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Abbreviations and symbols

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 Data unknown, not to be published or not meaningful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

Discrepancies in the totals are due to rounding.

Commentaries

Economic conditions

Underlying trends

German economy probably on brink of recession

Persistent high inflation and uncertainty about energy supply and its costs are weighing heavily on the German economy. According to surveys by the ifo Institute, business sentiment deteriorated strongly in all sectors in September. The consumer climate index calculated by the market research institute GfK fell to a new record low. The economy is probably on the brink of a recession.[1]

Economic output may have remained more or less unchanged in Q3, …

Economic output may have remained more or less unchanged in the third quarter of 2022.[2] According to data available up to August, industry and construction increased their output somewhat. Furthermore, the elimination of most coronavirus protective measures probably still provided positive stimuli in some services sectors. By contrast, price-adjusted sales declined somewhat in the retail sector. In addition, economic output is likely to have fallen over the course of the quarter, as indicated by the ifo Institute's surveys on the business situation of enterprises. There are mounting signs of a slowdown in construction as well.

… but could decline significantly in Q4 2022 and Q1 2023

Downward forces are likely to gain significant pace in the final quarter of 2022 and forthcoming first quarter of 2023. In particular, the gas supply situation will be stretched in the coming months owing to the lack of Russian deliveries. From today's perspective, it is fairly unlikely that gas will be rationed. High energy costs may have a similar effect, however, and lead to a decline in industrial production, in particular. This is consistent with pessimistic production plans and export expectations in this sector. Moreover, the considerable loss of purchasing power and households' subdued mood for spending are likely to lead to a drop in private consumption and to spill over to consumer-related services. Economic output could fall significantly overall in the final quarter of 2022 and first quarter of 2023. The extent of the decline is extremely uncertain, however. Gas shortages, for example, would amplify downward forces. These could be counteracted by the recently announced measures (depending on their design) taken by the Federal Government to curb the high gas and electricity prices.

Industry

Industrial output virtually unchanged in August

In August 2022, industrial output remained more or less the same as in the previous month in seasonally adjusted terms.[3] Taking the average of July and August, it was up slightly by ½% compared with the second quarter. Production of capital goods rose steeply across sectors, with the manufacture of motor vehicles and motor vehicle parts up particularly sharply. September is likely to have seen a substantial increase as well, as indicated by data from the German Association of the Automotive Industry (VDA) on the number of passenger cars produced. By contrast, taking the average of July and August, production of consumer goods and intermediate goods fell markedly on the quarter. High energy costs weighed on industry. Production in energy-intensive sectors therefore fell sharply. In August, production in the chemicals industry and of coke and refined petroleum products was probably also dampened by severely low water levels, which also affected the Rhine, and the associated restrictions on the transport of goods.[4]

1 Recession is defined here as a significant, broad-based and sustained decline in economic output; see Deutsche Bundesbank (2022).
2 The Federal Statistical Office will publish an initial flash estimate of gross domestic product for the third quarter on 28 October 2022.
3 Seasonal adjustment here and in the remainder of this text also includes adjustment for calendar variations, provided they can be verified and quantified.
4 See Federal Statistical Office (2022).

Economic conditions in Germany*

Seasonally and calendar adjusted

Period	Orders received (volume); 2015 = 100			
	Industry			Main construction
	Total	of which: Domestic	of which: Foreign	
2021 Q4	109.2	105.3	112.2	128.5
2022 Q1	112.3	103.4	119.1	127.5
Q2	106.1	102.3	108.9	110.1
June	105.8	102.6	108.2	106.2
July	107.8	98.8	114.7	114.8
Aug.	105.2	95.4	112.7	…

Period	Output; 2015 = 100			
	Industry			
	Total	of which: Intermediate goods	of which: Capital goods	Construction
2021 Q4	96.8	101.3	91.6	113.6
2022 Q1	96.6	102.3	89.8	117.0
Q2	95.7	101.1	89.7	113.2
June	96.8	101.4	91.7	113.1
July	96.2	100.9	91.6	115.3
Aug.	96.1	98.5	92.7	112.9

Period	Foreign trade; € billion			Memo item: Current account balance in € billion
	Exports	Imports	Balance	
2021 Q4	356.56	326.78	29.77	57.89
2022 Q1	370.12	343.96	26.16	52.30
Q2	390.66	378.39	12.26	31.74
June	133.10	127.40	5.71	10.31
July	130.99	127.58	3.41	6.90
Aug.	135.24	134.27	0.97	3.13

Period	Labour market			
	Employment	Vacancies[1]	Unemployment	Unemployment rate
	Number in thousands			%
2022 Q1	45,413	849	2,323	5.1
Q2	45,540	867	2,337	5.1
Q3	…	849	2,492	5.5
July	45,584	856	2,470	5.4
Aug.	45,580	851	2,497	5.5
Sep.	…	840	2,510	5.5

Period	Prices; 2015 = 100			
	Import prices	Producer prices of industrial products	Construction prices[2]	Harmonised consumer prices
2022 Q1	130.4	136.2	138.1	114.2
Q2	139.3	146.9	147.9	117.5
Q3	…	…	151.7	120.0
July	142.9	156.2	.	118.7
Aug.	149.3	168.5	.	119.3
Sep.	…	…	.	122.0

* 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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Industrial new orders fell in August compared with previous month which had undergone strong upward revision

After seasonal adjustment, industrial new orders in August 2022 saw a significant fall (-2½%) compared with the previous month, which had undergone a strong upward revision. A lack of large orders contributed to the decline. On an average of July and August, incoming orders were slightly higher than the previous quarter's level (+½%). Broken down by region, orders from within and outside the euro area saw steep growth. This was offset by a sharp decline in domestic orders. Demand was lower for both consumer goods and intermediate goods. By contrast, manufacturers of capital goods posted strong order growth which was attributable to orders for motor vehicles and motor vehicle parts. New orders fell significantly compared with the peak levels in the summer of 2021 but were still above the pre-pandemic level in the fourth quarter of 2019. Order book levels were also extremely high in August and are likely to continue to support industrial output.

Nominal industrial sales and exports higher

After seasonal adjustment, nominal industrial sales were markedly higher in August 2022 compared with the previous month (+1¼%). On an average of July and August, they even rose sharply compared with the previous quarter (+3¼%). Foreign sales grew considerably more strongly than sales at home. Sales of capital goods rose sharply in line with developments in production, whereas sales of intermediate goods were only slightly higher and sales of consumer goods declined somewhat. In August 2022, nominal goods exports saw a steep month-on-month rise in seasonally adjusted terms (+3¼%). Taking the average of July and August, they were well above the previous quarter (+2¼%). The increase came solely from higher sales prices, however; exports declined in real terms (-1¾%). Exports to Russia increased in terms of value but this did not nearly make up for the earlier slump in deliveries in connection with the war in Ukraine. Nominal imports of goods rose substantially on the month in August (+5¼%). By contrast, imports from Russia declined, as they had done since April. Looking at July and August as an

aggregate, imports of goods were up steeply on the quarter overall (+3¾%) but this was due to significantly higher import prices for energy. In price-adjusted terms, imports of goods were lower (-1%).

Construction

Construction output down significantly in August

After adjustment for seasonal variations, output in the construction sector decreased significantly in August 2022 when compared with the previous month (-2%). On an average of July and August, however, it was somewhat above the second quarter (+¾%). This was due to a sharp increase in output in the finishing trades, where data are prone to revision. By contrast, output in the main construction sector fell markedly in both building construction and civil engineering. High construction prices, dampened household purchasing power and increased financing costs are squeezing demand for construction services. Orders received in the main construction sector in July (the latest month for which data are available) rose steeply on the previous quarter but they fell considerably short of the highs recorded in the final quarter of 2021 and first quarter of 2022. According to the ifo Institute, the reach of order books contracted slightly again in September. In addition, equipment utilisation in the main construction sector has been declining since March. There are thus mounting signs of a slowdown in construction overall.

Labour market

No increase in employment in August, outlook nevertheless robust

In seasonally adjusted terms, there was no further rise in employment in August, with growth already tailing off in the previous months. The total number of persons in work dropped by 4,000 on the month, although there were half a million more persons in employment than in August 2021. This is mainly due to the steep rise in employment subject to social security contributions which, however, also increased at a considerably slower pace recently. Short-time work played only a minor role in July (data are available up until then). This was undoubtedly partly due to the fact that some special arrangements for the use of economically induced short-time work over the course of the pandemic had expired at the end of June 2022. The employment outlook remains slightly positive, despite gloomier expectations for economic growth. Demand for labour is high in many sectors. There is therefore no reason to assume a significant deterioration in the labour market across the economy in the final quarter of 2022 and first quarter of 2023. However, the very tight situation, with many vacancies and low employment levels in enterprises, is likely to ease.

Only marginal increase in unemployment

Registered unemployment increased only marginally in September, following a considerable rise in the previous three months, mainly owing to the inclusion of Ukrainian refugees. In seasonally adjusted terms, the number of unemployed persons went up by 13,000 to 2.51 million. Rounding meant that the unemployment rate remained unchanged at 5.5%. The impact of Ukrainian refugees on unemployment was small in September as the inclusion of further refugees in the unemployment statistics roughly balanced out persons no longer counted among the unemployed. Persons not being included in the statistics due to participation in integration and language courses played a role in this. This also explains the significant further increase in total underemployment, as persons taking part in active labour market policy measures and integration measures are counted in that figure. According to the Federal Employment Agency, registered unemployment went up minimally in September, even without the refugee effect.[5] The IAB barometer shows a further rise in unemployment for the next few months, although the extent of this increase is likely to remain manageable.

5 See Statistics provided by the Federal Employment Agency (2022), p. 13.

Prices

Crude oil price up at times

The price of Brent crude oil initially came under pressure owing to the flagging global economy and was down by 8% in September compared with the previous month. Following the recent decision by OPEC and its partners to cut their production target by 2 million barrels per day from November, the price rose at times. Most recently, it fell back to US$89 per barrel. Crude oil futures were trading at significant discounts. European gas prices dropped considerably in recent weeks. This was probably largely due to persistently high liquefied gas imports, price and weather-related savings and already well-stocked European gas storage facilities. Futures contracts suggest significant price rises again in the fourth quarter of this year and first quarter of 2023.

Price increases at upstream stages still exceptionally high

The exceptionally high price increases seen in the past few months at the upstream stages of the economy continued. This was mainly due to sustained price pressures in the European energy markets. In comparison to the previous year, import prices rose by around 33% overall and prices of domestic products by around 46% in August. Domestic prices for electricity and gas tripled, for example. Even excluding energy, price growth remained in double-digit territory at both stages of the economy.

Double-digit inflation in September

With the launch of the €9 ticket for local public transport and the fuel rebate in June, high consumer price inflation weakened slightly for a time. Price growth already picked up pace again in July and August, however, even though both relief measures were still in place. After they had expired as of September, both public transport and fuel became significantly more expensive. This led to steep price increases for energy and services. Moreover, inflation in food and industrial goods gained momentum again. In September, the Harmonised Index of Consumer Prices (HICP) rose by a total of 10.9% on the year, compared with 8.8% in the previous month.[6] The last time double-digit inflation was measured in Germany was in 1951. Inflation is likely to remain in the double digits over the next few months, even if several new relief measures come into effect, such as the reduction of the VAT rate on gas and district heating from October. Inflation will not necessarily be impacted by the government paying gas bills in December. This will depend on how government subsidies are paid to households and thus on how they are reflected in the official price measurement.

Public finances[7]

Local government finances

Local governments end Q2 in surplus – very sharp rise in local business tax revenue

Local governments (core budgets and off-budget entities) closed the second quarter of this year with a surplus. At €3½ billion, it was €½ billion higher than in the second quarter of 2021. Revenue saw a steep rise of just under 9% (+€6½ billion). At 15% (+€4 billion), growth in tax revenue was considerably stronger still. After deducting shares accruing to other government levels, receipts from local business tax – a large revenue item – increased by as much as 25%. Transfers from state government grew by 3½% (+€1 billion). Revenue from fees rose by 11%, and was thus somewhat above its pre-pandemic level. In part, this reflects the fact that pandemic-related restrictions on fee-charging public institutions had come to an end.

Robust growth in expenditure

Total expenditure also grew robustly (+8%). One cost item, personnel expenditure, rose equally steeply. Once again, this was partly due to a special effect caused by a change in the booking of a civil servants' pension fund in Baden-Württemberg. Spending on social benefits grew by 5%. Owing to the increase in the

6 The rate according to the national consumer price index (CPI) was 10.0% in September, up from 7.9%.
7 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.

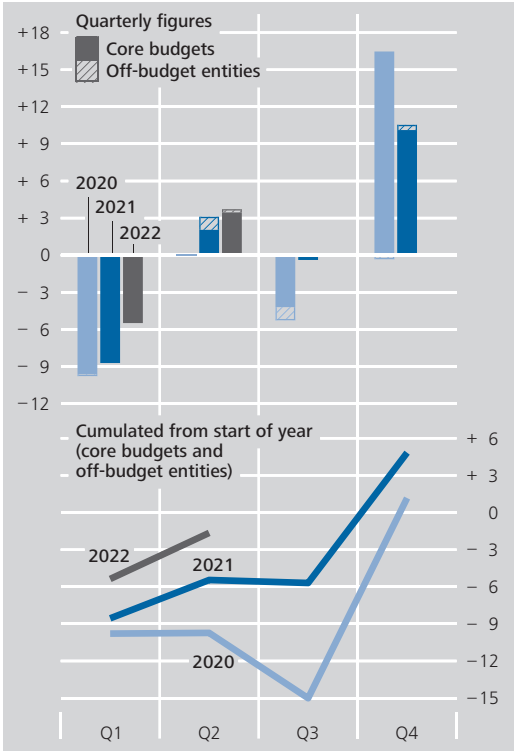
number of refugees, spending on benefits for asylum seekers more than doubled (a rise of just over €½ billion), and integration assistance likewise rose sharply. However, accommodation costs for recipients of unemployment benefit II and expenditure on social assistance for those in need of long-term care both fell. This clearly reflected the favourable labour market conditions and the expansion of long-term care insurance benefits. Other operating expenditure saw a particularly large increase (+11%, or +€2 billion). Fixed asset formation grew by 6% as a result of rising construction investment (+7%). The growth seen in construction investment and other operating expenditure was probably due, not least, to the sharp rise in prices.

Prospect of local governments posting surplus for year as a whole

Following the significant improvement recorded in the first half of the year (+€4 billion compared with 2021), a surplus is again likely to be recorded for the year as a whole (balance for 2021 as a whole: €4½ billion). In the second half of the year, however, inflation will probably increasingly make itself felt. At the same time, tax revenue is likely to weaken given the gloomier macroeconomic setting. It is therefore to be expected that local business tax will lose its momentum. The deterioration in the business situation of municipal energy supply companies could also have a negative impact on the balance. In previous years, these companies' profits had still often offset deficits recorded by local government facilities such as local public transport operators.

Local government fiscal balance

€ billion



Source: Federal Statistical Office.
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Securities markets

Bond market

High net issuance in the German bond market in August 2022

At €130.1 billion, gross issuance in the German bond market in August 2022 was down on July's figure (€148.7 billion). After deducting the significantly lower redemptions and taking account of changes in issuers' holdings of their own debt securities, net issuance of domestic debt securities came to €25.0 billion. The outstanding volume of foreign debt securities in Germany fell by €7.3 billion in the reporting month, which meant that the outstanding volume of debt instruments in the German market rose by €17.7 billion overall.

Net public sector issuance

During the reporting month, the public sector issued debt securities worth €20.3 billion net (following net redemptions of €17.0 billion in July). On balance, central government was the sole issuer of new securities (€23.5 billion), chiefly in the form of ten-year Federal bonds (Bunds: €6.1 billion) and two-year Federal Treasury notes (Schätze: €6.1 billion), as well as 30-year Federal bonds (Bunds: €4.8 billion) and five-year Federal notes (Bobls: €4.5 billion). State and local governments redeemed their own bonds worth €3.3 billion on balance.

Rise in credit institutions' capital market debt

Domestic credit institutions increased their capital market debt by €2.5 billion net in August, following net redemptions of €7.0 billion in July. On balance, growth was seen primarily in

Sales and purchases of debt securities

€ billion

Item	2021 Aug.	2022 July	2022 Aug.
Sales			
Domestic debt securities[1]	34.7	– 12.9	25.0
of which:			
Bank debt securities	6.9	– 7.0	2.5
Public debt securities	26.6	– 17.0	20.3
Foreign debt securities[2]	– 7.2	– 4.8	– 7.3
Purchases			
Residents	11.9	– 6.7	– 0.6
Credit institutions[3]	– 5.3	10.7	– 10.2
Deutsche Bundesbank	17.3	– 13.7	– 0.7
Other sectors[4]	– 0.1	– 3.7	10.3
of which:			
Domestic debt securities	1.7	– 0.2	10.1
Non-residents[2]	15.6	– 11.1	18.3
Total sales/purchases	27.5	– 17.8	17.7

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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the outstanding volume of mortgage Pfandbriefe (€3.2 billion), but also, to a lesser extent, in the outstanding volume of other bank debt securities (€0.6 billion). By contrast, public Pfandbriefe and debt securities issued by specialised credit institutions, which include, for example, public promotional banks, were redeemed in net terms (-€0.8 billion and -€0.4 billion, respectively).

Net issuance by enterprises

In August, domestic enterprises issued bonds with a net value of €2.2 billion, compared with €11.0 billion one month earlier. Other financial intermediaries were the chief issuers on balance.

Purchases of debt securities

Foreign investors, in particular, were major purchasers of bonds in August, acquiring German debt securities in the amount of €18.3 billion net. Domestic non-banks expanded their bond portfolios by €10.3 billion in net terms, concentrating mainly on domestic paper. By contrast, domestic credit institutions and the Bundesbank sold bonds worth €10.2 billion net and €0.7 billion net, respectively.

Equity market

Hardly any net issuance of German equities

In the reporting month, domestic enterprises placed new shares worth €0.1 billion in the German equity market. The volume of foreign equities in the German market fell by €1.9 billion during the same period. On balance, domestic non-banks were by far the main purchasers of shares (€0.7 billion). Domestic credit institutions added €0.2 billion to their holdings, while foreign investors reduced their equity exposure in Germany by €2.6 billion on balance.

Mutual funds

Minor inflows to mutual funds

German mutual funds recorded net inflows of €6.9 billion in August, compared with €2.8 billion in July. On balance, specialised funds reserved for institutional investors were the sole beneficiaries (€7.2 billion). Among the various asset classes, new shares were placed on the market primarily by mixed securities funds (€4.4 billion), as well as equity funds and open-end real estate funds (€1.7 billion and €1.5 billion, respectively). The outstanding volume of foreign mutual fund shares distributed in Germany increased by €0.4 billion during the month under review. On balance, solely domestic non-banks purchased mutual fund shares in August (€7.9 billion). The bulk of these were domestic mutual fund shares. Domestic credit institutions reduced their fund portfolios by €0.5 billion, while foreign investors were only marginally active in the German market.

Balance of payments

Current account surplus down

Germany's current account recorded a surplus of only €0.6 billion in August 2022, down €4.8 billion on the previous month's level. This was due to a decrease in the goods account sur-

plus. The deficit on invisible current transactions, which comprise services as well as primary and secondary income, changed only slightly.

Narrower surplus in goods account

In the reporting month, the surplus in the goods account contracted by €5.0 billion to €3.5 billion because receipts fell and expenditure rose sharply.

Higher deficit in services account almost offsets increases in primary and secondary income balances

The deficit on invisible current transactions declined slightly by €0.2 billion to €2.9 billion in August. The increases in the balances of primary and secondary income were almost offset by the expansion of the services account deficit by €1.6 billion to €8.8 billion. Services receipts were down overall, mainly due to lower receipts from charges for the use of intellectual property and other business services. In addition, expenditure rose, largely owing to higher expenditure on transport services and – as is typical for this time of year – on travel. By contrast, net receipts on primary income went up by €0.9 billion to €11.6 billion. Total receipts remained virtually unchanged, also because lower receipts from direct investment and higher receipts from portfolio investment broadly balanced each other out. Expenditure fell, however, with declining dividend payments to non-residents from portfolio investment contributing to this decrease. Moreover, the deficit on secondary income narrowed by €0.9 billion to €5.6 billion, chiefly linked to lower general government expenditure on current transfers relating to international cooperation.

