ 12,340	+ 5,126	+ 7,640	+ 2,892	+ 451	+ 481	− 629
Long-term 5									
debt securities	+ 66,867	+ 11,912	− 12,559	+ 9,657	+ 56,312	+ 46,281	+ 14,909	+ 20,856	+ 118
3. Financial derivatives and employee stock options 6	+ 94,579	+ 60,178	+ 42,677	− 2,054	+ 20,246	+ 11,251	+ 9,554	− 3,595	− 1,229
4. Other investment 7	+ 329,046	+ 371,874	+ 95,282	− 99,063	+ 2,562	− 58,395	+ 26,288	− 12,088	+ 12,098
MFIs 8	− 4,313	+ 112,903	+ 59,476	− 103,228	+ 65,798	− 23,037	+ 16,899	− 25,917	+ 29,330
Short-term	+ 3,683	+ 99,380	+ 34,961	− 109,790	+ 68,459	− 18,346	+ 18,361	− 20,624	+ 23,836
Long-term	− 8,021	+ 13,204	+ 24,474	+ 6,490	− 2,691	− 4,705	− 1,471	− 5,296	+ 5,484
Enterprises and households 9	+ 88,179	+ 143,700	+ 46,596	− 5,531	+ 33,033	+ 64,871	+ 10,836	+ 22,081	+ 899
Short-term	+ 44,218	+ 113,230	+ 23,769	− 13,198	+ 28,685	+ 60,315	+ 8,347	+ 21,006	− 614
Long-term	+ 22,325	− 13,944	− 7,625	− 244	+ 594	+ 563	+ 1,182	− 772	+ 596
General government	+ 2,069	− 8,123	− 24,958	+ 645	+ 9,444	− 2,659	− 874	+ 465	+ 27
Short-term	+ 3,461	− 7,256	− 23,451	+ 920	+ 3,286	− 1,897	− 691	+ 1,014	− 41
Long-term	− 2,485	− 2,327	− 2,883	− 274	+ 4,337	− 1,000	− 183	− 780	− 409
Bundesbank	+ 243,112	+ 123,394	+ 14,167	+ 9,051	− 105,713	− 97,571	− 574	− 8,716	− 18,159
5. Reserve assets	− 51	+ 31,892	+ 4,426	+ 845	+ 224	+ 1,096	+ 45	+ 962	− 118
II. Net foreign investment in the reporting country (increase: +)	+ 532,526	+ 571,203	+ 100,381	− 177,676	+ 30,030	− 25,603	+ 30,634	− 25,882	+ 13,892
1. Direct investment	+ 138,902	+ 80,483	+ 43,725	− 15,589	− 10,209	+ 21,404	− 1,074	+ 15,202	− 6,234
Equity	+ 45,841	+ 41,374	+ 14,811	+ 3,618	+ 13,182	+ 3,229	− 2,243	− 1,499	− 4,018
of which:									
Reinvestment of earnings 1	+ 707	+ 7,659	+ 7,123	+ 1,344	+ 5,976	− 4,384	− 4,402	− 159	− 475
Debt instruments	+ 93,061	+ 39,109	+ 28,914	− 19,207	− 23,391	+ 18,174	+ 1,170	+ 16,701	− 2,216
2. Portfolio investment	+ 150,014	− 28,581	− 7,600	− 23,214	+ 53,182	+ 32,870	+ 36,346	+ 1,996	+ 27,866
Shares 2	− 17,040	+ 2,101	− 4,695	+ 2,941	− 4,868	− 5,005	− 1,323	− 2,361	+ 2,851
Investment fund shares 3	+ 962	− 8,433	− 3,235	− 318	+ 932	− 1,061	+ 274	− 1,363	− 941
Short-term 4									
debt securities	+ 84,459	+ 29,313	− 37,218	− 24,696	+ 1,551	+ 9,964	+ 14,261	− 509	+ 422
Long-term 5									
debt securities	+ 81,632	− 51,563	+ 37,548	− 1,142	+ 55,568	+ 28,973	+ 23,134	+ 6,229	+ 25,534
3. Other investment 7	+ 243,611	+ 519,301	+ 64,255	− 138,873	− 12,943	− 79,877	− 4,638	− 43,080	− 7,740
MFIs 8	+ 108,426	+ 161,287	+ 152,946	− 187,546	+ 108,354	− 33,858	+ 18,973	− 49,315	+ 29,425
Short-term	+ 74,908	+ 115,265	+ 160,854	− 181,523	+ 88,506	− 37,871	+ 14,243	− 43,750	+ 27,687
Long-term	+ 33,579	+ 46,044	− 7,910	− 6,025	+ 19,847	+ 4,015	+ 4,730	− 5,563	+ 1,738
Enterprises and households 9	+ 32,084	+ 135,961	+ 6,958	− 36,507	+ 5,051	+ 26,516	+ 1,168	− 9,029	− 9,681
Short-term	+ 14,969	+ 99,877	− 9,271	− 46,236	− 711	+ 20,334	− 840	− 12,425	− 9,590
Long-term	+ 13,511	+ 12,382	+ 8,907	+ 8,020	+ 4,498	+ 4,758	+ 1,550	+ 2,834	− 562
General government	− 7,840	− 4,742	− 4,931	− 7,399	+ 1,074	+ 143	+ 1,338	− 2,268	+ 1,155
Short-term	− 7,557	− 2,134	− 2,478	− 7,371	+ 1,683	+ 143	+ 1,324	− 2,264	+ 1,325
Long-term	− 280	− 2,605	− 2,451	− 25	− 609	+ 0	+ 13	− 4	+ 21
Bundesbank	+ 110,941	+ 226,796	− 90,717	+ 92,579	− 127,423	− 72,678	− 26,117	+ 17,532	− 28,640
III. Net financial account (net lending: +/net borrowing: -)	+ 191,481	+ 248,551	+ 227,707	+ 111,625	+ 99,813	+ 63,794	+ 15,902	+ 59,190	+ 6,635