Inflows in portfolio investment

In August 2022, the financial markets continued to be shaped by the environment of high inflation rates, with the economic outlook deteriorating at the same time. Germany's cross-border portfolio investment generated net capital imports of €24.9 billion (July: net capital exports of €5.4 billion). Foreign investors added German securities worth €15.6 billion net to their portfolios, purchasing bonds (€22.9 billion) whilst offloading money market paper (€4.6 billion) and shares (€2.6 billion). By contrast, domestic investors sold foreign secur-

Major items of the balance of payments

€ billion

Item	2021 Aug.	2022 July	2022 Aug.p
I. Current account	+ 17.0	+ 5.4	+ 0.6
1. Goods	+ 12.9	+ 8.6	+ 3.5
Receipts	103.6	127.3	125.2
Expenditure	90.7	118.8	121.7
Memo item:			
Foreign trade[1]	+ 11.6	+ 4.9	+ 0.6
Exports	104.5	127.6	126.7
Imports	93.0	122.7	126.1
2. Services	– 3.5	– 7.2	– 8.8
Receipts	27.0	31.9	30.9
Expenditure	30.6	39.1	39.8
3. Primary income	+ 11.9	+ 10.6	+ 11.6
Receipts	19.4	19.8	20.0
Expenditure	7.5	9.2	8.4
4. Secondary income	– 4.3	– 6.6	– 5.6
II. Capital account	+ 0.5	– 2.1	– 0.8
III. Financial account (increase: +)	+ 20.7	– 11.9	+ 30.3
1. Direct investment	+ 5.0	+ 14.1	+ 12.7
Domestic investment abroad	+ 18.8	+ 1.1	+ 52.5
Foreign investment in the reporting country	+ 13.8	– 12.9	+ 39.8
2. Portfolio investment	– 6.4	+ 5.4	– 24.9
Domestic investment in foreign securities	+ 8.5	– 9.2	– 9.3
Shares[2]	+ 7.1	– 4.9	– 2.4
Investment fund shares[3]	+ 8.6	+ 0.5	+ 0.4
Short-term debt securities[4]	+ 0.8	– 2.1	– 0.2
Long-term debt securities[5]	– 8.0	– 2.7	– 7.0
Foreign investment in domestic securities	+ 14.8	– 14.6	+ 15.6
Shares[2]	– 0.3	– 1.8	– 2.6
Investment fund shares	– 0.5	– 1.7	– 0.0
Short-term debt securities[4]	+ 11.0	– 5.9	– 4.6
Long-term debt securities[5]	+ 4.6	– 5.2	+ 22.9
3. Financial derivatives[6]	+ 3.5	+ 4.0	+ 1.4
4. Other investment[7]	– 12.7	– 34.9	+ 41.1
Monetary financial institutions[8]	– 3.3	+ 6.5	+ 2.0
of which: Short-term	+ 14.5	– 2.1	+ 3.1
Enterprises and households[9]	+ 17.6	– 5.7	– 5.9
General government	+ 3.4	+ 0.9	– 2.2
Bundesbank	– 30.4	– 36.6	+ 47.2
5. Reserve assets	+ 31.3	– 0.5	+ 0.1
IV. Errors and omissions[10]	+ 3.2	– 15.2	+ 30.5

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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ities worth €9.3 billion net. They parted with bonds (€7.0 billion), shares (€2.4 billion) and money market paper (€0.2 billion), whilst acquiring a small volume of mutual fund shares (€0.4 billion).

In August, transactions in financial derivatives recorded outflows of €1.4 billion (July: €4.0 billion).

Direct investment sees net capital exports

Direct investment recorded net capital exports of €12.7 billion in August (July: €14.1 billion). The main reason for this was that domestic companies stepped up their investment abroad by €52.5 billion, supplying their business units abroad with additional funds worth €43.7 billion via intra-group lending. In addition, they boosted their equity capital by €8.8 billion, primarily through reinvested earnings. Conversely, foreign enterprises increased their investment in Germany by €39.8 billion, issuing intra-group loans to the tune of €39.6 billion and raising their equity capital by €0.2 billion.

Net capital exports in other investment

Other statistically recorded investment – which comprises loans and trade credits (where these do not constitute direct investment), bank deposits and other investments – registered net capital exports amounting to €41.1 billion in August (following net capital imports of €34.9 billion in July). The Bundesbank's net external claims went up by €47.2 billion. This rise was chiefly attributable to the increase in TARGET2 claims (€78.9 billion). At the same time, however, the Bundesbank's external liabilities also grew, mainly driven by a rise in deposits of non-euro area residents at the Bundesbank. Monetary financial institutions (excluding the Bundesbank) recorded net capital exports (€2.0 billion). By contrast, the transactions by enterprises and households (€5.9 billion) and by general government (€2.2 billion) resulted in net capital imports.

Reserve assets

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

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Statistik der Bundesagentur für Arbeit (2022), Berichte: Blickpunkt Arbeitsmarkt – Monatsbericht zum Arbeits- und Ausbildungsmarkt, Nuremberg, September 2022.

State government finances in 2021: surplus and additional reserves from emergency borrowing

The budgets of the state governments and their local governments shaped up very well in the second year of the coronavirus pandemic. Altogether, they recorded a surplus of €5 billion in 2021 following a deficit of €32 billion in 2020. This favourable outcome was due not only to a sharp rise in tax revenue but also to the fact that the Federal Government assumed the bulk of pandemic-related burdens. In structural terms, the surplus was considerably higher still, as the structural balance excludes the unfavourable effects of the cyclical component, financial transactions and temporary coronavirus-related burdens.

More specifically, half of the federal states (including their off-budget entities and municipalities) reported a surplus in 2021. Rhineland-Palatinate, home to the main site of a vaccine manufacturer, came off particularly well. In structural terms, all state government budgets were at the very least balanced – even without temporary coronavirus-related burdens being factored out.

Within the framework of their respective debt brakes, state governments made use of emergency borrowing totalling €18 billion, despite the good state of their finances. Special calculations indicate that they needed only a small portion of this to close funding gaps in their core budgets and off-budget entities. They thus used most of this borrowing to top up reserves with which they can finance future budgets. These reserves may be part of the core budget or resources placed in special funds. Rhineland-Palatinate was the only federal state to have already repaid all the emergency loans it took out in 2020.

Going by budget documents and surveys, state governments held reserves of over €110 billion as at the end of 2021. These also include pension pots of almost €50 billion. Several federal states are planning to use reserves to close gaps in their budgets for some years to come. However, where the reserves to be used for this purpose have effectively been formed from emergency borrowing in connection with the pandemic, such an approach seems questionable.

As things stand, a large surplus is on the cards for the federal states this year, and most of them have sizeable reserves available should budget developments take a turn for the worse. Therefore, despite the difficult environment in which they are currently operating, further take-up of emergency loans at the state government level this year does not appear self-evident. Their very good starting position should enable the state governments to make a considerable contribution to the financial challenges. In any event, central government will assume the lion's share of expenditure stemming from the current energy crisis.

Individual federal states' finances still lack transparency. The opportunities offered by competition between the federal states risk remaining unused as long as data are difficult to compare. The diversity of rules in state-specific debt brakes also makes it harder to compare the structural fiscal positions of the federal states. In addition, important budgetary data are published with a major time lag in some cases. The Stability Council, in particular, remains tasked with making substantial progress with respect to transparency, comparability and timely publication.

Overview

Surpluses in second pandemic year and thus far further improvement in current year

State and local governments recorded a perceptible surplus in 2021. This was possible due to taxes growing sharply and central government assuming a fairly large proportion of pandemic-related burdens. Nevertheless, most federal states once again activated their debt brake escape clauses. Significant rises in surpluses have so far still been on the horizon for the current year.

Report structure and contents

This report builds on the corresponding analyses of the annual figures for state government finances in recent years. Government finance statistics are specially processed (see the box on pp. 15 f.) and cover the federal states and their municipalities. Particular focus is placed on key variables such as balance, debt and interest burden. The report presents the results for both the federal states as a whole and for individual federal states. A later section takes a closer look at the accounting for the state-specific debt brakes for 2021. This examines which federal states (non-city states excluding their municipalities) took out emergency loans and compares the extent to which the budgetary data indicate a need for this. The concluding remarks contextualise the results and point to shortcomings in the transparency and comparability of state government finances.

Budgetary figures for state governments (including local governments) as a whole

€ billion

Item	Item No	2020	2021
Fiscal balance	1	– 32.2	5.1
Financial transactions (net)	2	– 7.7	– 8.5
Settlement of payments under the state government financial equalisation scheme	3	0.7	0.4
Adjusted balance	4=1–2+3	– 23.9	14.0
Cyclical component	5	– 13.3	– 8.9
Coronavirus response measures[1]	6	– 7.8	– 9.1
Offsetting relief provided by central government funds[2]	6a	6.4	–
Partially adjusted structural balance	7=4–5–6a	– 17.0	22.8
Adjusted structural balance adjusted for temporary coronavirus response measures	8=4–5–6	– 2.8	31.9
Net interest burden	9	10.1	10.2
Adjusted structural primary balance	10=8+9	7.3	42.1

Sources: Federal Statistical Office, legislative texts and Bundesbank calculations. **1** Excluding financial transactions. **2** Central government funds to compensate for local governments' lower revenue from local business tax and lagged residual payments of consolidation assistance for 2019.

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Financial performance of state and local governments in 2021

Federal states as a whole: surplus despite temporary burdens

State and local governments recorded a surplus in their core budgets and off-budget entities in 2021, …

In 2021, state governments (including off-budget entities and local governments) recorded an unadjusted surplus of €5 billion (just over 0.1% of gross domestic product; see the adjacent table, item 1, and the chart on p. 16). State government core budgets, meanwhile, posted a deficit of €6 billion. On balance, they used the bulk of this deficit to finance the surplus of €6½ billion in their off-budget entities.[1] Local governments (core budgets and off-budget entities) contributed a surplus of €4½ billion.

… which was significantly higher still in structural terms

From a structural perspective, the surplus of state and local governments was significantly higher still, reaching €32 billion (see the adjacent table, items 2-8). To calculate the structural figure, the unadjusted balance is adjusted for various items that obscure the underlying financial situation. The following are deducted:

– burdens in the amount of €9 billion stemming from the unfavourable cyclical component (Bundesbank estimate);

– financial transactions of €8½ billion;

1 The more timely monthly cash statistics for core budgets still showed a surplus of €1 billion. Subsequent closing entries, such as allocations to off-budget entities, led to the aforementioned deficit.

Preparation of state government data and data gaps

The Bundesbank prepares the cash statistics for the purpose of presenting results for both the federal states as a whole and for individual state governments. The data prepared in this way form the basis for the analysis in the first part of the report and can be found in the tables on pp. 30-33:[1]

- The picture of the federal states' fiscal situation is supposed to be complete and comparable. Their off-budget entities and the local government level are therefore also included in addition to their core budgets. It then no longer matters for the results which of the entities assumes a given task and bears any resulting deficits. Furthermore, this makes non-city states and city states more easily comparable, as the latter include the local government level.

- Shifts in financial assets and temporary effects should not distort the underlying picture. For this reason, four adjustments are necessary. The first two of these four steps are implemented in a similar way by both central government and many state governments in their debt brakes.

  - First, financial transactions (shifts in financial assets such as loans granted) are disregarded.

  - Second, cyclical effects are deducted from the fiscal balance. In this report, the Bundesbank uses its own method to calculate the cyclical effects on the basis of its spring projection.

  - Third, the provisional settlement figures for the financial equalisation scheme and the supplementary central government transfers are additionally taken into account on an accruals basis.

  - Fourth, larger one-off effects are also generally factored out. That being said, none were recorded in the reporting year aside from the coronavirus burdens that were not reimbursed by central government. In individual federal states, however, there were gaps in the data on coronavirus burdens. Comparisons among federal states are therefore made on the basis of results that have not been adjusted for these burdens (partially adjusted structural balances).

Remaining weaknesses in the data pool

Despite the preparation of the data outlined above, the results and the underlying fiscal policy can, in some cases, only be interpreted to a limited extent.

- One problematic factor is that some state governments record data in a way that deviates from the intended methodology. This applies, for example, to coronavirus-related business aid from central government; in some state governments, this was recorded as other operating expenditure rather than as business transfers. This means that expenditure categories are no longer comparable between state governments. Although coronavirus-related business aid from central government was intended to be channelled through the state government budgets, it also partly affected the balance. This was the case where state governments had received the central government funds

1 For a more in-depth explanation of this approach, see Deutsche Bundesbank (2021a), pp. 17-19.

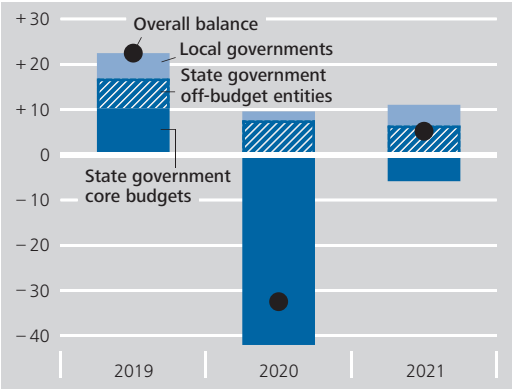
but had not yet disbursed them. As in previous years, capital transfers used to absorb losses do not always appear to have been correctly separated from acquisitions of participating interests. The latter only change the type of financial assets recorded, not the amount. In this analysis, however, the adjustment for financial transactions is carried out in line with budgetary reporting (as is the case for most debt brakes).

– The volume of public spending is unclear in some places. This is due, in particular, to transfer balances within the general government sector, which arise in cases where the bookings of the receiving and paying entities do not match. According to the cash statistics, state government off-budget entities received current transfers of €43 billion from the state government core budgets last year, whereas the core budgets only paid out €21 billion. For the consolidated result of core budgets and off-budget entities, the cash statistics also included core budget payments to off-budget entities from other items. On balance, these exceeded the revenue of the off-budget entities by €2 billion, meaning that it is not possible to adjust them. Where internal payments are service charges, the cash statistics do not consolidate these at all. Service costs are then double-counted. The distortion increases when services for government entities are outsourced from the core budget to off-budget entities.

– temporary burdens of around €9 billion arising from measures taken in response to the coronavirus pandemic[2] (Bundesbank estimate based on draft legislation and surveys). In particular, these include spending on coronavirus tests in schools and vaccination centre costs.

Fiscal balance of state governments (including local governments)*

€ billion



Sources: Federal Statistical Office and Bundesbank calculations.
* Government finance statistics.

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Dynamic tax developments

The excellent outturn and the notable improvement on the year were driven largely by strong tax revenue, which rose considerably and was markedly higher than the figure expected by the Working Party on Tax Revenue Estimates before the pandemic (in October 2019) for 2021.

Structural surplus potentially overstated by payment shifts

However, it is highly uncertain to what extent the highly favourable structural developments are in fact so favourable, as it became more difficult to distinguish temporary factors from structural ones in the coronavirus years. For example, it was only possible to estimate cyclical factors with a considerably higher degree of

2 The coronavirus-related burdens reported here are adjusted for coronavirus-related revenue from central government that has yet to be disbursed. See also the box on pp. 15 f.

uncertainty more recently.[3] Moreover, structural tax revenue in 2021 may be overstated by the fact that tax payments for which there had been a deferral in 2020 due to the pandemic were made in the meantime. Last but not least, it is impossible to fully gauge the financial ramifications of the coronavirus pandemic that went beyond recorded measures, e.g. non-payment of fees due to the pandemic-related closure of various facilities.

Comparing individual federal states

Balances vary considerably from state to state

Partially adjusted balances of some federal states still include temporary coronavirus measures

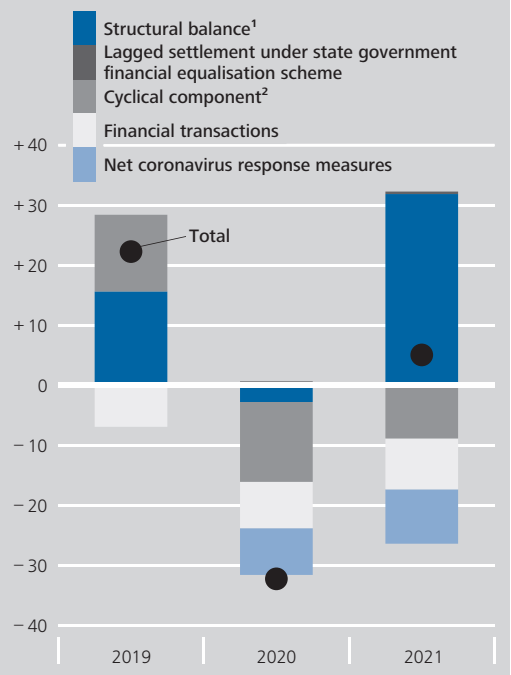
This article also presents the results and adjusted balances for each federal state. However, it was not possible to factor out temporary coronavirus response measures, as some federal states did not fully quantify these burdens on request (temporary coronavirus-related burdens of €110 per capita were deducted for the federal states as a whole). As a result, the structural balances reported for individual federal states still include the burdens arising from coronavirus response measures, i.e. their actual structural figures are more favourable than shown here. The state government balances can therefore only be labelled as partially adjusted. Nevertheless, they are much more informative than the unadjusted balances, as they exclude cyclical factors, delays in financial equalisation and financial transactions, some of which are sizeable. Detailed state-by-state results can be found in the table on pp. 30 f. To improve comparability between the federal states, figures are given below relative to the population size of each federal state.

Half of federal states recorded unadjusted surplus

In unadjusted terms, half of the federal states (including their municipalities) closed 2021 with a surplus. Rhineland-Palatinate recorded the highest surplus, at €710 per capita. The largest deficit (€570 per capita) was posted by Berlin.

Factors influencing fiscal balance of state governments (incl. local governments)*

€ billion



Sources: Federal Statistical Office and Bundesbank calculations. * Government finance statistics. **1** Calculated as a residual. **2** According to Bundesbank estimate of June 2022.

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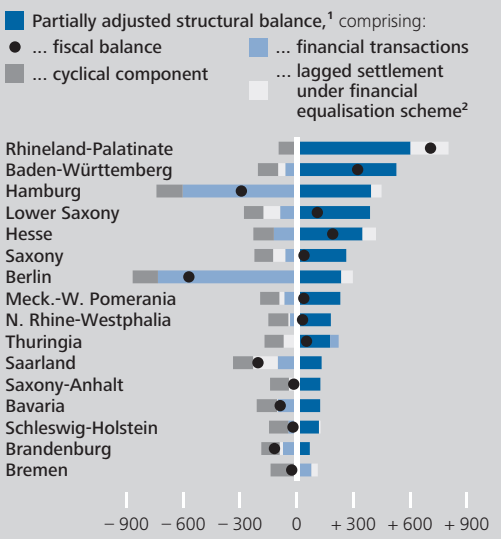
Partially adjusted balances vary widely

The partly adjusted balances of the federal states still varied considerably in 2021, but to a lesser extent. Looking at the federal states as a whole, the partially adjusted surplus amounted to €270 per capita. At €600, Rhineland-Palatinate again recorded the highest surplus (see the table on pp. 30 f., item 7). This state is home to the main site of a major coronavirus vaccine manufacturer. Corporation tax and local business tax, in particular, therefore in-

3 Uncertainty is also reflected in the rather high revision of the cyclical component in 2020. Cyclical factors in 2020 are no longer assessed as unfavourably as they were in last year's report (improvement of €6½ billion): macroeconomic developments are not as far below trend levels anymore due to calculations using new data and projections revising trend levels downwards. The cyclical component of 2021 could be revised in a similar way, especially if energy shortages have a greater dampening impact on macroeconomic developments than assumed in the 2022 spring projection.

Fiscal balances of individual state governments (including local governments) in 2021*

€ per capita



Sources: Federal Statistical Office and Bundesbank calculations. * Government finance statistics. **1** Fiscal balance adjusted for financial transactions, settlement of payments under the state government financial equalisation scheme, cyclical component and one-off effects. The only one-off effects were coronavirus response measures. However, the amounts could not be attributed to individual states. **2** Settlement of payments under the state government financial equalisation scheme.

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creased sharply.[4] At the lower end of the range, Bremen's budget was balanced. In the absence of budgetary recovery assistance from central government, Bremen as well as Saarland would have recorded large partially adjusted deficits (€590 and €270 per capita, respectively).

Tax revenue up sharply, with considerable differences between states despite financial equalisation

State government and local government tax revenue accounted for just over two-thirds of their total revenue, rising sharply overall. However, there are considerable differences in per capita revenue. For example, the spread among the non-city states reached €880, with the figure for Hesse (€5,900) being 18% higher than that of Saxony-Anhalt (see also the tables on pp. 30 f., item 19). There are multiple reasons for these differences. For example, the financial equalisation scheme (including supplementary central government grants that are dependent on financial capacity) does not fully even out varying levels of tax revenue. It should also be borne in mind that state and local governments sometimes have different tax rates and multipliers. Differences in revenue resulting from this remain hidden in the financial equalisation scheme. The way the scheme is set up,[5] the differences remain smaller and the ranking changes. In 2021, the spectrum ranged from just under 98% in Bremen to 108% in Bavaria.[6]

Higher central government transfers accompanied by higher expenditure, but outflow of funds not complete

In addition to strong tax revenue, almost all federal states received higher central government grants (see the table on pp. 32 f., item 21). This was due primarily to an increase in central government funds for transfers to enterprises in 2021 in response to the coronavirus pandemic. To the extent that state governments pass on these funds as intended, they do not ease the burden on state government budgets.[7] However, according to a survey of finance ministries, some federal states did not fully pay out these funds to enterprises prior to closing their books (see also the box on pp. 15 f.). In these states, the fiscal balance for 2021 thus improved to the tune of €3½ billion

4 Rhineland-Palatinate thus became a federal state with high financial capacity and was required to hand over VAT funds to recipient federal states under the financial equalisation scheme. This comparison is based on the provisional settlement of financial equalisation for 2021. Nevertheless, Rhineland-Palatinate's structural position remains overstated by around €200 per capita. The main reason for this is that the exceptional increases in local business tax in 2021 are not reflected in the financial equalisation scheme until 2022. For more on this and on further distortions, e.g. from the lagged allocation of corporation tax to other federal states that are home to operating sites, see Weiß et al. (2022).

5 In particular, adjusted for different tax rates, taking into account only three-quarters of municipalities' financial capacity and a higher weighting of the financial needs of city states; data available as at the date of provisional settlement. See Federal Ministry of Finance (2022).

6 Measured in terms of normalised tax revenue in relation to normalised average financial capacity.

7 According to central government data, transfers to enterprises in response to the coronavirus pandemic increased by €30 billion (around €360 per capita) to €48 billion in 2021. By contrast, central government's compensation payments for expected shortfalls in local business tax revenue, totalling €6 billion in 2020, were fully dispensed with.

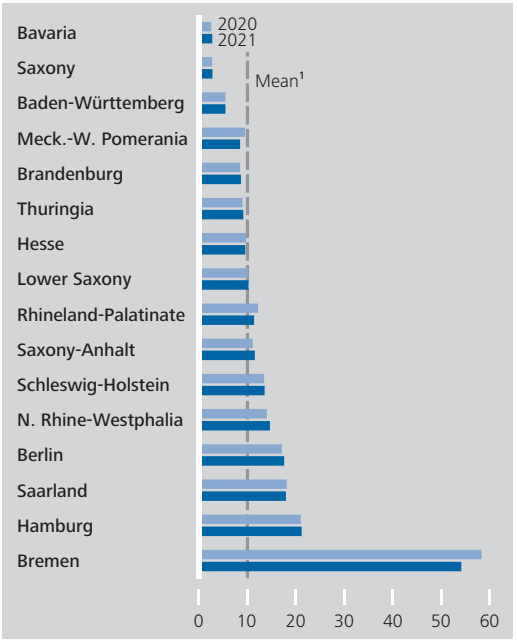
overall, while the result for the current year is correspondingly less favourable.[8]

Comparability of expenditure data among federal states severely restricted in some cases

Looking at the federal states as a whole, expenditure growth was mainly concentrated in the categories of other operating expenditure, personnel and current transfers to enterprises. The differences between individual federal states were considerable in some cases. These are only partly attributable to federal states focusing on different areas of expenditure; they are also due, amongst other things, to the fact that the federal states do not record business aid financed from central government funds in a uniform manner. It seems to be not least for this reason that payments to enterprises and other operating expenditure, for example, vary so widely from state to state. The central and state government budgetary planning system to be used throughout Germany is actually intended to prevent such discrepancies in recording methods. Action is needed to ensure that identical forms of expenditure are also identically categorised.

Debt of individual state governments (including local governments)*

€ thousand per capita



Sources: Federal Statistical Office and Bundesbank calculations. * Government finance statistics. Debt in the non-public and public sectors (non-consolidated). 1 Population-weighted mean of all state and local governments (2020: €9,983; 2021: €10,095).

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Transfers to households vary widely but are partly refunded by central government

Social benefits at the local government level are the prime component of transfers to households (see the table on pp. 30 f., item 14). However, they do not reflect the actual burdens at the state and local government level as central government partly offsets burdens, leaving state and local governments with correspondingly higher revenue. For example, central government pays just under three-quarters of the accommodation costs for recipients of unemployment benefit II. In the case of the basic allowance for the elderly and for persons with reduced earning capacity, it even reimburses the transfers in full.[9]

Debt and interest burden across the federal states

By far the highest debt in Bremen

On aggregate, the per capita debt of state and local governments stood at €10,000.[10] Bremen recorded by far the highest figure of just over €54,000, followed by Hamburg with slightly more than €21,000. At the other end of the scale, Bavaria and Saxony each reported around €2,800.

Debt growth despite surplus, but also significant declines in some federal states

Although the budgets as a whole recorded a surplus, aggregate debt rose by a total of €9 billion, or €110 per capita (see the table on pp. 32 f., item 23). The fiscal balance and change in debt diverged even more strongly in some federal states: among non-city states, per capita debt grew most strongly in North Rhine-

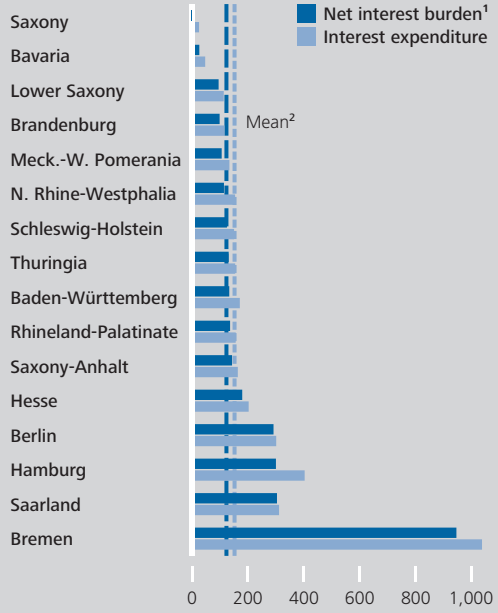
8 The situation in Bavaria is different. Undisbursed receipts from central government for business aid were evidently still included in the monthly cash statistics at the end of the year. Revenue from central government of €2 billion (€160 per capita) was taken off the books when they were closed, which appears to have prevented there being a legacy burden in the current year.

9 The notable increase in transfers in Saarland appears to be due to a misclassification of central government-provided coronavirus aid for businesses.

10 The figures presented here are taken from the debt statistics of the Federal Statistical Office. These cover debt to the non-public and public sectors. Debt as defined under budget law can additionally include unused borrowing authorisations, which are thus available as a reserve. The corresponding amount of borrowing on the capital market is then still outstanding.

Interest burden of individual state governments (including local governments) 2021*

€ per capita



Sources: Federal Statistical Office and Bundesbank calculations. * Government finance statistics. **1** Interest expenditure less interest income. **2** Population-weighted mean of all state and local governments.

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Westphalia (+€640). At the same time, however, the state closed the year with a moderate surplus. Although Bremen recorded a slight deficit, its per capita debt fell most sharply from a high level (-€4,180), with the state repaying loans related to interest rate derivatives. These derivatives hedge long-term interest rate conditions. As market interest rates rose, the negative market value of the derivatives fell below their end-2020 level, and Bremen required less cash collateral to finance them.[11]

Average rate of interest down in most federal states

The calculated average rate of interest on debt[12] continued to fall on the year for the federal states as a whole, but only slightly, declining to 1.5% (see the tables on pp. 30-33, item 24 in each case). Although federal states are able to borrow under similar conditions, there are significant differences between their average rates of interest. The reasons for this concern debt structure (e.g. varying fixation periods and times at which loans were taken out) and interest rate hedges. Differing premia on bond issues probably also contributed to the variance.[13] However, data on such factors are often lacking. Last year, the highest average rates of interest were calculated for Baden-Württemberg (3.1%). As in the previous year, Saxony recorded the lowest average rate of interest (0.9%). In Baden-Württemberg, average rates of interest rose particularly significantly, climbing by 0.5 percentage point. However, this is due solely to one debt instrument, which accumulated interest obligations for a decade that fell due last year.[14] The average rate of interest fell most sharply in Bavaria, where debt increased particularly strongly in relation to its starting point in 2020 without interest expenditure rising in the process.

Very diverse net interest burdens, due in part to interest rate hedges

Besides interest expenditure, some federal states also generate considerable interest income. Interest payments between core budgets and off-budget entities (transactions that the government finance statistics do not consolidate) often play a key role in this context. The net interest burden denotes the difference between interest expenditure and interest income and, in this respect, the total burden arising from debt instruments issued and purchased. The largest net interest burden (per capita) was recorded by the city states and Saarland (see the table on pp. 30 f., item 8). In Bremen, the net interest burden accounted for 8% of total expenditure, which was attributable to current payments for derivatives to a significant extent.[15] In Saarland, its share amounted to 4%. However, these particular states receive special support of €400 million per year in each case

11 See Deutsche Bundesbank (2021a), p. 24, for information on the impact of derivatives on debt and discrepancies between the fiscal balance and changes in debt levels.
12 Calculated from interest expenditure as reported in the government finance statistics and debt according to the debt statistics as at the end of the previous year.
13 Premia and discounts can also play a substantial role in comparisons of the calculated average rates of interest in the annual government finance statistics. Premia reduce interest expenditure, while discounts increase it. See Deutsche Bundesbank (2021b).
14 See Ministry of Finance for Baden-Württemberg (2022).
15 Unlike many other federal states, Bremen records expenditure on interest rate hedges separately, thus making its budget more transparent.

for their debt burdens, which are well above average. Deducting this budgetary recovery assistance provided by central government from their net interest burden, the ratios fall to 3% in Bremen and -1½% in Saarland. By way of comparison, Hesse, the non-city state with the highest ratio, recorded a net interest expenditure ratio of 2%. As in previous years, Saxony did not record a net burden.

State government debt brakes in 2021

Difficult to keep track of debt brakes

Comparison thwarted by differing rules

The federal states have designed their debt brakes very differently.[16] As a result, their accounts can be compared to a limited extent only. Furthermore, not all states have yet provided comprehensive accounts for 2021.[17] The overview presented in this article is therefore incomplete.

Problems gauging reserves held to meet debt brakes

In particular, the way in which reserves, special funds and budgetary authorisations carried forward to subsequent years interact with the debt brakes is confusing. Yet it is these very relationships that proved especially significant during the coronavirus crisis, as the federal states in some cases took out extensive emergency loans to top up reserves and special funds. In some instances, borrowing authorisations, too, are carried forward to future years (see also the box on p. 25).

Most states activated escape clauses in 2021

The coronavirus pandemic meant that state governments (much like central government) were in a difficult situation until well into last year. Against this backdrop, most state governments (as well as central government) once again activated their debt brake escape clauses. Berlin, Mecklenburg-West Pomerania, Rhineland-Palatinate and Thuringia, however, did not, planning instead to use reserves to balance their budgets. Rhineland-Palatinate was an exception, only reporting net cyclical borrowing in its budget plan.

Despite surpluses, take-up of emergency loans in excess of €18 billion

In response to the Bundesbank's requests for information or in budget documents, the federal states (non-city states excluding the local government level) reported taking out emergency loans in excess of €18 billion (€220 per capita) on balance overall in the 2021 financial year. At the same time, the federal states as an aggregate, including their off-budget entities, recorded a surplus (before adjustment). The following section gauges the extent to which the various states have used these emergency loans to build reserves.

Bundesbank calculation approximates structural annual financing needs

Bundesbank's own calculation of structural net borrowing requirements approximate to debt brake

In this report, the Bundesbank provides a calculation of the structural fiscal balances approximate to the debt brake for the federal states for analytical purposes. The results indicate the extent to which borrowing under the escape clause (or recourse to existing reserves) would have been necessary to finance a structural deficit incurred in 2021.

Fiscal balance of core budgets and off-budget entities …

Specifically, this back-of-the-envelope calculation is based uniformly on the balance of state governments' core budgets and off-budget entities, even though some states do not include off-budget entities in their debt brakes. This ensures that the actual budgetary situation is not obscured by, for instance, core budgets prefinancing off-budget entities. In addition, focusing on the balance takes into account the fundamental principle of budgets operating on an annual basis, because the balance only covers cash inflows and outflows for the period

16 For an overview, see Deutsche Bundesbank (2021a), pp. 40-42.
17 Central government, on the other hand, publishes data in a timely manner: provisional figures are available as early as 1 March of the following year, with the final figures being published on 1 September.

Federal states' financing needs according to Bundesbank calculations and emergency loans taken out in 2021

€ per capita

Federal state	1 Fiscal balance, total[1]	1a of which: core budgets	1b of which: off-budget entities	2 Financial transactions[2]	3 Cyclical component[2]	4 Structural financing needs[3] = -1+2+3	5 Emergency borrowing[4]	6 Amount estimated for building reserves[5] = 5-4	7 Repayment volume from outstanding emergency loans taken out in 2020 and 2021[2]	8 Estimated annual repayment burden from emergency loans[6]
Baden-Württemberg	132	72	60	2	– 144	– 274	85	359	733	29
Bavaria	– 104	– 104	– 0	–	–	104	226	122	774	39
Brandenburg	– 248	– 357	108	– 24	233	457	778	320	1,021	34
Hesse	149	331	– 182	1	309	161	129	– 32	567	19
Meck.-W. Pomerania	10	296	– 286	–	–	– 10	–	–	1,769	88
Lower Saxony	163	– 179	342	– 0	91	– 72	287	358	838	34
N. Rhine-Westphalia	11	– 271	283	–	–	– 11	256	268	883	18
Rhineland-Palatinate	446	560	– 114	10	309	– 127	– 41	–	–	–
Saarland	6	82	– 76	0	206	200	345	145	610	20
Saxony	– 44	– 1	– 43	–	–	44	155	110	589	98
Saxony-Anhalt	– 1	– 1,132	1,130	–	– 24	– 23	1,024	1,047	1,061	46
Schleswig-Holstein	21	– 1	22	– 112	151	19	– 50	–	1,765	46
Thuringia	– 186	– 122	– 64	–	–	186	–	–	329	41
Berlin	– 571	– 33	– 537	– 132	– 208	231	–	–	1,992	74
Bremen	– 29	– 181	153	24	600	652	1,475	823	1,475	49
Hamburg	– 294	– 27	– 266	– 28	260	525	494	– 31	726	36

1 Source: Federal Statistical Office, quarterly results including phasing-out period. **2** Source: Federal states' finance ministries, unless otherwise stated. **3** Without adjustment for one-off effects, i.e. including coronavirus response measures, and excluding the provisional settlement of payments under the state government financial equalisation scheme. **4** Emergency loans supplemented by borrowing by or for coronavirus special funds if applicable. A positive value indicates emergency borrowing in 2021. A negative value indicates net repayment. **5** Value given only for positive borrowing. **6** Bundesbank calculations based on repayment deadlines as reported by federal states.

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in question and is therefore not influenced by the fact that funds have been withdrawn from or added to reserves. By contrast, changes in reserves do have an impact on net borrowing in the budget (the target variable underlying most debt brakes): it falls if existing reserves are used and rises when reserves are formed.

… adjusted according to state-specific rules

In line with the rules for all debt brakes, the local government level is included for city states only. Cyclical effects and financial transactions have also been adjusted in accordance with state-specific rules based on the data provided by the federal states. The calculations thus indicate which emergency loans would have been necessary to cover the financing needs of the federal states and their off-budget entities, following state-specific adjustment rules.

Deviation from emergency borrowing indicates change in reserves

This calculation of structural financing requirements approximate to the debt brake is then compared with the emergency borrowing reported by the federal states. The difference indicates the extent to which reserves were either formed from emergency loans or used to limit the scope of emergency borrowing. If, for example, a state tops up reserves, the emergency loan taken out is higher than the balance calculated by the Bundesbank here.

Calculations point to high levels of reserve formation in individual federal states

Five states repaid emergency loans or did not take out new ones, …

Five states concluded 2021 without new emergency loans on balance. Rhineland-Palatinate deserves particular mention here, as it repaid all of its emergency loans taken out in the previous year. While Schleswig-Holstein repaid somewhat more emergency loans per capita than Rhineland-Palatinate, this was only a small fraction of the very large amount that the state had taken out in 2020. According to its longer-term financial forecast, the state intends to use the remaining reserves by the end of the dec-

ade. Berlin, Mecklenburg-West Pomerania and Thuringia left their respective stocks of emergency loans unchanged. Thuringia and Berlin used previously formed reserves to finance their deficit.

… three remained significantly below the average of €220 per capita …

In total, state governments took out new emergency loans in excess of €220 per capita. Baden-Württemberg, Hesse and Saxony remained well below this figure. In Baden-Württemberg, however, the favourable structural balance (calculated with a considerable cyclical burden)[18] would have enabled it to repay a significant amount of its emergency loans. Instead, it increased its reserves using new emergency borrowing and at the expense of its control account. Meanwhile, Hesse recorded a structural deficit. In this case, the unadjusted surplus achieved was not sufficient to offset the high level of cyclical relief calculated on a state-specific basis. The calculation suggests that, on balance, Hesse used reserves to limit new debt resulting from the pandemic. In Saxony, transfers to the pension fund caused its deficit to be lower than its take-up of emergency borrowing. In making relatively high annual transfers to the pension fund, the state is complying with a requirement set out in its constitution.

… and eight surpassed the average – by a large margin in some cases – despite no apparent financing requirements of this magnitude

Emergency borrowing stood above the average of €220 per capita – in some cases only slightly so – in eight federal states. Bavaria, North Rhine-Westphalia, Lower Saxony, Saarland and Hamburg (in ascending order) recorded up to €500. Bavaria, Hamburg and Saarland had structural financing needs. In Bavaria and Saarland, however, these were considerably lower than the emergency loans they took out.[19] The federal states of Bremen, Saxony-Anhalt and Brandenburg reported even higher new emer-

18 Baden-Württemberg recorded the second highest actual cyclical burden per capita (after Berlin) although, ex post, it was around €100 per capita lower than budgeted. In view of this, only a correspondingly smaller level of net borrowing would have been permitted. However, the state recorded net borrowing on the basis of the higher planned cyclical burden. The difference was debited to the control account.
19 In Saarland, emergency borrowing was recorded by a special fund. The manner in which the core budget was settled remains unclear.