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

XII. External sector

7. External position of the Bundesbank *

€ million

End of reporting period	External assets									External liabilities 3 4	Net external position 5
		Reserve assets					Other investment				
	Total	Total	Gold and gold receivables	Special drawing rights	Reserve position in the IMF	Currency, deposits and securities	Total	of which: Clearing accounts within the ESCB 1	Portfolio investment 2		
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	46,491	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	48,567	9,480	34,404	1,290,317	1,269,076	50,251	919,441	697,614
2021 Mar.	1,364,046	209,400	155,323	14,367	7,966	31,744	1,098,486	1,081,989	56,160	647,647	716,400
Apr.	1,307,161	210,799	158,143	14,085	7,836	30,735	1,041,472	1,024,734	54,890	604,863	702,299
May	1,370,231	221,201	168,678	14,037	7,809	30,677	1,093,721	1,076,918	55,309	621,827	748,404
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	45,091	8,174	31,720	1,053,653	1,037,259	56,327	699,773	660,949
Sep.	1,431,909	246,908	160,943	45,606	8,267	32,092	1,130,558	1,115,126	54,443	746,128	685,781
Oct.	1,388,160	250,340	164,602	45,719	8,449	31,570	1,083,141	1,066,604	54,678	735,595	652,564
Nov.	1,456,861	258,815	170,460	46,375	8,405	33,575	1,142,719	1,127,545	55,327	773,217	683,644
Dec.	1,592,822	261,387	173,821	46,491	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	46,931	8,504	33,168	1,163,561	1,149,868	54,168	807,889	671,805
Feb.	1,491,552	273,726	184,255	46,854	8,711	33,905	1,164,098	1,149,722	53,729	774,786	716,766
Mar.	1,516,744	277,782	187,779	47,375	8,663	33,965	1,184,501	1,169,952	54,462	808,690	708,055
Apr.	1,491,558	288,953	196,274	48,617	8,799	35,263	1,148,681	1,135,400	53,923	790,221	701,337
May	1,505,419	278,174	186,481	48,031	8,681	34,980	1,173,376	1,159,716	53,869	805,179	700,240
June	1,566,099	281,157	187,573	48,712	8,948	35,923	1,232,176	1,216,530	52,767	826,280	739,819
July	1,514,570	280,910	185,950	49,465	9,086	36,409	1,179,431	1,166,155	54,229	810,881	703,689
Aug.	1,590,572	280,160	184,794	49,614	9,300	36,451	1,258,187	1,245,014	52,225	842,576	747,996
Sep.	1,613,008	281,258	184,022	50,287	9,358	37,592	1,281,266	1,266,647	50,483	829,129	783,879
Oct.	1,569,272	274,421	178,101	49,675	9,527	37,119	1,243,873	1,230,005	50,977	811,035	758,237
Nov.	1,577,175	277,458	183,052	49,168	9,315	35,923	1,248,088	1,233,980	51,629	810,314	766,861
Dec.	1,617,056	276,488	184,036	48,567	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	48,256	9,437	33,938	1,176,042	1,162,354	50,772	793,716	714,791
Feb.	1,455,724	276,016	183,755	48,582	9,480	34,199	1,130,353	1,114,888	49,356	743,006	712,718
Mar.	1,522,539	288,131	196,405	48,039	9,373	34,314	1,184,604	1,170,620	49,804	791,478	731,061
Apr.	1,431,180	285,667	194,679	47,642	9,297	34,049	1,096,324	1,081,284	49,189	726,986	704,194
May	1,435,049	290,368	197,915	48,658	9,379	34,416	1,095,750	1,081,900	48,931	701,467	733,582
June	1,416,292	280,820	188,991	48,618	9,292	33,919	1,087,034	1,068,747	48,438	718,324	697,969
July	1,399,374	282,438	191,458	48,368	9,184	33,429	1,068,875	1,052,218	48,061	689,447	709,927
Aug.	1,406,665	284,364	192,914	48,979	9,218	33,253	1,074,575	1,056,420	47,725	687,342	719,322