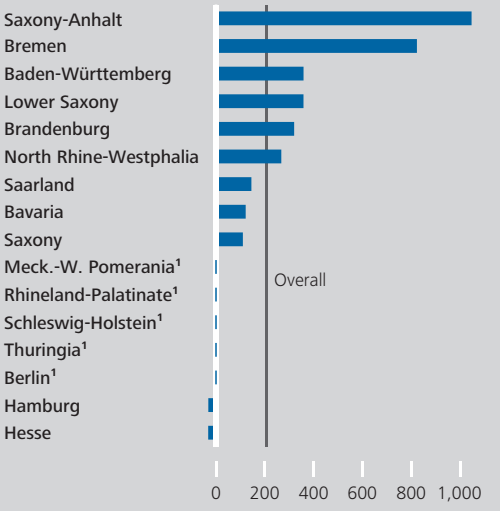
Federal states' emergency net borrowing and estimated financing needs in 2021

€ per capita

Sources: Federal Statistical Office, data from federal states' finance ministries and Bundesbank calculations. **1** Emergency borrowing under state-specific debt brake as specified in federal states' data, supplemented by further non-cyclical borrowing by or for coronavirus special funds if applicable. **2** Fiscal balance of core budgets and off-budget entities according to government finance statistics, adjusted for financial transactions and cyclical effects according to federal states' specifications.
Deutsche Bundesbank

Difference between federal states' emergency net borrowing* and estimated financing needs** in 2021

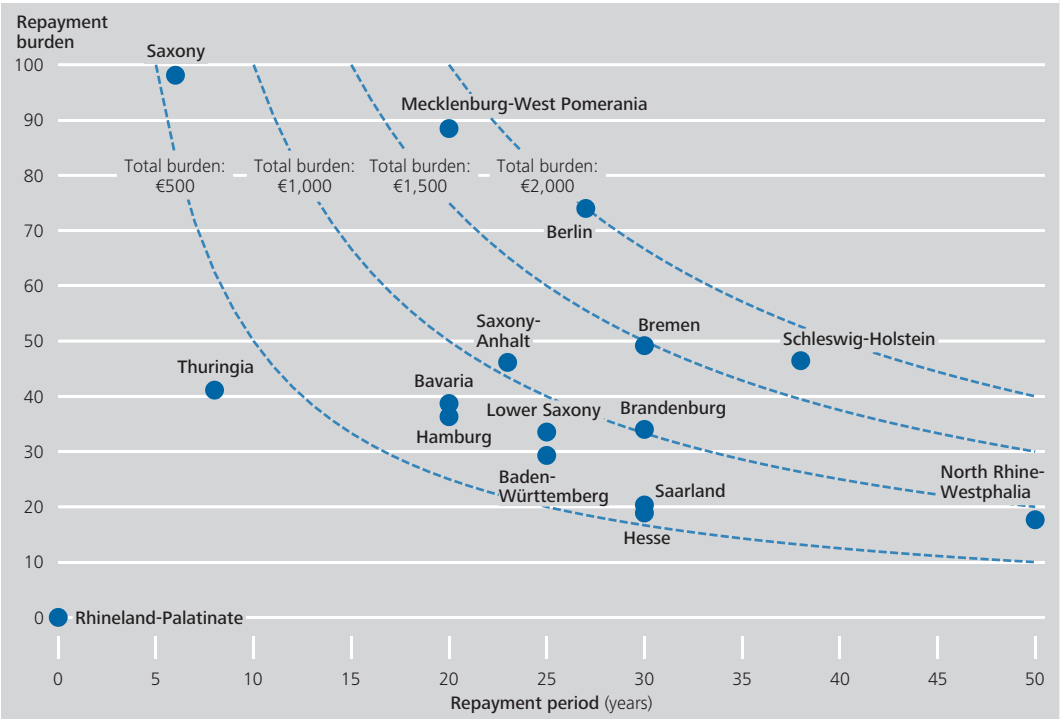
€ per capita



Sources: Federal Statistical Office, data from federal states' finance ministries and Bundesbank calculations. * Emergency borrowing under state-specific debt brake as specified in federal states' data, supplemented by further non-cyclical borrowing by or for coronavirus special funds if applicable. ** Fiscal balance of core budgets and off-budget entities according to government finance statistics, adjusted for financial transactions and cyclical effects according to federal states' specifications. **1** No data, as no emergency loans were taken out in 2021.
Deutsche Bundesbank

Future average annual repayment burden from emergency loans taken out in 2020 and 2021

€ per capita



Sources: Federal states' finance ministries and Bundesbank calculations.
Deutsche Bundesbank

gency loans (above €500 per capita). According to the back-of-the-envelope calculation, these states, too, used the emergency loans to build up reserves – to a large extent in some cases.

Limit emergency credit authorisations to crisis-related burdens

However, using emergency loans to build up reserves for the future seems questionable. It makes budgets less transparent and undermines the principle of annuity. Using reserves at a later date to finance expenditure not related to the crisis would – at the very least – be incompatible with the intention of the debt brake.[20] Instead, in a better-than-anticipated financial situation, it would stand to reason that fewer emergency loans be taken out or that existing ones be repaid. Should the situation flare up again in the following years, it would then be up to the state parliaments to declare a new emergency. This would need to be justified by the developments at that time. New, targeted emergency borrowing would then be approved as appropriate. At the same time, the choice of specific crisis management measures would need thorough justification.

Repayments

At end-2021, emergency loans of €71 billion were pending

The debt brakes require the federal states to draw up repayment schedules for the emergency loans they take out. At the end of 2021, the federal states reported a total volume with pending repayment of €71 billion (€850 per capita). Some states are planning to take out additional emergency loans this year as well. On the other hand, sizeable reserves are available (see also the box on p. 25) with which the federal states could repay emergency loans. If they were to make use of these, repayments would not burden their budgets. The repayment burdens that have accumulated so far

20 See also Deutsche Bundesbank (2021c). The requirements of the Constitutional Court of Hesse governing the justification of emergency loans from the judgement of 27 October 2021 also indicate legal problems.

State government reserves as at the end of 2021

There is no complete overview of the state government reserves. Even using the budget accounts for 2020, which are now available, it would only be possible to compile such an overview with a great deal of effort. The number of reserve pots is too large. Although the use of such funds is restricted by law, it stands to reason that they could be mobilised, if necessary, for other purposes – possibly via legislative changes. Gathering data on reserve stocks is important in order to better gauge the state of state government finances. These data are therefore significant, not least for Germany's central fiscal surveillance body, the Stability Council. Consequently, it is vital for the Stability Council to ensure the availability of better, clearer data.

For this Monthly Report, the state governments were asked about their reserve stocks as at the end of 2021. They provided more detailed information on stocks in pre-financed special funds and reserves. In addition to these, other reserves may also exist. For example, some state governments are incurring budget liabilities (which count towards the debt brake) and, at the same time, carrying forward expenditure appropriations funded by these liabilities (residual expenditure) to later years. In Bavaria's 2021 budget accounts, for example, these amounted to €14 billion (including residual expenditure connected to the pandemic). In Baden-Württemberg's 2020 budget accounts, they came to just under €7 billion. In addition, there is scope for expenditure of €4 billion stemming from unused borrowing authorisations from previous years. In the survey, however, this stock was not reported as reserves.

The state governments reported stocks of around €110 billion in reserves and special funds. The stocks listed below include both new reserves resulting from the coronavirus crisis and older reserves:

- The reported general reserves increased somewhat, reaching €33 billion by the end of 2021. The general reserves per capita are particularly high in Bremen and Berlin.

- The cumulative surpluses from 2020 and 2021 created reserves of €12 billion in coronavirus special funds. Hesse dissolved its special fund with reserves of just under €1 billion following a ruling by the state's constitutional court. The per capita increase in Saxony-Anhalt was particularly large. This state formed its coronavirus special fund via borrowing in the core budget at the end of 2021.

- Reserves in pre-financed off-budget entities for investment purposes fell by just under one-third to €7 billion. Transfers to other reserve pots appear to have contributed to this decline.

- Civil servant pensions place a considerable burden on state government budgets, especially in the western German states. State governments provisioned the largest amounts overall for these costs. The reported stock rose significantly, climbing by one-tenth to €49 billion. At €2,340 per capita, Saxony has by far the highest provisions in relation to the size of its population. Other state governments have stopped filling up such stocks in recent years and – as in the case of Saarland and Bremen, for example – are already drawing markedly on these reserves.

The other reserves reported by the state governments come to €7 billion. The bulk of this total was attributable to a collective item reported by Schleswig-Holstein, which, as evidenced by the 2020 budget accounts, largely constituted provisions for pandemic-related budgetary burdens.

vary considerably. Rhineland-Palatinate has already repaid its emergency loans in full. By contrast, the total repayment burden stemming from emergency borrowing is particularly high in Berlin (at around €1,990 per capita),[21] Mecklenburg-West Pomerania and Schleswig-Holstein (at around €1,750 per capita in each case). The repayment deadlines are also very different: the longest deadlines are in North Rhine-Westphalia, at up to 50 years.

Concluding remarks

Use of emergency borrowing and outlook

Do not undermine debt brakes with reserves financed by emergency borrowing

The debt brakes allow higher loans to be taken out if required in an emergency. However, there is a risk of excessive recourse to the escape clauses undermining the debt brakes. Emergency borrowing in connection with the coronavirus crisis should therefore only be used for measures that are necessary to combat this specific crisis. This also applies to the use of reserves built up from emergency loans. Furthermore, the fundamental principle of budgets operating on an annual basis implies that emergency borrowing authorisations should be for a specific financial year. An improvement in budgetary developments can mean that emergency loans are no longer needed. In that case, it would not make sense to set these borrowing authorisations aside for later use. In the spirit of the debt brake, then, there is much to be said for the states promptly liquidating reserves that they have ultimately built up using emergency loans justified by the coronavirus pandemic. This would prevent inappropriate use of funds and reduce the subsequent repayment burden.

Very favourable developments in state government finances so far this year – difficult to justify emergency borrowing

State government finances have so far remained in good shape this year. To date, there are signs of a sharp rise in unadjusted surpluses. This is due to very high tax revenue, which is considerably higher than was forecast in the last pre-crisis tax estimate for 2022. Another reason for the surpluses is that central government bears most of the non-tax burdens associated with the pandemic and the war in Ukraine. This is reflected not least in the very different budgetary positions of central government and the state governments. More specifically, central government is likely to still record a large structural deficit in 2022. By contrast, the structural state government budget surplus could even be higher than before the coronavirus crisis. Based on their favourable budgetary situation and sizeable reserves, it does not appear self-evident that state governments will need to take out emergency loans again this year.[22]

Outlook for 2023 extremely uncertain, but good starting position creates resilience

The future outlook is fraught with uncertainty as a result of the war in Ukraine and the associated energy crisis. Real growth is weakening, but price dynamics are increasing government revenue. Overall, state governments will enter next year with a good structural starting position. Central government is assuming the bulk of burdens resulting from the fallout of the Ukraine war, such as the energy crisis. The good financial situation should enable the federal states to make a considerable contribution to the current financial challenges. The new tax estimate at the end of October will provide an updated basis for budget planning.

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21 The high repayment burden in Berlin is due to the fact that the emergency loans taken out there in 2020 were also for cyclical burdens. The latter amounted to €620 per capita.

22 Saarland is pursuing its own course. It receives extensive budgetary recovery assistance from central government, not least to help shoulder its very high debt. In order to cope with elevated transformation burdens, partly as a result of the Ukraine war, Saarland is planning to launch a credit-financed special fund of €3 billion (just over €3,000 per capita and thus, for example, higher than Bavaria's total per capita debt), for a term of one decade. The funds are intended to finance the restructuring of industrial sites, but also to finance energy efficiency improvements in state-owned buildings and investment in universities. The projects have yet to be outlined in detail. To a large extent, however, they relate to the state's normal tasks and do not appear especially linked to an emergency situation caused by the war in Ukraine. Hence, such extensive additional borrowing is inconsistent with the intention of the escape clause and is even less in keeping with central government's budgetary recovery assistance.

Cyclical adjustment should be reviewed

States use different cyclical adjustment procedures

Cyclical components are calculated differently by each federal state and can vary widely. For example, despite the sharp economic downturn, the tax level procedures for 2020 identified almost no negative cyclical components. These procedures, in particular, require high reserves or safety margins. If these reserves or margins are depleted at the start of a downturn, it is no longer possible to maintain a steady budget under the regular debt brake. Hamburg's tax trend procedure should actually have done better here. Yet, in 2020, calculations using this procedure identified considerable cyclical relief.[23]

Simultaneous cyclical strains and relief across Germany economically unconvincing

The impact of cyclical effects on state government finances (see the table on p. 22, column 3) continued to range from high relief (for example, in Bremen, at €600 per capita) to persistently large burdens (in Berlin, for instance, at €210 per capita) in the 2021 reporting year. Given the state government financial equalisation scheme and the similarity of economic developments across Germany, this is difficult to comprehend and economically unconvincing. Where cyclical components are so different, the structural key figures of the states' debt brakes cannot be compared either. To ensure that the comparison across states is meaningful, alternative calculations, such as those presented in the first part of this report on financial results, are therefore required. The tables agreed by the Stability Council for debt brake accounting for all state governments are not suitable for this purpose,[24] as they are not sufficiently harmonised.

Bundesbank proposal: supplement cyclical adjustment with error component

Initial experience with cyclical adjustment at the central and state government levels suggests that most procedures should be revised. It seems expedient to look into harmonising the various cyclical adjustment procedures practised by state governments. The Bundesbank has presented a proposal to reform central government's cyclical adjustment procedure: namely, introducing an estimation error component, which could stabilise budgetary policy.[25] This would benefit state government finances, in particular, where expenditure volumes are more rigid than at the central government level. The procedure would therefore also be closer to a tax trend procedure, such as the one used by Rhineland-Palatinate.

Essential to enhance dataset

Stability Council should ensure greater transparency of states' financial situation and budgetary plans

The Stability Council is Germany's central institution for fiscal surveillance. Budgetary surveillance would benefit from the publication of an informative set of data.[26] Even in less uncertain times, it is very difficult to obtain an overview of the need or scope for action in the individual federal states. Conducting even a retrospective analysis of fiscal developments, structural budgetary positions, reserve stocks and repayment obligations is immensely challenging. In order to be able to monitor budgets effectively, meaningful data on respective state government budget outturns and budgetary planning as well as on the need for action are required. A major step in the right direction would be for each state to provide clear information showing how each new tax estimate affects its budget. In a similar vein, regular updates could be made to show what state-specific budgetary effects are caused by changes in tax law enacted in the meantime and what cyclical components arise as a result of a new macroeconomic projection by the Federal Government. Available reserves would have to be clearly presented. This should not just apply to the current budget at any given time, but also to plans for the following years.

23 This was due to the fact that, because of its commercial double-entry bookkeeping, Hamburg released extensive provisions for tax repayments with an effect on the recorded cyclical effects.
24 See Deutsche Bundesbank (2019).
25 See Deutsche Bundesbank (2022).
26 See also Deutsche Bundesbank (2019) and Independent Advisory Board to the Stability Council (2019).

Make better use of benefits of federalism

Generally speaking, the benefits of the federal system should be put to better use. It would be expedient to present the budget outturns of and public services rendered by the individual federal states on the basis of a robust set of data to aid comparability between the states.

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The tables accompanying this article are printed on pp. 30 ff.

Budgetary figures for state governments (including local governments) in 2021*

Item	BW	BY	BB	HE	MV	NI	NW	RP	SL
Derivation of partially adjusted structural balances	€ per inhabitant								
Fiscal balance (1)	323	– 87	– 117	191	38	109	31	708	– 205
Memo item: € million	3,584	– 1,146	– 297	1,198	61	876	556	2,904	– 201
	.	.	.	.	.	.	.	.	.
Financial transactions (net) (2)	– 60	– 100	– 72	– 121	– 65	– 87	– 35	2	– 100
Settlement of payments under the state government financial equalisation scheme (3)	38	4	18	– 71	26	89	9	– 200	130
Adjusted balance (4)=(1)–(2)+(3)	421	17	– 28	240	129	285	75	506	26
Cyclical component[1] (5)	– 107	– 107	– 97	– 108	– 102	– 103	– 106	– 95	– 106
One-off effects (6)	0	0	0	0	0	0	0	0	0
Partially adjusted structural balance (7)=(4)–(5)–(6)	528	124	70	348	231	388	181	601	132
Memo item: Coronavirus response measures	.	.	.	.	.	.	.	.	.
Adjusted structural balance adjusted for temporary coronavirus response measures	.	.	.	.	.	.	.	.	.
Net interest burden[2] (8)	133	26	99	179	106	95	114	136	304
Partially adjusted structural primary balance (9)=(7)+(8)	661	150	168	528	337	483	295	737	436
Memo item: Adjusted structural balance adjusted for temporary coronavirus response measures	.	.	.	.	.	.	.	.	.
Expenditure, revenue and debt	€ per inhabitant								
Total expenditure (10)	7,486	8,115	8,048	8,622	8,021	7,353	8,260	7,152	7,985
of which:									
Personnel expenditure[3] (11)	3,070	2,949	2,964	3,209	2,755	2,956	2,999	3,035	3,169
Expenditure on current staff (11a)	2,305	2,221	2,530	2,488	2,320	2,240	2,244	2,264	2,337
Civil service pension benefits[4] (11b)	765	728	433	721	435	716	755	771	832
Other operating expenditure (12)	1,307	1,390	1,537	1,751	1,354	1,299	2,179	1,461	1,587
Interest expenditure (13)	171	47	116	202	134	113	154	156	311
Transfers to households (14)	728	862	902	1,070	902	1,089	1,155	891	1,032
Current transfers to enterprises (15)	799	340	647	767	493	243	227	171	535
Fixed asset formation (16)	730	957	564	572	849	570	495	549	432
Adjusted total expenditure[5] (17)	7,338	7,945	7,708	8,366	7,893	7,199	8,081	7,122	7,872
Less interest expenditure (17a)	7,167	7,898	7,592	8,164	7,760	7,086	7,927	6,966	7,561
Less interest expenditure and fees (17b)	6,697	7,411	6,931	7,378	7,289	6,588	6,966	6,447	7,151
Total revenue (18)	7,808	8,028	7,929	8,812	8,058	7,462	8,291	7,860	7,928
of which:									
Tax revenue[6] (19)	5,515	5,688	5,125	5,904	5,100	5,248	5,472	5,489	5,244
Fees (20)	470	487	661	785	471	497	961	519	409
Transfers from central government[7] (21)	938	939	1,008	1,045	1,346	900	963	803	1,496
Adjusted total revenue[5] (22)	7,865	8,069	7,775	8,714	8,124	7,587	8,262	7,723	8,151
Less fees (22a)	7,395	7,582	7,114	7,929	7,654	7,090	7,301	7,204	7,742
Debt at year-end (23)	5,508	2,782	8,702	9,585	8,526	10,250	14,677	11,414	17,971
Calculated average rate of interest (%)[8] (24)	3.11	1.83	1.36	2.07	1.40	1.11	1.10	1.28	1.71
Tax rates and multipliers									
Real estate acquisition tax (%) (25)	5.0	3.5	6.5	6.0	6.0	5.0	6.5	5.0	6.5
Real estate tax B (%)[9] (26)	404	396	412	503	434	443	579	412	469
Local business tax (%)[9] (27)	370	377	322	411	388	407	448	395	445
Other figures									
Staff (FTEs per 1,000 inhabitants)[10] (28)	35.3	32.2	36.5	35.8	31.9	33.7	33.9	34.1	33.3
Recipients of pension benefits (per 1,000 inhabitants)[11] (29)	14.5	13.5	5.9	14.8	5.4	14.7	14.6	14.4	17.7
A 13 annual gross civil servant pay (in €1,000)[12] (30)	67.5	70.7	67.1	65.7	66.7	67.1	65.5	67.9	65.4