***** 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						
			Claims on foreign non-banks							Liabilities to non-banks				
					from trade credits							from trade credits		
	Total	Balances with foreign banks	Total	from financial operations	Total	Credit terms granted	Advance payments effected	Total	Loans from foreign banks	Total	from financial operations	Total	Credit terms used	Advance payments received
Rest of the world														
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 Feb. r	1,288,815	294,730	994,085	681,436	312,649	282,699	29,950	1,639,386	203,036	1,436,350	1,158,439	277,911	170,382	107,529
Mar. r	1,258,723	285,902	972,822	650,929	321,892	291,477	30,415	1,591,228	184,372	1,406,856	1,120,422	286,434	180,614	105,820
Apr. r	1,287,498	326,535	960,963	657,274	303,689	273,260	30,429	1,627,060	207,609	1,419,450	1,142,227	277,223	170,765	106,458
May r	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 r	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 p	1,325,613	357,169	968,444	667,844	300,600	268,608	31,992	1,625,118	202,705	1,422,413	1,149,539	272,874	165,222	107,652
EU Member States (27 excl. GB)														
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 Feb. r	748,489	237,252	511,237	385,937	125,300	111,832	13,468	981,655	119,121	862,533	747,403	115,130	81,543	33,588
Mar. r	746,393	231,542	514,851	383,998	130,854	116,916	13,937	972,305	114,893	857,411	738,453	118,958	86,201	32,757
Apr. r	783,061	262,600	520,462	394,679	125,782	111,680	14,102	996,850	119,224	877,627	762,940	114,686	81,522	33,165
May r	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 r	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 p	808,151	290,784	517,368	396,050	121,317	106,305	15,012	996,479	118,245	878,234	766,858	111,376	79,076	32,299
Extra-EU Member States (27 incl. GB)														
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 Feb. r	540,325	57,477	482,848	295,498	187,350	170,867	16,483	657,732	83,915	573,817	411,036	162,781	88,839	73,942
Mar. r	512,330	54,360	457,970	266,932	191,039	174,561	16,477	618,923	69,479	549,444	381,969	167,476	94,413	73,062
Apr. r	504,437	63,935	440,502	262,595	177,907	161,580	16,327	630,209	88,386	541,824	379,287	162,537	89,244	73,293
May r	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 r	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 p	517,462	66,386	451,076	271,794	179,283	162,303	16,980	628,639	84,459	544,179	382,681	161,498	86,145	75,353
Euro area (20)														
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 Feb. r	644,861	220,008	424,854	328,128	96,725	84,652	12,074	893,319	100,251	793,068	705,928	87,140	61,107	26,033
Mar. r	641,632	214,675	426,957	325,761	101,197	88,646	12,550	883,244	95,565	787,679	698,040	89,639	64,217	25,422
Apr. r	679,900	246,187	433,713	336,129	97,584	84,845	12,739	909,076	99,419	809,658	723,243	86,415	60,837	25,578
May r	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 r	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 p	705,301	275,070	430,231	335,490	94,741	81,133	13,608	909,201	100,002	809,200	724,453	84,746	60,260	24,486
Extra-Euro area (20)														
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 Feb. r	643,953	.	.	.	.	.	.	746,067	.	.	.	190,771	109,275	81,497
Mar. r	617,092	.	.	.	.	.	.	707,984	.	.	.	196,795	116,397	80,398
Apr. r	607,598	.	.	.	.	.	.	717,983	.	.	.	190,808	109,928	80,880
May r	605,640	.	.	.	206,729	187,916	18,813	737,921	.	.	.	190,881	109,243	81,638
June r	627,333	.	.	.	212,434	193,805	18,629	715,649	.	.	.	193,911	110,642	83,269
July p	620,312	.	.	.	205,859	187,475	18,384	715,916	.	.	.	188,128	104,961	83,166