Sources: Federal Statistical Office, Federal Ministry of Finance and Bundesbank calculations. * Core budgets and off-budget entities. Abbreviations: BW – Baden-Württemberg, BY – Bavaria, BB – Brandenburg, HE – Hesse, MV – Mecklenburg-West Pomerania, NI – Lower Saxony, NW – North Rhine-Westphalia, RP – Rhineland-Palatinate, SL – Saarland, SN – Saxony, ST – Saxony-Anhalt, SH – Schleswig-Holstein, TH – Thuringia, BE – Berlin, HB – Bremen, HH – Hamburg. **1** Data pursuant to the Bundesbank's cyclical adjustment procedure based on figures from the spring 2022 macroeconomic forecast. **2** Interest expenditure less interest income. **3** Including refunds to central government for legacy claims for pension benefits in eastern Germany (under the Entitlement Transfer Act *(Anspruchs- und Anwartschaftsüberführungsgesetz* – AAÜG)). **4** Including healthcare subsidies and AAÜG payments. **5** Excluding financial transactions. Payments under the state government financial equalisation scheme are settled on the revenue side. **6** Taxes and compensation for motor vehicle tax; state government financial equalisation

SN	ST	SH	TH	BE	HB	HH	Total	Total	Item
							€ per inhabitant	€ million	**Derivation of partially adjusted structural balances**
39	− 15	− 20	52	− 570	− 26	− 293	61	.	Fiscal balance (1)
157	− 33	− 57	110	− 2,090	− 18	− 541	.	5,063	Memo item: € million
.	.	.	.	.	.	.	.	− 8,477	
− 60	− 2	− 44	45	− 734	78	− 603	− 102	414	Financial transactions (net) (2)
64	39	− 9	69	− 61	− 33	− 55	5	.	Settlement of payments under the state government financial equalisation scheme (3)
163	26	16	76	102	− 138	255	168	13,955	Adjusted balance (4)=(1)–(2)+(3)
− 99	− 100	− 102	− 101	− 134	− 138	− 138	− 107	− 8,854	Cyclical component[1] (5)
0	0	0	0	0	0	0	0	0	One-off effects (6)
262	125	118	177	236	0	394	274	22,809	Partially adjusted structural balance (7)=(4)–(5)–(6)
.	.	.	.	.	.	.	− 109	− 9,055	Memo item: Coronavirus response measures
.	.	.	.	.	.	.	383	31,864	Adjusted structural balance adjusted for temporary coronavirus response measures
− 2	143	125	131	291	945	300	123	10,236	Net interest burden[2] (8)
261	268	243	308	527	945	694	398	33,045	Partially adjusted structural primary balance (9)=(7)+(8)
.	.	.	.	.	.	.	506	42,100	Memo item: Adjusted structural balance adjusted for temporary coronavirus response measures
							€ per inhabitant		**Expenditure, revenue and debt**
7,473	7,822	7,979	7,406	11,101	12,061	13,323	8,178	.	Total expenditure (10)
									of which:
2,908	2,956	2,797	2,891	3,578	3,904	3,977	3,049	.	Personnel expenditure[3] (11)
2,530	2,511	2,110	2,453	2,784	2,911	2,878	2,344	.	Expenditure on current staff (11a)
378	444	687	439	793	994	1,098	706	.	Civil service pension benefits[4] (11b)
1,323	1,721	1,261	1,336	3,425	2,884	3,962	1,735	.	Other operating expenditure (12)
25	164	150	154	301	1,036	403	152	.	Interest expenditure (13)
819	854	1,027	789	872	1,235	1,008	959	.	Transfers to households (14)
693	690	735	399	1,045	946	2,194	525	.	Current transfers to enterprises (15)
691	701	738	691	531	534	717	659	.	Fixed asset formation (16)
7,280	7,785	7,843	7,337	10,277	11,971	12,461	7,970	.	Adjusted total expenditure[5] (17)
7,255	7,622	7,693	7,183	9,977	10,934	12,058	7,818	.	Less interest expenditure (17a)
6,834	7,140	7,097	6,778	9,279	9,983	9,804	7,151	.	Less interest expenditure and fees (17b)
7,511	7,806	7,959	7,458	10,531	12,033	13,029	8,241	.	Total revenue (18)
									of which:
5,128	5,021	5,249	5,073	7,177	7,312	7,642	5,050	.	Tax revenue[6] (19)
421	482	596	404	698	951	2,254	667	.	Fees (20)
967	1,261	1,052	1,105	1,611	2,221	1,834	1,036	.	Transfers from central government[7] (21)
7,542	7,910	7,961	7,514	10,513	11,969	12,853	8,246	.	Adjusted total revenue[5] (22)
7,122	7,429	7,365	7,109	9,815	11,017	10,599	7,579	.	Less fees (22a)
2,829	11,562	13,582	9,191	17,615	54,146	21,218	10,095	.	Debt at year-end (23)
0.90	1.46	1.12	1.70	1.76	1.77	1.92	1.53	.	Calculated average rate of interest (%)[8] (24)
									Tax rates and multipliers
3.5	5.0	6.5	6.5	6.0	5.0	4.5	5.4	.	Real estate acquisition tax (%) (25)
500	424	408	438	810	687	540	481	.	Real estate tax B (%)[9] (26)
423	389	381	410	410	460	470	403	.	Local business tax (%)[9] (27)
									Other figures
36.4	36.7	32.0	35.7	41.9	44.5	39.2	34.7	.	Staff (FTEs per 1,000 inhabitants)[10] (28)
3.7	6.1	14.2	6.8	17.8	23.1	20.1	13.4	.	Recipients of pension benefits (per 1,000 inhabitants)[11] (29)
69.2	67.4	64.5	67.4	67.5	66.1	66.5	67.0		A 13 annual gross civil servant pay (in €1,000)[12] (30)

scheme and financial capacity-dependent supplementary central government grants according to provisional settlement figures. **7** Excluding financial capacity-dependent supplementary central government grants and compensation for motor vehicle tax. **8** Interest expenditure as a percentage of debt at the end of the previous year. **9** Revenue-weighted average local government multipliers for 2021. **10** Public sector staff working in state and local governments as at 30 June 2020. Areas in which non-public sector enterprises normally operate (such as university and other hospitals, nutrition, utilities, transport, finance) are not included. **11** Recipients of state and local governments' civil service pension benefits as at 1 January 2021. **12** Total of annual basic salary at the final level of the pay grade, general job-based allowance or structural allowance, special payment(s), assuming a 40-hour week. Total column shows the unweighted mean here. The A 13 pay grade applies in particular to many school teachers. Source: German Trade Union Confederation (2021).

Budgetary figures for state governments (including local governments) in 2021: change against 2020*

Item	BW	BY	BB	HE	MV	NI	NW	RP	SL
Derivation of partially adjusted structural balances	€ per inhabitant								
Fiscal balance (1)	751	444	247	635	121	287	415	854	– 138
Memo item: € million	8,345	5,825	623	3,994	194	2,298	7,439	3,501	– 135
Financial transactions (net) (2)	22	2	– 68	38	8	– 10	32	67	– 6
Settlement of payments under the state government financial equalisation scheme (3)	89	10	– 14	– 104	9	92	17	– 233	197
Adjusted balance (4)=(1)–(2)+(3)	819	452	301	494	121	389	400	554	65
Cyclical component[1] (5)	52	53	49	58	45	49	53	55	43
One-off effects (6)	– 76	– 80	– 50	– 88	– 67	– 60	– 77	– 51	– 173
Partially adjusted structural balance (7)=(4)–(5)–(6)	843	480	302	523	143	399	424	550	196
Memo item: Coronavirus response measures	.	.	.	.	.	.	.	.	.
Adjusted structural balance adjusted for temporary coronavirus response measures	.	.	.	.	.	.	.	.	.
Net interest burden[2] (8)	18	– 9	18	– 10	– 7	– 9	4	– 8	– 41
Partially adjusted structural primary balance (9)=(7)+(8)	861	471	320	514	136	391	428	542	154
Memo item: Adjusted structural primary balance adjusted for temporary coronavirus response measures	.	.	.	.	.	.	.	.	.
Expenditure, revenue and debt	€ per inhabitant								
Total expenditure (10)	177	513	511	580	422	265	247	378	301
of which:									
Personnel expenditure[3] (11)	87	90	65	138	52	92	86	126	86
Expenditure on current staff (11a)	60	69	68	105	58	68	71	89	65
Civil service pension benefits[4] (11b)	26	21	– 3	33	– 6	24	15	37	20
Other operating expenditure (12)	119	152	197	152	51	123	124	83	5
Interest expenditure (13)	38	– 9	19	– 8	– 18	– 6	1	– 13	– 42
Transfers to households (14)	36	29	30	60	38	28	48	38	289
Current transfers to enterprises (15)	184	– 9	– 47	234	99	– 80	51	43	– 8
Fixed asset formation (16)	– 109	– 25	55	– 12	9	41	0	47	36
Adjusted total expenditure[5] (17)	220	518	354	574	424	235	267	476	318
Less interest expenditure (17a)	181	527	335	582	442	241	266	489	361
Less interest expenditure and fees (17b)	130	486	287	500	449	189	243	461	348
Total revenue (18)	929	957	751	1,215	542	552	662	1,232	303
of which:									
Tax revenue[6] (19)	619	708	565	788	339	564	593	801	497
Fees (20)	51	41	48	82	– 7	52	23	28	13
Transfers from central government[7] (21)	264	232	– 14	214	216	183	87	147	– 24
Adjusted total revenue[5] (22)	1,063	998	648	1,097	567	634	691	1,026	654
Less fees (22a)	1,012	957	600	1,015	574	582	668	998	641
Debt at year-end (23)	7	204	177	– 201	– 1,013	42	641	– 812	– 177
Calculated average rate of interest (%)[8] (24)	0.52	– 0.74	0.11	– 0.27	– 0.64	– 0.17	– 0.10	– 0.14	– 0.24
Tax rates and multipliers									
Real estate acquisition tax (%) (25)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Real estate tax B (%)[9] (26)	4.4	1.9	2.3	2.7	2.0	3.8	2.5	4.8	12.8
Local business tax (%)[9] (27)	2.3	9.6	– 2.3	0.1	4.5	1.7	– 2.4	13.1	– 3.9

Sources: Federal Statistical Office, quarterly cash statistics (including post-bookings); Bundesbank calculations. * Core budgets and off-budget entities. Abbreviations: BW – Baden-Württemberg, BY – Bavaria, BB – Brandenburg, HE – Hesse, MV – Mecklenburg-West Pomerania, NI – Lower Saxony, NW – North Rhine-Westphalia, RP – Rhineland-Palatinate, SL – Saarland, SN – Saxony, ST – Saxony-Anhalt, SH – Schleswig-Holstein, TH – Thuringia, BE – Berlin, HB – Bremen, HH – Hamburg. **1** Data pursuant to the Bundesbank's cyclical adjustment procedure based on figures from the spring 2022 macroeconomic forecast. **2** Interest expenditure less interest income. **3** Including healthcare subsidies and refunds to central government for legacy claims for pension benefits in eastern Germany (under the

SN	ST	SH	TH	BE	HB	HH	Total	Total	Item
							€ per inhabitant	€ million	**Derivation of partially adjusted structural balances**
762	280	313	169	– 128	372	250	449	.	Fiscal balance (1)
3,096	613	908	357	– 469	253	460	.	37,305	Memo item: € million
273	– 21	74	40	– 632	– 35	– 476	– 9	– 753	Financial transactions (net) (2)
20	2	– 54	40	– 195	– 52	– 125	– 3	– 241	Settlement of payments under the state government financial equalisation scheme (3)
509	303	185	168	309	356	601	455	37,817	Adjusted balance (4)=(1)–(2)+(3)
48	47	50	46	68	68	84	54	4,449	Cyclical component[1] (5)
– 68	– 75	– 72	– 69	– 84	– 252	– 114	– 77	– 6,401	One-off effects (6)
529	331	208	191	325	540	631	478	39,769	Partially adjusted structural balance (7)=(4)–(5)–(6)
.	.	.	.	.	.	.	– 15	– 1,274	Memo item: Coronavirus response measures
.	.	.	.	.	.	.	417	34,641	Adjusted structural balance adjusted for temporary coronavirus response measures
8	– 2	– 2	– 7	31	17	– 9	1	111	Net interest burden[2] (8)
537	329	205	184	356	557	622	480	39,880	Partially adjusted structural primary balance (9)=(7)+(8)
.	.	.	.	.	.	.	418	34,753	Memo item: Adjusted structural primary balance adjusted for temporary coronavirus response measures
							€ per inhabitant		**Expenditure, revenue and debt**
– 120	317	186	516	1,418	1,246	1,713	412	.	Total expenditure (10)
									of which:
73	111	99	124	189	166	134	100	.	Personnel expenditure[3] (11)
83	119	82	123	171	144	105	81	.	Expenditure on current staff (11a)
– 10	– 8	17	2	18	23	29	18	.	Civil service pension benefits[4] (11b)
86	98	84	109	335	366	310	138	.	Other operating expenditure (12)
7	2	1	– 8	32	17	– 11	3	.	Interest expenditure (13)
38	84	28	38	15	93	32	42	.	Transfers to households (14)
65	72	92	22	139	401	613	79	.	Current transfers to enterprises (15)
– 17	74	14	7	126	12	84	– 2	.	Fixed asset formation (16)
128	290	222	504	765	1,214	1,161	387	.	Adjusted total expenditure[5] (17)
120	288	220	512	733	1,197	1,173	384	.	Less interest expenditure (17a)
88	258	155	476	677	1,104	1,070	340	.	Less interest expenditure and fees (17b)
642	597	501	684	1,291	1,617	1,961	862	.	Total revenue (18)
									of which:
549	396	432	416	903	1,060	1,181	97	.	Tax revenue[6] (19)
33	29	65	36	56	93	103	43	.	Fees (20)
67	273	123	267	190	327	566	180	.	Transfers from central government[7] (21)
656	620	432	695	1,090	1,753	1,791	867	.	Adjusted total revenue[5] (22)
624	591	366	659	1,034	1,660	1,688	823	.	Less fees (22a)
53	418	109	146	475	– 4,177	172	111	.	Debt at year-end (23)
0.14	0.01	– 0.04	– 0.19	0.05	– 0.33	– 0.09	– 0.10	.	Calculated average rate of interest (%)[8] (24)
									Tax rates and multipliers
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.	Real estate acquisition tax (%) (25)
1.5	1.0	3.7	0.8	0.0	0.0	0.0	2.7	.	Real estate tax B (%)[9] (26)
1.2	7.0	1.6	0.9	0.0	0.0	0.0	3.2	.	Local business tax (%)[9] (27)

Entitlement Transfer Act (*Anspruchs- und Anwartschaftsüberführungsgesetz* – AAÜG)). **4** Including healthcare subsidies and AAÜG payments. **5** Excluding financial transactions. Payments under the state government financial equalisation scheme are settled on the revenue side. **6** Taxes and compensation for motor vehicle tax; state government financial equalisation scheme and general supplementary central government grants according to provisional settlement figures. **7** Excluding general supplementary central government grants and compensation for motor vehicle tax. **8** Interest expenditure as a percentage of debt at the end of the previous year. **9** Revenue-weighted average local government multipliers.

Member States' financial relationships with the EU budget and the Next Generation EU off-budget entity in 2021

Last year, the regular EU budget amounted to €165 billion, or just over 1% of the European Union's gross national income (EU GNI). As usual, this was financed by the EU Member States roughly in proportion to the sizes of their economies, with each contributing around 1% of their respective GNI. Cohesion and agricultural policy once again accounted for more than two-thirds of expenditure. The vast majority of EU budget expenditure takes the form of earmarked transfers to individual Member States. Relative to their GNI, Member States with weaker economies tend to receive more transfers than those with stronger economies. In 2021, ten Member States were net contributors; these included Germany, which contributed 0.6% of its GNI. The other 17 countries were net recipients.

The EU budget generally redistributes financial resources from higher-performing Member States to lower-performing ones (as measured by per capita GNI). With few exceptions, the per capita incomes of net contributors are above the EU average, while those of net recipients are below it. Furthermore, within the two groups, the amounts of per capita net contributions are roughly contingent on economic performance.

In addition to the regular EU budget, 2021 saw the inaugural year of the Next Generation EU (NGEU) off-budget entity, which is set to operate for a total of six years. Initially, EU Member States are not paying contributions for NGEU, as it is being financed by joint borrowing. These debts are to be repaid out of the EU budget between 2028 and 2058. During that period, Member States will make commensurately higher contributions or assign revenue from other sources to the EU. In 2021, the first year of NGEU disbursements, the transfers paid out of the off-budget entity amounted to €54 billion, or just under ½% of EU GNI. This represents around one-eighth of the total allocated NGEU transfers.

The final, net contributions to NGEU will only be known for certain once the loans taken to finance the package have been repaid. Nevertheless, it is possible to estimate these at present, so as to give a more comprehensive picture of the Member States' financial relationships with the EU. As things stand today, it is to be assumed that Member States will continue to finance future EU budgets roughly in line with their shares of GNI. It therefore makes sense to take the current GNI shares as a funding key for NGEU transfers. When viewed in those terms, the net contributors in the EU budget generally prove to be similarly positioned when it comes to NGEU. For instance, Germany's net payments to NGEU amounted to 0.3% of its GNI in 2021. Italy was the only Member State that turned from a net contributor to a net recipient on balance as a result of NGEU. For most of the 17 countries that were net recipients of the EU budget in 2021, NGEU increased the net payments received. The allocated NGEU transfers are thus set to echo the redistribution pattern seen with the EU budget.

Member States' net contributions reveal financial relationships with the EU

Aim of the article

Article outlines the financial relationships between the EU and its Member States

This article looks at the financial relationships between the EU and its Member States. To this end, Member States' net contributions to the EU budget and NGEU in 2021 are calculated.

Net contributions reveal financial redistribution

The net contributions to the EU budget and NGEU reveal whether a given Member State's financial relationship with the EU relieves or burdens its finances on balance. In this way, they shed light on the extent to which financial resources are redistributed between the countries of the EU. The degree of reallocation and the instruments used to achieve it are the subject of mutual agreement between the Member States. The net contributions are the result of these agreements.

Net contributions not an indicator of benefits of EU membership

The figures on net contributions should be interpreted with caution. In particular, they do not provide a measure of the benefits that EU membership brings to a country, as these are far more multi-faceted than the financial relationship alone. For example, enterprises and households in all Member States benefit from the single market and its four freedoms (free movement of persons, goods, services and capital). In addition, payments that flow to individual Member States can also have positive spillover effects on other countries. This article does not discuss such effects, nor does it cover other, non-economic ones. Instead, its goal is to provide a transparent picture of the payment flows associated with the EU's common budgets. Using the data available from the European Commission, the article depicts the payment flows relevant for net contributions in 2021 (see the adjacent box). In addition, it compares the 2021 net contributions with those of previous years.

Information available about financial links within EU

Up to and including 2018, Member States' net contributions could be taken from the European Commission's annual Financial Reports. The Financial Report contained Member States' operating budgetary balances,[1] which are a suitable measure of net contributions and are also used as such in this article (see the box on p. 38).

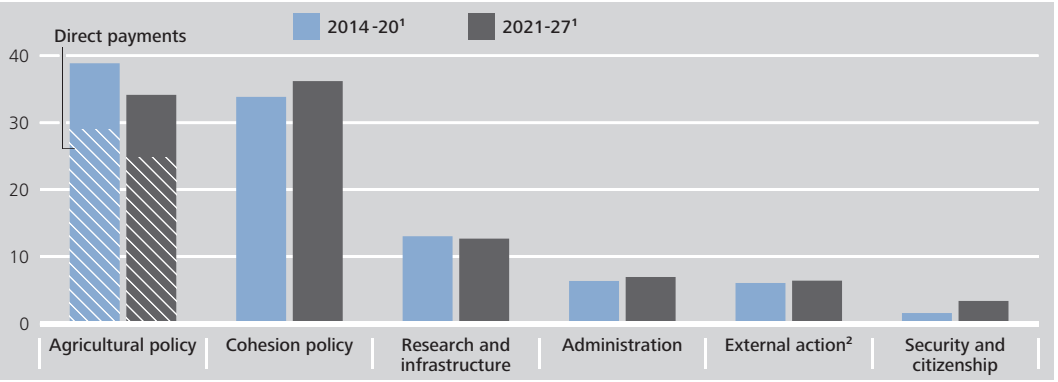
For 2019 and subsequent years, the European Commission replaced the Financial Report with the Integrated Financial and Accountability Reporting,[2] which no longer shows operating budgetary balances. However, operating budgetary balances were still initially included in the figures published on the European Commission's website.[3]

For 2020 and 2021, information on the Member States' net contributions is no longer provided. However, the net contributions can be derived from the EU budget's annual spending and revenue figures, which were last published by the European Commission on 28 September 2022.[4] For 2021, these figures also contain a breakdown of expenditure and revenue by country for the Next Generation EU (NGEU) instrument.