* 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 AUD	Canada CAD	China CNY	Denmark DKK	Japan JPY	Norway NOK	Sweden SEK	Switzerland CHF	United Kingdom GBP	United States 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 Apr.	1.4663	1.3652	6.9605	7.4391	136.61	9.6191	10.3175	1.0211	0.83655	1.0819
May	1.4995	1.3588	7.0830	7.4405	136.24	10.1453	10.4956	1.0355	0.84969	1.0579
June	1.5044	1.3537	7.0734	7.4392	141.57	10.2972	10.6005	1.0245	0.85759	1.0566
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

* 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	340.750
2007 January 1	Slovenia	Slovenian tolar	SIT	239.640
2008 January 1	Cyprus	Cyprus pound	CYP	0.585274
	Malta	Maltese lira	MTL	0.429300
2009 January 1	Slovakia	Slovak koruna	SKK	30.1260
2011 January 1	Estonia	Estonian kroon	EEK	15.6466
2014 January 1	Latvia	Latvian lats	LVL	0.702804
2015 January 1	Lithuania	Lithuanian litas	LTL	3.45280
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 extended EER group of trading partners [1]				broad EER group of trading partners [2]		Indicators of the German economy's price competitiveness						
							Based on the deflators of total sales [3] vis-à-vis				Based on consumer price indices vis-à-vis		
							27 selected industrial countries [4]						
								of which:					
	Nominal	In real terms based on consumer price indices	In real terms based on the deflators of gross domestic product [3]	In real terms based on unit labour costs of national economy [3]	Nominal	In real terms based on consumer price indices	Total	Euro area countries	Non-euro area countries	37 countries [5]	27 selected industrial countries [4]	37 countries [5]	60 countries [6]
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	91.9	97.5	85.4	91.1	93.1	92.3	91.2
2001	87.4	87.1	86.6	84.4	90.1	86.9	91.7	96.6	86.0	90.5	93.0	91.7	91.0
2002	89.7	90.3	89.7	88.0	94.4	90.6	92.3	95.7	88.4	91.0	93.5	92.2	91.9
2003	100.5	101.6	101.0	99.2	106.5	101.7	95.8	94.8	97.5	95.3	97.0	96.7	96.8
2004	104.3	105.6	104.2	102.6	111.0	105.6	96.1	93.6	99.9	95.6	98.5	98.2	98.4
2005	102.9	104.3	102.1	100.8	109.1	103.2	94.7	92.0	98.7	93.3	98.5	97.2	96.7
2006	102.9	104.3	101.6	99.8	109.3	102.6	93.5	90.4	98.1	91.6	98.6	96.8	96.0
2007	106.5	107.3	103.9	101.5	112.9	104.8	94.5	89.6	102.0	92.0	100.9	98.3	97.4
2008	110.4	110.3	106.2	105.5	117.8	107.3	94.9	88.4	105.1	91.3	102.4	98.5	97.6
2009	111.9	111.1	107.2	109.1	120.8	108.3	95.2	89.2	104.6	92.0	101.9	98.6	97.9
2010	104.6	103.3	99.0	101.6	112.1	99.3	92.5	88.7	98.1	88.1	98.8	94.3	92.5
2011	104.4	102.4	97.1	99.8	112.9	98.8	92.1	88.4	97.5	87.3	98.2	93.5	91.9
2012	98.6	97.0	91.5	94.0	107.6	94.0	90.0	88.3	92.4	84.7	95.9	90.5	88.9
2013	102.2	100.1	94.6	96.8	112.4	97.0	92.3	88.8	97.4	86.6	98.1	92.3	90.9
2014	102.4	99.5	94.5	97.0	114.7	97.4	92.9	89.6	97.7	87.4	98.2	92.5	91.5
2015	92.5	89.7	85.8	86.3	106.1	88.7	89.7	90.2	88.9	83.5	94.3	87.8	86.9
2016	95.2	91.6	88.1	p 87.5	110.1	90.7	90.6	90.7	90.4	84.9	95.0	88.8	88.1
2017	97.5	93.6	89.3	p 88.2	112.5	92.0	91.8	90.8	93.3	85.6	96.3	89.9	88.9
2018	100.0	95.8	90.9	p 89.9	117.3	95.2	93.1	91.0	96.4	86.7	97.7	91.1	90.8
2019	98.1	93.3	89.1	p 87.2	115.5	92.5	92.2	91.1	93.5	85.8	96.4	89.9	89.4
2020	99.7	93.7	89.8	p 88.1	119.2	93.9	92.4	91.5	93.5	86.5	96.4	90.1	90.1
2021	99.6	93.7	p 89.0	p 86.4	120.5	94.3	93.5	92.0	95.6	86.8	97.4	90.6	90.9
2022	95.3	p 90.8	p 83.9	p 81.4	116.1	p 90.9	92.1	91.9	92.3	85.2	95.9	89.1	p 89.0
2021 Mar.	100.4	94.4			121.1	94.9					97.7	91.1	91.3
Apr.	100.7	94.5			121.7	95.2					97.9	91.2	91.6
May	100.9	94.6	89.7	p 87.1	122.1	95.3	93.3	91.5	96.0	86.7	98.1	91.3	91.6
June	100.3	94.1			121.3	94.7					98.0	91.1	91.4
July	99.8	93.8			120.6	94.3					97.7	91.0	91.2
Aug.	99.4	93.5	p 88.8	p 86.1	120.2	93.9	93.7	92.2	95.8	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	93.1					96.7	90.0	90.1
Nov.	97.6	92.0	p 86.9	p 84.0	118.4	92.6	93.6	92.7	94.8	86.5	96.1	89.3	89.6
Dec.	97.0	91.4			118.6	92.4					95.7	88.9	89.3
2022 Jan.	96.6	91.3			118.2	p 92.2					96.0	88.9	p 89.3
Feb.	96.8	91.8	p 85.2	p 82.8	118.5	p 92.6	92.8	92.1	93.7	85.6	96.1	89.0	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 90.3					96.1	88.9	p 88.8
May	95.4	90.5	p 83.7	p 81.1	115.8	p 90.2	92.1	91.7	92.5	84.8	96.5	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 82.0	p 79.7	113.6	p 88.7	91.4	91.8	90.6	84.6	94.4	87.6	p 87.2
Sep.	93.9	p 89.8			113.9	p 89.3					95.9	89.1	p 88.6
Oct.	94.5	p 91.2			114.8	p 90.7					96.0	89.7	p 89.3
Nov.	95.7	p 92.1	p 84.7	p 81.9	116.6	p 91.9	92.2	91.9	92.5	85.6	97.0	90.6	p 90.3
Dec.	96.8	p 92.5			118.6	p 92.7					96.2	89.7	p 89.7
2023 Jan.	97.1	p 92.6			119.2	p 92.9					97.4	90.3	p 90.3
Feb.	97.0	p 92.7	p 86.5	p 84.2	119.3	p 93.1	93.0	91.7	94.9	86.1	97.6	90.4	p 90.5
Mar.	97.3	p 92.9			119.7	p 93.4					98.0	90.9	p 91.0
Apr.	98.4	p 93.8			121.5	p 94.6					98.5	p 91.6	p 91.9
May	98.0	p 93.2	...	...	120.9	p 93.9	p 93.9	p 92.4	96.1	p 87.0	98.0	p 91.0	p 91.3
June	98.2	p 93.5			121.8	p 94.5					p 98.3	p 91.4	p 91.9
July	99.2	p 94.6			123.7	p 95.9					p 98.3	p 91.8	p 92.4
Aug.	99.0	p 94.8	...	...	123.7	p 96.1	...	...	...	...	p 98.3	p 91.8	p 92.5

* 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 comosition). **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

Financial Stability Review

Monthly Report

A list of the articles published in the period from 2010 to 2022 is available on the Bundesbank's website.

Monthly Report articles

December 2022
- Outlook for the German economy for 2023 to 2025
- Rise in energy prices, the exchange rate of the euro and Germany's price competitiveness
- Access to cash in Germany – results of a representative public survey

January 2023
- From the monetary pillar to the monetary and financial analysis
- Term structures in economic analysis
- Mobile payment usage in Germany
- Access to cash in Germany: analyses of the spatial availability of cash withdrawal facilities

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
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1 Banking statistics guidelines, January 2023[1,2]

2 Banking statistics, customer classification, January 2023[2]

For footnotes, see p. 88•.

3 Aufbau der bankstatistischen Tabellen, July 2013[1,2]

7 Notes on the coding list for the balance of payments statistics, September 2013

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Makro-ökonometrisches Mehr-Länder-Modell, November 1996[1]

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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[1]

2a Solvency Regulation and Liquidity Regulation, February 2008[2]

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o Discussion papers published from 2000 are available online.
1 Publication available in German only.
2 Available only as a download.