1 See, for example, European Commission (2019).
2 See European Commission (2020).
3 See https://ec.europa.eu/info/strategy/eu-budget/long-term-eu-budget/2014-2020/spending-and-revenue_en
4 See https://ec.europa.eu/info/strategy/eu-budget/long-term-eu-budget/2021-2027/spending-and-revenue_en

Planned use of EU funds by area of expenditure

Percentage shares



Sources: European Commission and Bundesbank calculations. **1** Planned commitment appropriations for each seven-year period. Actual payments may differ. **2** The European Development Fund did not form part of the EU budget from 2014 to 2020. To aid comparability, it has also been excluded from the data for 2021 to 2027 shown here. Compensatory payments made to new EU Member States in the first few years of their membership are not included.

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Overview of the EU budget and NGEU

EU budgetary framework for 2021 to 2027 similar in scale to that of 2014 to 2020

The EU budget is used by the Member States to finance joint spending. They determine the nature and volume of expenditure in advance, drawing up a seven-year financial framework. The current financial framework covers the period from 2021 to 2027 and provides for annual revenue and expenditure equivalent to around 1% of EU GNI.[1] These are roughly the same as the amounts involved in the 2014 to 2020 financial framework. Expenditure priorities have also shifted only minimally (see the chart above). Owing to Brexit in 2020, EU Member States drew up the financial framework without the United Kingdom.

EU budget always balanced

Most of the EU's budgetary expenditure flows to the Member States in the form of earmarked transfers. Within the Member States, it finances projects and spending in the pre-agreed areas. Own resources are the dominant source of revenue for the EU budget. These include customs duties (traditional own resources) and payments from Member States (also known as contributions). Member States' payments are determined on the basis of various national metrics: gross national income (GNI-based own resource), (standardised) value added tax revenue (VAT-based own resource) and, more recently, also the amount of non-recycled plastic packaging waste (plastics own resource). Alongside the own resources, a smaller role is played by other EU budget revenue sources such as antitrust penalties or fines paid by Member States. The EU budget is balanced every year. In principle, there is no provision for debt financing. GNI-based own resources are therefore calculated in such a way as to ensure that EU budget expenditure is always covered.

Calculating net contributions

Net contributions determined at the national level

Individual Member States' financial relationships with the EU budget are generally not balanced, resulting in either a positive or negative net contribution. In broad terms, this is represented by the difference between a Member State's payments received from the EU budget and its payments made to the EU budget. If the balance is positive, the country receives net payments from the EU budget and is thus a net

1 GNI was selected as the reference variable for the EU budget. Gross national income and gross domestic product (GDP) differ in the extent to which household income is included. GNI encompasses the entire income of all residents, regardless of whether it was generated domestically or abroad. GDP, on the other hand, only incorporates total income generated domestically. The difference between a country's GNI and GDP is typically small; in the cases of Ireland and Luxembourg, however, GDP is significantly higher than GNI.

Operating budgetary balances as a measure of net contributions to the EU budget

Net contributions to the EU budget should show whether a country is a net contributor or a net recipient in terms of the EU budget. To this end, this article uses the concept of the European Commission's operating budgetary balances.[1] This box describes how the operating balances are calculated.

First, certain categories are excluded from the total revenue and expenditure of the EU budget:

– Only the GNI own resource, the VAT own resource and the plastics own resource are included on the revenue side of the EU budget. Customs duties, on the other hand, are not taken into account because Member States collect tariffs at the EU's external borders on behalf of the EU and pass them on to the EU budget. Owing to the single market and the tariff-free trade within the EU, these cannot be assigned to individual countries in any meaningful way. This is illustrated particularly clearly by the Netherlands and Belgium, which collected a large share of the customs revenue because of the major ports located in Rotterdam and Antwerp. However, the tariffs primarily apply to products destined for other EU countries. As a result, the two countries' financial burden would be overstated if the customs duties transferred were to be included in the payments to the EU.

– On the expenditure side, of the expenditure that flows to the Member States, only the operating expenditure is taken into account. To do so, administrative expenditure is factored out. This is because it is used to finance services that benefit the EU as a whole, such as to pay the salaries of those working for EU institutions. A disproportionately large share of the administrative expenditure flows to Belgium and Luxembourg, where the major EU institutions and their staff are based. If administrative expenditure were to be taken into account, the share of the payments from the EU budget to these countries would be too high. From 2021 onwards, the debt servicing costs (interest and repayments) for transfers from the Next Generation EU (NGEU) off-budget entity will also be disregarded. NGEU debt servicing costs are paid from the current EU budget. This article reports the net contribution for NGEU separately, thus preventing double counting. (For details on the calculation of net contributions in connection with NGEU, see p. 39.) In 2021, however, debt servicing costs were still negligible at €3 million.

Second, a correction is made to ensure that payments to the EU budget correspond to payments from the EU budget, despite the adjustments to revenue and expenditure.

– Member States' payments to the EU budget are adjusted proportionally so that their sum corresponds to the total operating expenditure. In technical terms, the balance of customs duties on the one hand and administrative expenditure and NGEU debt servicing costs on the other is allocated proportionally to the Member States. The share that a country contributes to the financing of the EU budget remains unchanged. The difference between operating expenditure and the adjusted payments to the EU budget yields the reported net contributions to the EU budget.

1 See, for example, European Commission (2019).

recipient. If the balance is negative, the country makes net payments to the EU budget and is thus a net contributor. A more detailed explanation of how net contributions are calculated can be found on p. 38 of this report.

Additional net contributions on account of NGEU off-budget entity from 2021 to 2026

The EU budget was accompanied by the NGEU off-budget entity for the first time in 2021. Set to run until 2026, NGEU is intended to disburse transfers totalling approximately €420 billion and loans of up to €390 billion to Member States over its lifetime.[2] Although this off-budget entity is being financed through borrowing rather than by contemporaneous contributions from Member States, it is possible to calculate net contributions for NGEU, too (see the adjacent box). This allows the financial relationships between the EU and its Member States to be depicted more accurately in economic terms.

The EU budget in 2021

2021 EU budget amounted to around €165 billion

The 2021 EU budget comprised expenditure of around €165 billion.[3] This equates to just over 1% of EU GNI. Roughly €10 billion of this was allocated to administrative expenditure, which has been disregarded for the purposes of calculating the net contributions discussed in this article (see the box on p. 38). At 6%, the share of total expenditure accounted for by administrative expenditure remained unchanged compared with the 2014 to 2020 financial framework.[4] Around €20 billion of expenditure was covered by EU customs revenue, which has likewise been excluded from the calculations of net contributions.

Share of customs revenue down

At 12%, the share of customs duties in total own resources was somewhat lower than in the 2014 to 2020 financial framework, in which it averaged just under 15% annually. This was partly due to the fact that Member States are

2 All NGEU figures are shown in current prices.
3 See European Commission (2022).
4 A similar analysis for the 2014 to 2020 financial framework can be found in Deutsche Bundesbank (2020).

Calculating net contributions in connection with NGEU

The Next Generation EU (NGEU) off-budget entity has a number of differences compared with the EU budget. These need to be taken into consideration when calculating net contributions.

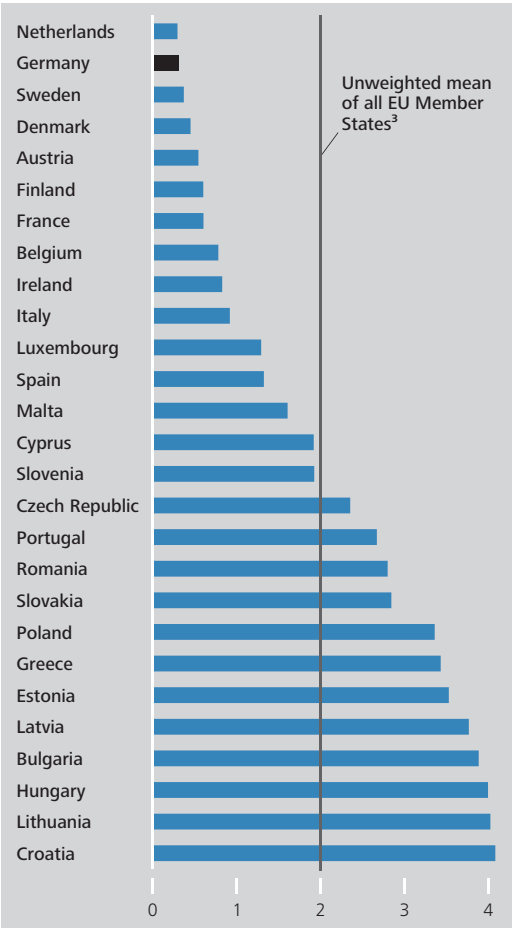
– Ultimately, NGEU is also financed through contributions from Member States. However, unlike the regular contribution-funded EU budget, these payments will only become due in later years. This is because, initially, the EU will borrow in order to finance NGEU. For 2021 to 2027, the current EU financial framework allows only for interest payments on NGEU loans. For the period thereafter, Member States are obligated to provide the EU budget with sufficient funds to repay the loans. In this way, it is planned that the debts incurred for NGEU transfers will be successively repaid out of the regular EU budget from 2028 to 2058.

  At present, Member States finance the EU budget largely in accordance with their GNI shares. It seems plausible that this will continue to be the case in the future, even if additional own resources are used to fund the EU budget. As things stand today, the contribution burdens of NGEU transfers may therefore be allocated to the Member States according to their GNI shares in the respective years in which the transfers are disbursed. This results in the same net contributions as would be paid if the Member States were to fund NGEU via the regular EU budget instead of through borrowing. This is because additional expenditure in the EU budget is financed by the Member States through higher GNI-based own resources and thus in accordance with their GNI shares.

– This box takes account only of NGEU transfers to Member States. NGEU loans are not included, as the borrower Member States are expected to service the associated debts in full themselves. As a result of their interest rate conditions being more favourable than those prevailing on the market, the loans in fact contain a transfer component as well. However, this is not taken into consideration in this report.

Payments from the EU budget to the Member States

As a percentage of GNI,[1] operating expenditure[2] in 2021



Sources: European Commission and Bundesbank calculations. **1** Gross national income. **2** Expenditure excluding administrative expenditure and debt service for the Next Generation EU off-budget entity. **3** Factoring in the different sizes of the Member States, the weighted mean was just under 1% of EU GNI.

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now entitled to retain a larger share of customs revenue as flat-rate compensation for the collection costs that they incur (25% instead of the previous 20%). The Netherlands and Belgium are the main beneficiaries of this increase. This is because they account for a disproportionately large share of customs receipts, while their actual collection costs are likely to be significantly lower. Consequently, the flat-rate compensation arrangement for collection costs is sometimes also seen as a hidden rebate for those countries. No further consideration is given to this in the following discussion, however.

Operating expenditure in the EU budget

High degree of disparity across inflows of included expenditure in relation to economic size

Operating expenditure totalled around €155 billion in 2021. That year, cohesion policy accounted for the largest share (approximately €68 billion), followed by agricultural policy (approximately €56 billion). The remaining €31 billion was allocated across the spending areas of research and infrastructure, external action and security and citizenship. The payments from the EU budget received by Member States differ significantly in relation to the sizes of their economies (see the adjacent chart). In 2021, the (unweighted) average ratio stood at 2% of each Member State's GNI. Croatia had the highest ratio of 4% of GNI, while the Netherlands had the lowest at 0.3% of GNI.

Member States' payments to the EU budget

Virtually no change in shares of GNI-based and VAT-based own resources

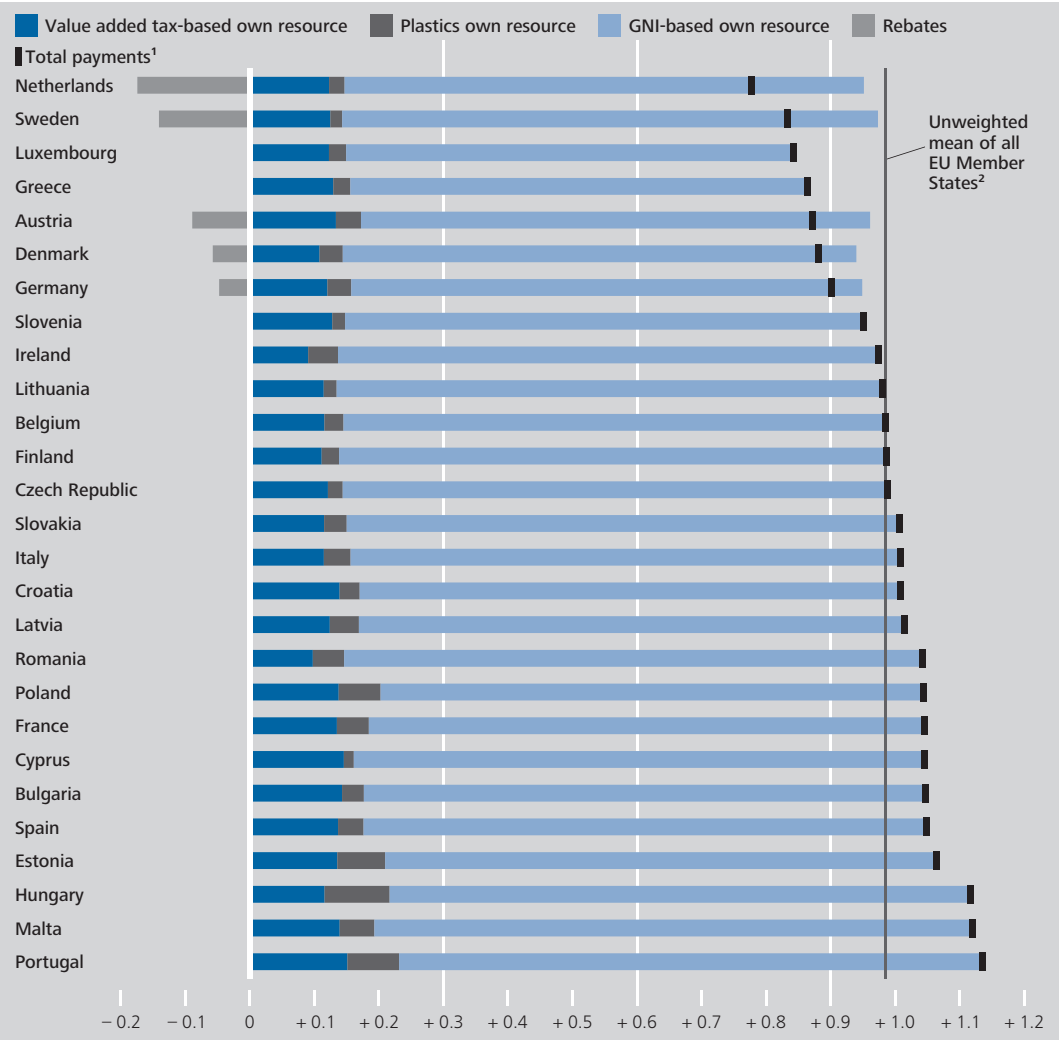
Member States' payments to the EU budget covered around €140 billion of expenditure in 2021. By far the largest part of this was attributable to GNI-based own resources, which accounted for 73% of total own resources (unchanged from the annual average from 2014 to 2020). The share of the VAT-based own resource, which is now calculated using a new method, stood at 11% in 2021 (13% on average from 2014 to 2020).

New plastics own resource accounted for 4% of own resources

In 2021, Member States also contributed the plastics own resource to the EU budget for the first time. This comprised 4% of total own resources. The relative burden among the countries shifted only slightly as a consequence of the plastics own resource (see the chart on p. 41), which was mainly due to its small size. In addition, Member States agreed on different flat-rate cuts for many countries. As a result, there is less variation between Member States with regard to the ratio of the plastics own resource to economy size.

Value added tax-based, plastics, and GNI-based* own resources, and rebates

As a percentage of GNI, 2021



Sources: European Commission and Bundesbank calculations. * Gross national income. **1** Member States' total payments to the EU budget. **2** Factoring in the different sizes of the Member States, the weighted mean also amounted to just under 1% of EU GNI.
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Economy size continues to determine absolute level of Member States' financing contributions

All in all, Member States financed the 2021 EU budget roughly in line with the sizes of their economies: as in the past, payments did not differ significantly in relation to GNI (see the chart above). The chart also includes the rebates for Austria, Denmark, Germany, the Netherlands and Sweden. The Netherlands received the largest rebate, at just under 0.2% of its GNI, while Germany received the smallest, at less than 0.1% of GNI. The (unweighted) average of own resources excluding customs duties across all EU Member States stood at just under 1.0% of each country's GNI in 2021. The contributions of individual countries ranged from just under 0.8% of GNI in the Netherlands to just over 1.1% of GNI in Portugal.

The Next Generation EU off-budget entity in 2021

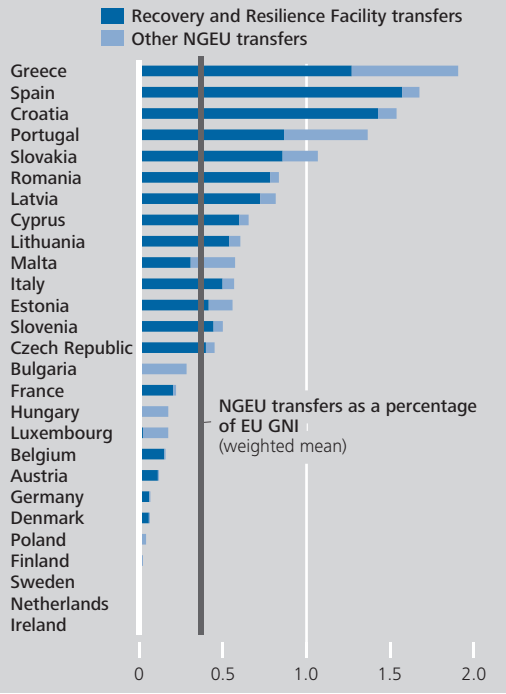
NGEU transfer payments

In 2021, just under 0.4% of EU GNI was channelled to Member States as NGEU transfers

Last year, Member States received a total of €54 billion in NGEU transfers. More than four-fifths of these were transfers from the new Recovery and Resilience Facility (RRF). The remaining NGEU transfers topped up existing EU

2021: Transfers from the NGEU* off-budget entity to the Member States

As a percentage of GNI[1]

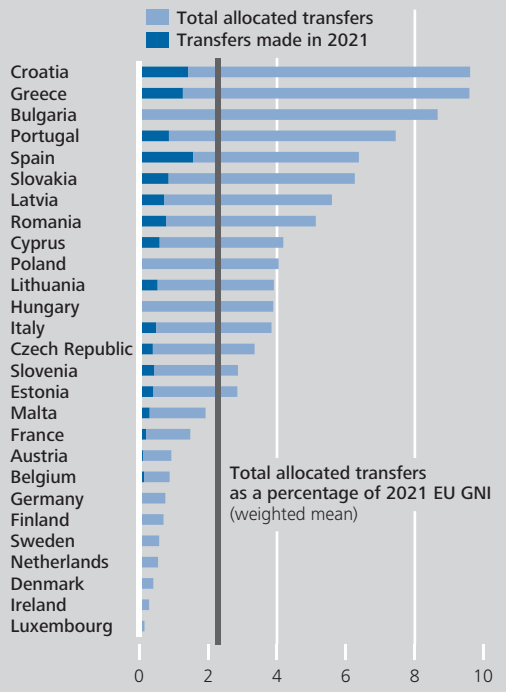


Sources: European Commission and Bundesbank calculations.
* Next Generation EU. **1** Gross national income.

Deutsche Bundesbank

RRF* transfers: Total allocation and actual disbursements in 2021

As a percentage of GNI[1]



Sources: European Commission and Bundesbank calculations.
* Recovery and Resilience Facility. **1** Gross national income.

Deutsche Bundesbank

budget programmes without being recorded in the EU budget.

RRF transfers flowing at different speeds

The adjacent chart shows the country-by-country distribution of NGEU funding over the past year in relation to each Member State's GNI. At just over 1.5% of their respective GNI, Greece, Spain and Croatia received the largest shares of funds, whilst Ireland, the Netherlands, Sweden, Finland, Poland, Denmark and Germany received the smallest payments, amounting to less than 0.1% of GNI. RRF funds, which are generally earmarked, flow to Member States at different speeds (see the chart below). In 2021, 14% of the total allocated funding was channelled to the Member States. Spain made the largest withdrawals, calling on 25% of its allocated funds. RRF funds are yet to be received by seven Member States, including Bulgaria, Hungary and Poland. Relatively large amounts of funding have been allocated to these countries. In the cases of Poland and Hungary, disbursement has been delayed owing to conflicts in connection with the "rule of law" clause.[5] In addition, no RRF funds were channelled to Finland, Sweden, the Netherlands or Ireland in 2021.

NGEU financing shares

Financing of NGEU transfers in line with current GNI shares

In order to determine Member States' net contributions to NGEU, NGEU financing shares are compared with NGEU transfers received (see the box on p. 39). It is assumed that Member States will finance NGEU transfers according to their GNI shares in the respective year of disbursement. As NGEU transfers amounted to 0.4% of EU GNI in 2021, each Member State is deducted 0.4% of its GNI for NGEU transfers. Consequently, countries that received more than 0.4% of their GNI in NGEU funds in 2021 are recorded as net recipients and countries that received less are recorded as net contributors.

5 See also Deutsche Bundesbank (2022).

Development of net contributions to the EU budget and NGEU

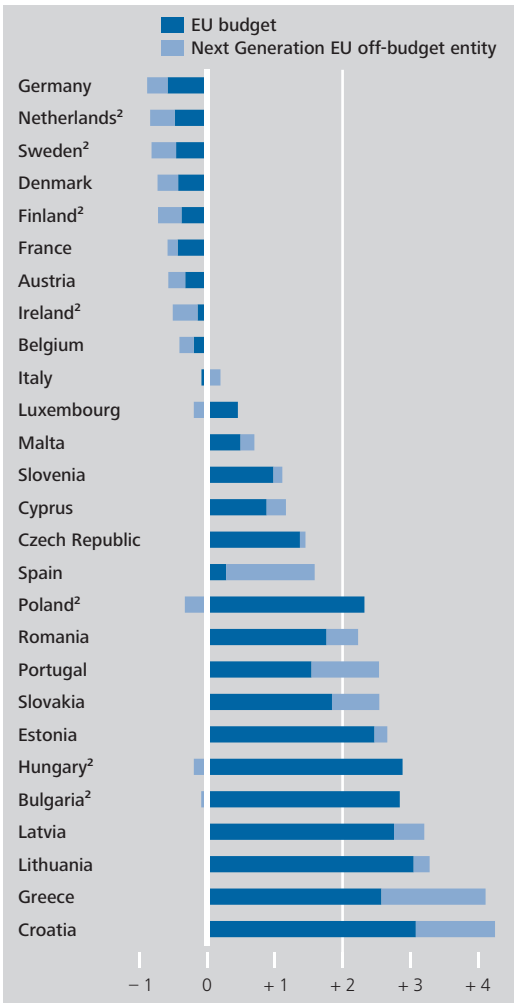
EU budget and NGEU taken together

In most Member States, net contributions from EU budget and NGEU point in the same direction

In 2021, Member States' net contributions consisted of two components for the first time: the net contribution from the EU budget and a net contribution from NGEU. On balance, nine of the 27 EU Member States were net contributors (see the adjacent chart). Germany's net payments were the highest relative to its GNI, at 0.9%, followed by the Netherlands, Sweden, Denmark, Finland, France, Austria, Ireland and Belgium. NGEU was a factor for all these countries being net contributors. For example, excluding NGEU would have lowered Germany's net contribution by 0.3 percentage point to 0.6% of GNI. The 18 remaining EU Member States were net recipients. Relative to their GNI, Croatia and Greece received the highest net payments, amounting to more than 4%. Lithuania and Latvia ranked third and fourth, with net payments of more than 3% of GNI. Most of these countries received net payments from both the EU budget and NGEU, though the net payments from the EU budget were generally considerably larger. Only in the case of Spain were the net payments from NGEU higher. This was due to the fact that Spain withdrew a particularly large share of its RRF funds in 2021. Hungary, Bulgaria and Poland are recorded as net contributors to NGEU in 2021, as no RRF funds have yet been channelled to these countries. However, this will change if they receive the RRF transfers that they have been allocated. Luxembourg is a net contributor to NGEU, but it receives larger net disbursements from the EU budget, making it a net recipient overall. Italy would have been a net contributor solely on the basis of the EU budget, but became a net recipient as a result of NGEU.

Net contributions in 2021

As a percentage of GNI[1]



Sources: European Commission and Bundesbank calculations. **1** Gross national income. **2** There were no transfers from the Next Generation EU off-budget entity to these countries in 2021.

Deutsche Bundesbank

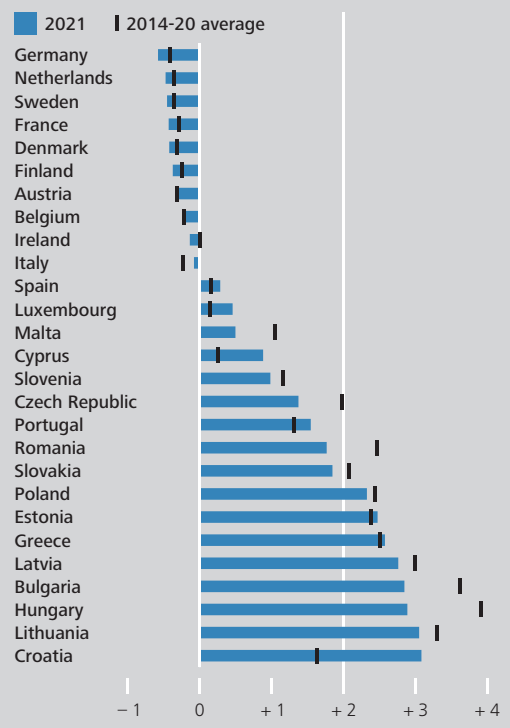
Comparison with average net contributions from 2014 to 2020

Net contributors and net recipients virtually unchanged from the 2014 to 2020 financial framework

Both RRF and EU budget funds have been channelled unevenly to Member States over the years. This means that, even within a given financial framework, the level of net contributions can fluctuate from year to year and the ranking of countries in this respect can vary. Compared with the average of the 2014 to 2020 financial framework, however, the groups of net contributors and net recipients remained

Net contributions to the EU budget

As a percentage of GNI[1]



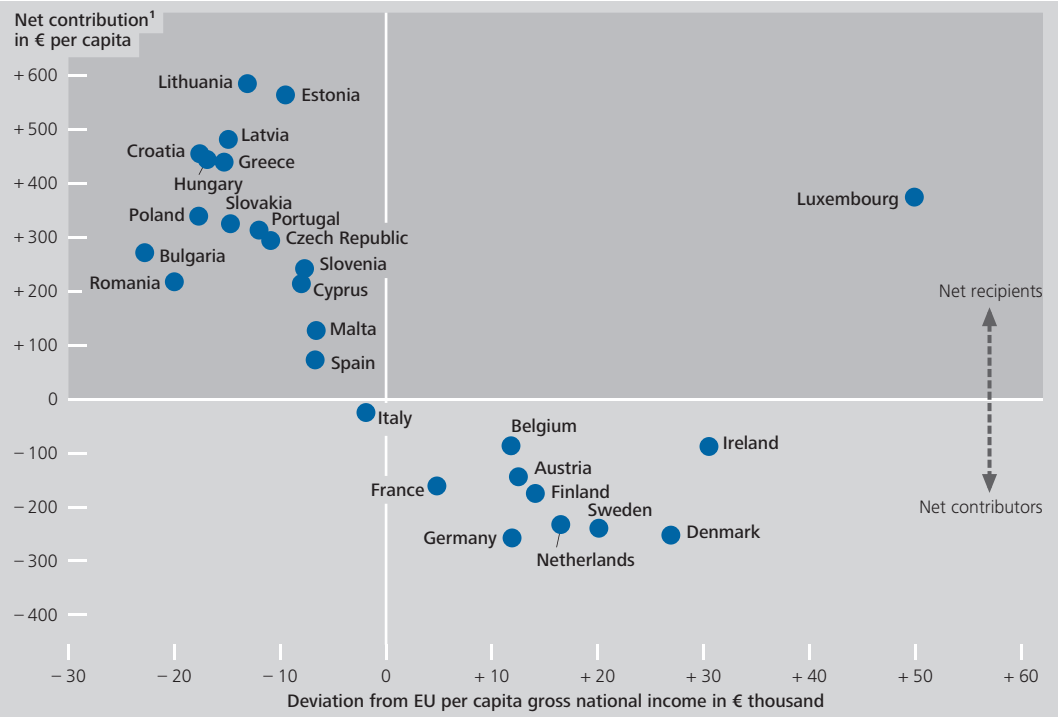
Sources: European Commission and Bundesbank calculations. **1** Gross national income.
Deutsche Bundesbank

virtually unchanged in 2021 (see the upper adjacent chart).

Germany's net contribution rose slightly as a result of Brexit

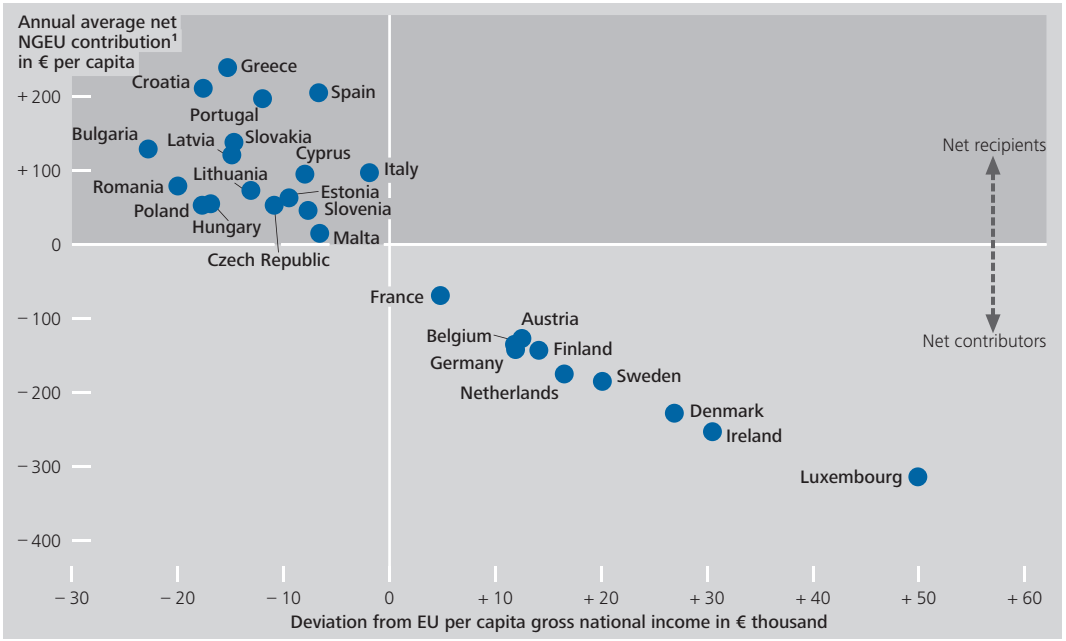
Compared with the average from 2014 to 2020, Germany's net contribution to the EU budget rose from 0.4% to just under 0.6% of its GNI. This was partly due to the fact that the United Kingdom was no longer a net contributor following its withdrawal from the EU. The German share of EU GNI increased from just under 22% to just over 25% as a result of Brexit. The German financing contribution to the EU budget rose accordingly. Among the net recipients, Croatia saw the steepest rise in its net payments, which amounted to around 1.5 percentage point. Bulgaria and Hungary, amongst others, received significantly less funding.

Net contributions to the EU budget and economic performance of the EU Member States in 2021



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

Planned transfers in the Next Generation EU (NGEU) off-budget entity and economic performance



Sources: European Commission and Bundesbank calculations. **1** The annual average net NGEU contribution corresponds to one-sixth of the difference between the overall NGEU transfers pre-allocated to a Member State and that Member State's financing share in the total pre-allocated NGEU transfers. The share in the EU GNI in 2021 serves as the financing key. The following NGEU programmes have been pre-allocated: Recovery and Resilience Facility, React-EU, Just Transition Fund, and Rural Development. Not taken into account are NGEU programmes with no pre-allocation: Horizon Europe, InvestEU, and RescEU.

Deutsche Bundesbank

Net contributions and economic performance

Net contributions continue to correlate with economic performance

Member States decide jointly how to redistribute funds through the EU budget and NGEU. In this context, it appears reasonable to reallocate these funds from higher-performing Member States to lower-performing ones. This can be measured, for example, in terms of per capita GNI. With regard to the EU budget, all net contributors except Italy have a per capita GNI above the EU average and all net recipients except Luxembourg have a per capita GNI below the EU average. In addition, the amount of the net payments made or received is based on economic performance. While this does not apply in the case of every individual country, it generally holds true. Per capita net contributions show a stronger response to differences in performance among net recipients than among net contributors. This pattern has been observed in the past and continued in the first year of the current financial framework (see the lower chart on p. 44).

Link between level of transfers and economic performance in NGEU, too

NGEU transfers, as provided for in the allocation key, also tend to vary according to each Member State's economic performance (see the chart above). As the very uneven outflow of NGEU transfer payments would distort the picture, the chart for 2021 shows the annual average net contribution over the entire framework period of six years.

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The validity of interest parity in times of crisis

A theoretical relationship exists between exchange rate developments and the interest rate differential between two currency areas. This relationship is referred to as interest parity. Here, a distinction is made between covered and uncovered interest parity. With covered interest parity, cross-border investments are hedged against exchange rate changes. There is therefore no exchange rate risk when the transaction is concluded. In theory, the interest rate differential between the currency areas should correspond to the rate of change between the forward and spot rates. It should not be possible in this case to make a risk-free profit through trading (interest rate arbitrage). With uncovered interest parity, investments in the other currency area are not hedged against exchange rate changes. Under simplified assumptions, the interest rate differential should correspond to the rate of change between the present and expected future spot rates.

This article begins by examining empirically whether interest parity in its various forms applies for the period up to the end of 2021. The analysis focuses primarily on the income from investing in three-month money in euro or alternative currencies. The observation period covers various crises, in particular the global financial crisis that began in 2007. It can be seen that the relationship between the interest rate differential and the exchange rate changed following the onset of the financial crisis. This was true of both forms of interest parity.

For example, deviations from covered interest parity are clearer and longer lasting than before the crisis. This applies not only between the euro and the US dollar, but also to a large number of other currency pairs. At first glance, such deviations from covered interest parity contradict the assumption usually made in financial market theory that risk-free profit opportunities cannot occur if market participants behave rationally. However, more detailed analyses show that the observed violations of covered interest parity are indeed compatible with rational behaviour. This is because financial market conditions have changed since the financial crisis. Important conditions for the validity of covered interest parity were often no longer met to the same extent as before. For example, counterparty risk increased markedly during severe financial market turmoil, and financial market participants demanded a premium for taking it on. In addition, the costs of interest arbitrage were increased by the Basel III decisions, which were phased in as of 2013. This contrasted at times with one-sided and relatively price-inelastic demand for exchange rate hedging. Taken together, these factors allowed marked deviations to arise even outside times of crisis.

Since the financial crisis, a change has also taken place in the relationship between the exchange rate and interest rates on investments without exchange rate hedging. Trade strategies such as currency carry trades previously played a major role in this relationship. Market participants who were typically speculative preferred to invest in the currency that offered higher-interest investment opportunities. The associated capital movements led to a simultaneous appreciation of the higher-interest currency. Evidence of this empirical relationship, which is contrary to uncovered interest parity, can no longer be found in the period since the global financial crisis. However, it cannot be ruled out that this trading strategy will regain importance as interest rate differentials between the currency areas now grow larger again.

Introduction

Interest parity theory describes relationship between interest rate differential and exchange rate

Interest parity theory describes the relationship between interest rate differential and exchange rate, taking into account the investment behaviour of investors. This theory states that, under some assumptions, the expected return on a fixed-interest investment in domestic currency matches that on an equivalent fixed-interest investment in foreign currency. Covered and uncovered interest parity are distinguished via their different treatment of exchange rate risks. With covered interest parity, investors hedge their open foreign currency position by means of a forward transaction. With uncovered interest parity, on the other hand, the open foreign currency position is left unhedged.

Significant deviations from covered interest parity since the outbreak of the financial crisis

For example, fairly stable regularities can be found up to the outbreak of the financial crisis under covered interest parity. Deviations from covered interest parity were generally relatively small in the early years of monetary union and – taking into account transaction costs – were likely due to data imperfections rather than market inefficiencies, according to an empirical study in the 2005 Monthly Report.[1] Since August 2007, however, significant and longer-lasting deviations have been observed, sometimes even during calm market phases. This applies not only to the relationship between the euro and the US dollar, but also to that between the euro and a large number of other currencies. The more pronounced deviations from covered interest parity since then raise the question of why seemingly safe profit opportunities arising from arbitrage transactions are not exploited.

Uncovered interest parity violated even before the financial crisis

By contrast, empirical support for the uncovered interest parity theory was low even before the outbreak of the financial crisis. The theory states that the currency in which the higher-interest, otherwise equally safe investment is denominated depreciates against the currency with the lower-interest investment over the term, so that the expected return on domestic and foreign interest instruments is the same. However, one result of the empirical studies conducted at the time was that the higher-interest currency appreciated on average over the investment period. This is consistent with the empirical results of numerous previous studies.[2] The observed phenomenon is also related to the fact that currency carry trades were, on average, a profitable investment strategy as investors often received, in addition to the higher interest rate at which they invested using this strategy, a return from currency appreciation.[3] At the beginning of the new millennium, the question of why the uncovered interest parity theory could not be confirmed well empirically was the subject of a large number of theoretical and empirical papers.[4]

Report re-examines relationship between interest rate differentials and exchange rates

This report takes the scientific debate as an opportunity to re-examine the relationship between interest rate differentials and the exchange rate both theoretically and empirically. The main focus is on differences in return between money market investments in other currency areas and those in the euro area.[5] By contrast, the available literature primarily looks

1 See Deutsche Bundesbank (2005), p. 34.
2 See, for example, Fama (1984) and MacDonald and Taylor (1992).
3 At first glance, the result of these studies, i.e. that interest rate differentials forecast excess returns, contradicts the assumption of rational expectations, and has been discussed in the literature as the "uncovered interest rate parity puzzle" or "forward premium puzzle". See Engel et al. (2022).
4 A comprehensive overview of the empirical papers on this topic can be found in Engel (2014). See also the abovementioned article in the Monthly Report, Deutsche Bundesbank (2005).
5 In keeping with the relevant literature, the empirical analysis is based on the London Interbank Offered Rate (LIBOR), which is now only calculated for the US dollar. The calculation was discontinued for other currencies at the end of 2021. The investigation period therefore ends on 31 December 2021. Following news in 2012 of manipulation in connection with the setting of reference rates, notably LIBOR and EURIBOR, the global system of reference rates underwent fundamental reform (see Deutsche Bundesbank (2020)). One result was that LIBOR was initially reformed before being replaced by new reference rates from 2022. For the euro area, it is to be superseded by €STR (euro short-term rate), which the European Central Bank (ECB) only began publishing in October 2019 and is only available retroactively for the period up to March 2017. This is the reason why the empirical examination uses LIBOR rates for the longer-term period under review.

at interest rate differentials vis-à-vis the United States. The report consists of two sections. It deals, first, with covered interest parity and presents various explanatory approaches for the observed deviations from the relationship it postulates. Next, it looks at uncovered interest parity and examines whether, using the aforementioned hypothetical currency carry trade strategy, interest-rate speculators would still have been able to generate profits on average in recent years.

Crises with a potential impact on interest parity

In this context, the relationship between the transatlantic interest rate differential and the euro exchange rate against the US dollar has been linked, amongst other things, to several crises that have weighed on the international financial markets in recent years. The first to be mentioned is the global financial crisis, which began in mid-2007 in the US mortgage market and expanded into an international crisis the following year. Second, the sovereign debt crises in the euro area affected foreign exchange market developments, which first came to a head in October 2009 with the downgrade of Greek creditworthiness and then intensified further. Third, the global spread of the coronavirus from the spring of 2020 onwards and the Russian war of aggression against Ukraine which began in February 2022 have been weighing on the global economic outlook. In each of the affected currency areas, the crises led central banks to recalibrate their monetary policy at different points in time and thus asymmetrically. This was reflected in changing interest rate differentials. In the academic literature, the interest rate differential "breathing" in this manner is usually cited as an important cause of exchange rate fluctuations.

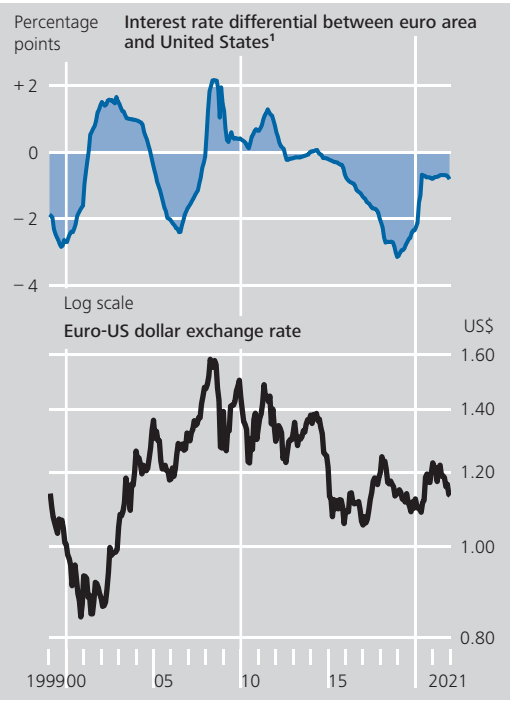
Covered interest parity and euro-US dollar exchange rate

Covered interest parity in theory

According to the covered interest parity theory, under the assumptions of an efficient foreign exchange market, the interest income from a US dollar investment should match that from an equivalent euro investment plus the rate of change of the euro expected in the forward market.[6] This rate of change in the exchange rate expected in the forward market is referred to as the swap rate and is derived from the difference between the forward and spot quotation of the euro-US dollar exchange rate based on the spot rate.[7] As the forward rate is already fixed today, there is no exchange rate risk. The difference between euro area and US interest rates plus the swap rate is referred to as the basis or the cross-currency basis. If covered interest parity exists, this basis should be close to zero. If this is not the case, the theory suggests there is a possibility of generating safe

Interest rate differential and exchange rate

Monthly averages



Sources: ECB, Refinitiv and Bundesbank calculations. **1** Euro LIBOR minus US dollar LIBOR; annualised; three-month maturity.
Deutsche Bundesbank

6 In such a formulation, it is assumed that no risk premia are demanded that can also be reflected in the forward rate. The prerequisites for an efficient foreign exchange market include free movement of capital, no transaction costs, rational actors, information efficiency and complete market transparency.
7 In the case of an interest rate differential that is formed from US interest rates minus euro interest rates, the forward and spot rates are quoted in US dollars per euro.

(arbitrage) profits from the interest rate differentials. However, since safe profits should be excluded, deviations from covered interest parity are generally a phenomenon that requires a specific economic explanation.

An example by way of illustration

The following example is provided as an illustration. Let us assume there is an interest rate advantage for the United States. An interest rate arbitrageur borrows in euro at the lower interest rate in the euro area, exchanges the borrowed amount for US dollars on the spot market and invests it in a US dollar investment with the same maturity as the loan. At the same time, the arbitrageur hedges against the exchange rate risks and sells the repayment amount of the US dollar investment that will mature in the future against the euro on the forward market today. If the swap rate of the euro-US dollar exchange rate is positive when the contract is concluded, the euro trades more strongly on the forward market than on the spot market (forward price premium). Under these circumstances, the arbitrageur accepts an exchange rate loss (that is already known to them today) when the US dollar investment amount is exchanged back. Where there is covered interest parity, this exchange rate loss that is associated with the hedging transaction more or less compensates for the US interest rate advantage.

However, if there is no covered interest parity and the exchange rate loss associated with the hedging transaction when the US dollar investment amount is exchanged back is smaller, for example, than the US interest rate advantage, the model states that the credit-financed US dollar investment will create a risk-free profit opportunity. The weaker the euro is in the forward market, the greater the profit. By contrast, the credit-financed foreign investment would make a loss if the forward price premium for the euro and the resulting price hedging costs were greater than the interest rate differential.

Up until the onset of the global financial crisis, the swap rate approximately compensated for the differences in money market rates between the currency areas. As mentioned above, after taking transaction costs into account, the observed deviations from covered interest parity pointed to data imperfections rather than to market inefficiencies, and were negligible, all in all. During the course of 2008, however, a relatively large deviation emerged. In the money markets, US dollar interest rates based on the LIBOR rate fell below the corresponding interest rates in the euro area without the swap rate simultaneously taking a negative value, thus compensating for the change in the interest rate differential.[8] A deviation from covered interest parity arose (in this case, a negative dollar basis) which, with the opposite sign, corresponds to a positive euro basis.[9]

Covered interest parity deviations during and after the financial crisis significant, …

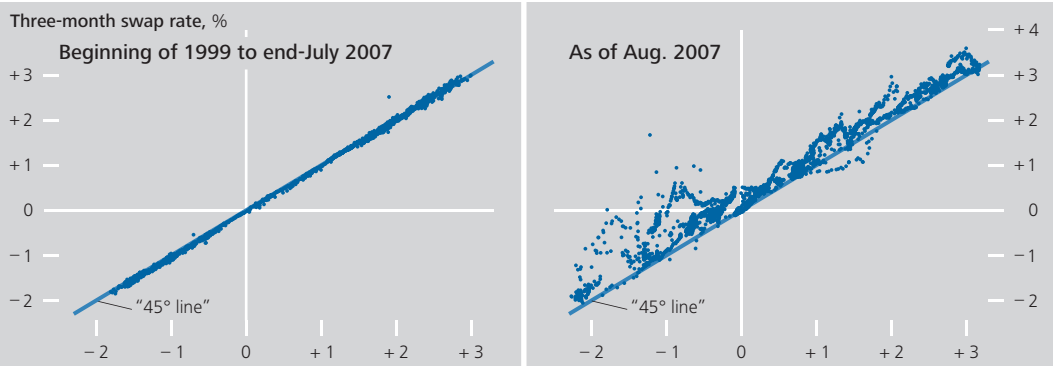
In September 2008, following the bankruptcy of the US investment bank Lehman Brothers, a positive swap rate even came into effect in the short term, although the interest rate differential between the United States and the euro area remained negative. Thus, the forward exchange rate of the euro against the US dollar rose above the spot rate; the forward markets priced in an appreciation of the euro. An investment in the euro area was therefore doubly lucrative, owing both to the interest rate advantage in the euro area and to the forward price premium of the euro. The covered interest parity deviation increased and peaked at 289 basis points annualised in terms of three-month money and expressed as a euro basis. A similar reaction was observed during the intensification of the euro area sovereign debt crises in November 2011, when the euro basis rose to as high as an annualised 149 basis points. Although it gradually decreased again until mid-2014, there were also longer-lasting deviations from covered interest parity despite relatively calm market phases in the time that followed.

In recent years, however, such covered interest parity deviations have remained comparatively

8 For information on the use of LIBOR for the analysis of covered interest parity, see footnote 5 on p. 48.
9 For more information, see the box on pp. 52 ff.

Covered interest parity between the United States and the euro area*

Annualised daily data, 4 Jan. 1999 to 31 Dec. 2021



Sources: Refinitiv and Bundesbank calculations. * A single dot indicates the ratio calculated from exchange rates and interest rates for a given trading day. When covered interest parity holds, the dots should be close to the 45° line shown in the chart. Dots above the 45° line denote a positive euro basis against the US dollar. **1** US dollar LIBOR minus euro LIBOR.

Deutsche Bundesbank

… but relatively small in recent years

small. For example, the euro basis expanded once again as the coronavirus spread worldwide from March 2020 onwards, but peaked at no higher than 75 basis points before declining again in the second half of March. This was partly due to coordinated action by the Eurosystem and the Fed as well as the central banks of Canada, the United Kingdom, Japan and Switzerland, which had agreed on additional measures to strengthen the provision of US dollar liquidity.[10] This supported the euro against the US dollar in the spot market, reducing the existing forward price premium of the euro and the underlying expectation of appreciation.

Russia's war of aggression against Ukraine has had relatively little impact on deviations from the covered interest parity of the euro. Since February 2022, the interest rate differential between three-month LIBOR for the US dollar and three-month EURIBOR has widened. This is largely attributable to expectations of a faster monetary policy normalisation in the United States than in the euro area, which has grown further in intensity on the back of the Ukraine war. At the same time, however, the forward market has experienced a positive swap rate, which means that the euro has been trading more strongly on the maturity date of the forward contract. As a result, the euro basis has hardly reacted to the war in Ukraine.

Even recently, although fragmentation risks have been discussed in the euro area and the ECB Governing Council in July 2022 approved, against this background, the establishment of an instrument to protect monetary policy transmission (Transmission Protection Instrument, TPI),[11] the euro basis has remained at a comparatively low level.[12]

10 As part of this coordinated move, it was agreed that in order to enhance the provision of US dollar liquidity, US dollar swaps with a seven-day maturity would no longer be offered only weekly, as hitherto, but on a daily basis. This evidently alleviated market participants' concerns regarding providing the banking system with US dollar liquidity and the prospect of a shortage of US currency. The hitherto negative dollar basis of the euro, the yen and the Swiss franc, which is an indicator of tension in the foreign exchange market, subsequently declined rapidly and the high level of exchange rate volatility fell markedly. The measure therefore helped calm the market.

11 "Subject to fulfilling established criteria, the Eurosystem will be able to make secondary market purchases of securities issued in jurisdictions experiencing a deterioration in financing conditions not warranted by country-specific fundamentals, to counter risks to the transmission mechanism to the extent necessary." See European Central Bank (2022).

12 EURIBOR has been used to calculate the euro basis as of 2022 because LIBOR values for the euro were no longer made available after 31 December 2021. In the past, the three-month EURIBOR for the euro was closely correlated with LIBOR. A comparison with the aforementioned crises is therefore generally possible, but should be interpreted with caution, subject to differences in datasets.

On the interpretation of the dollar or euro basis

According to the covered interest parity theory, the returns on a domestic investment and a foreign investment hedged by a forward transaction are equal. International interest rate differentials on the money market are thus roughly offset by the swap rate, i.e. the percentage deviation of the forward rate from the current spot rate in relation to this spot rate. If this is not the case, there are risk-free profit opportunities (if transaction costs are disregarded), which would theoretically be directly reduced by interest rate arbitrage. Where i_t denotes the domestic interest rate, i_t^* the foreign interest rate for money market loans or investments with a maturity of k periods, t the investment date, $t+k$ the repayment date, $w_{t,t+k}^T$ the forward rate agreed at time t for $t+k$ and w_t^K the exchange rate on the spot market, each expressed in foreign currency units per domestic currency unit, the equilibrium condition of covered interest parity, where arbitrage gains are not possible, is approximately:[1]

$$(1) \quad i_t + \frac{w_{t,t+k}^T - w_t^K}{w_t^K} = i_t^*$$

In contrast to theory, however, longer-lasting deviations from covered interest parity have been observed empirically since 2007. In the extensive literature on this topic, this deviation is generally referred to as a basis, or more specifically the cross-currency basis. The cross-currency basis is a dimensionless variable expressed in percentage points. How it is formulated depends on the choice of reference currency. The literature mostly looks at the cross-currency basis of the US dollar. If the partner currency is the euro, the cross-currency basis of the US dollar (the dollar basis) can be written as follows:

$$(2) \quad dollar\ basis_t^{euro} = \underbrace{i_t^{dollar}}_{\substack{costs\ of\ direct \\ US\ dollar\ financing}} - \underbrace{\left(i_t^{euro} + \frac{w_{t,t+k}^{euro\ T} - w_t^{euro\ K}}{w_t^{euro\ K}} \right)}_{\substack{costs\ of\ synthetic \\ US\ dollar\ financing}}$$

The exchange rate w^{euro} is defined here in units of US dollar per euro.[2] The academic literature on this topic focuses in particular on the frequently observed phenomenon of a negative dollar basis. The dollar basis can be interpreted as the difference between direct US dollar financing and "synthetic" US dollar financing.[3] The difference between these two financing options played a role in the financial crisis, when foreign commercial banks were no longer able to directly refinance their US dollar-denominated liabilities via US dollar loans in

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1 The no-arbitrage condition can be derived as follows: an interest rate arbitrageur receives a safe return of $(1+i)$ for a certain investment amount A expressed in domestic currency and invested domestically. If, instead, the arbitrageur were to invest investment amount A abroad, they would first have to convert it into foreign currency units on the spot market. The return on the alternative foreign investment in foreign currency is therefore $[(1+i^*) \cdot w_t^K]\ A$. It is assumed that the interest rate arbitrageur hedges against exchange rate risks on the forward market; they sell the income from foreign investment expressed in foreign currency at t in a forward transaction $t+k$ at the forward exchange rate $1/w_{t,t+k}^T$ for domestic currency and receive $[(1+i^*) \cdot w_t^K/w_{t,t+k}^T]\ A$. The risk-neutral interest rate arbitrageur is indifferent to investing domestically versus investing abroad if the yields from the investments are equal. This condition is met if $(1+i)\ A = [(1+i^*) \cdot w_t^K/w_{t,t+k}^T]\ A$ or equivalent $(1+i) \cdot w_{t,t+k}^T/w_t^K = (1+i^*)$ and $((1+i^*) - (1+i))/(1+i) = (w_{t,t+k}^T - w_t^K)/w_t^K$ or $(i^*-i)/(1+i) = (w_{t,t+k}^T - w_t^K)/w_t^K$. If i is relatively small, the literature approximates $1+i \approx 1$ or $i^*-i \approx (w_{t,t+k}^T - w_t^K)/w_t^K$.

2 In order to improve comparability, the quantity quotation of the euro has been retained here, contrary to what is often the case in the literature.

3 A negative dollar basis means the cost of direct US dollar financing is lower than the cost of synthetic US dollar financing. At the same time, from the perspective of an investor from the United States, the yield on a money market investment in the euro area is higher than that on a comparable investment in the United States.

the US interbank market (direct US dollar financing).[4] Instead, they relied on synthetic financing. This is where a loan is taken out in a currency other than the US dollar, i.e. in euro, for example, and then exchanged for US dollars. At the time of transaction t, the loan amount denominated in euro is sold against US dollars using a swap transaction at the then-valid spot rate $w^{euro\ K}$ and at the same time bought back at the forward exchange rate $w^{euro\ T}$ agreed today for the end of the term $t+k$. The dollar basis of the euro as the difference between the money market rates in the United States, i^{dollar}, and the sum of the money market rate in the euro area, i^{euro}, and the swap rate exactly corresponds to the difference between the two types of financing described. The cost of synthetic dollar financing is higher than the euro interest rate, i^{euro}, only if the forward exchange rate of the euro is traded at a mark-up against the spot price, i.e. where $w^{euro\ T} > w^{euro\ K}$. A negative dollar basis implies that the cost of direct US dollar financing is lower than the cost of synthetic US dollar financing. At the same time, from the perspective of an investor from the United States, the yield on a money market investment in the United States is lower than that of a comparable investment in the single currency area.

This report looks at the euro basis instead of the dollar basis. The euro basis corresponds exactly to the US dollar basis with the sign inverted.[5]

(3) $$euro\ basis_t^{dollar} = \underbrace{i_t^{euro}}_{\substack{costs\ of\ direct \\ euro\ financing}} - \underbrace{\left(i_t^{dollar} - \frac{w_{t,t+k}^{euro\ T} - w_t^{euro\ K}}{w_t^{euro\ K}} \right)}_{\substack{costs\ of\ synthetic \\ euro\ financing}} = -dollar\ basis_t^{euro}$$

Transaction costs have not been taken into account in previous analyses of the cross-currency basis. The equations assume that it is possible to buy and sell at the same rate. In fact, however, two rates are usually quoted in the financial markets. First, the bid rate, i.e. the price at which a currency can be sold from an arbitrageur's perspective. Second, the ask rate, at which it can be purchased from an arbitrageur's perspective. The bid rate is, in this case, below the ask rate.[6] In the case of synthetic euro financing, which an interest rate arbitrageur would use when the euro basis is positive, the relevant factors are the euro ask rate (purchase of euro today, i.e. at t) for the spot transaction described above and the euro bid rate (sale of euro at the forward rate known today, i.e. at t, at time $t+k$) for the forward transaction.[7] If the conditional equation for the cross-currency basis of the euro (3) is corrected by the transaction costs resulting from the bid-ask spread, the fol-

4 See also pp. 56.
5 If the euro basis is positive, the cost of direct euro financing is higher than the cost of synthetic euro financing.
6 From an arbitrageur's perspective, under these circumstances, buying and selling the euro at the same time entails a loss that usually represents the transaction costs.
7 In the case of synthetic euro financing, a US dollar loan is taken out in the US money market at the favourable US interest rate i_t^{dollar}. The US dollar loan amount is exchanged for euro on the spot market. This means that the arbitrageur purchases euro today, i.e. at t, on the spot market at the ask rate $w(ask)_t^{euro\ K}$. In order to be able to repay the US dollar loan amount at maturity $t+k$, without exchange rate risks, the arbitrageur sells the euro amount set to be freed up at $t+k$ in a forward transaction at the bid rate $w(bid)_{t,t+k}^{euro\ T}$ known at t.

Euro basis and transaction costs

Basis points, monthly averages

Source: Refinitiv. **1** Euro basis calculated using money market rates (three-month LIBOR). **2** Transaction costs derived from the bid-ask spread.

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lowing is true in the case of synthetic euro financing:[8,9]

$$(4)\quad euro\ basis_t^{dollar} = i_t^{euro} - \Bigg(i_t^{dollar} - \frac{w_{t,t+k}^{euro\ T} - w_t^{euro\ K}}{w_t^{euro\ K}} \underbrace{- \frac{w(bid)_{t,t+k}^{euro\ T}}{w(ask)_t^{euro\ K}} + \frac{w_{t,t+k}^{euro\ T}}{w_t^{euro\ K}}}_{correction\ factor} \Bigg)$$

As the correction factor of synthetic euro financing is positive,[10] the costs of synthetic euro financing on the basis of the actual bid and ask rates are higher than those shown in the (uncorrected) cross-currency basis. The positive, unadjusted euro basis is therefore reported as too high.[11]

Transaction costs, which are reflected in bid-ask spreads, mean that the uncorrected cross-currency basis overestimates arbitrage opportunities. A necessary but insufficient condition for arbitrage is that the uncorrected cross-currency basis is higher in terms of value than the transaction costs captured in the correction factor. This was indeed the case when the euro basis expanded markedly against the US dollar during the crises and between 2015 and 2020. The observed deviations from covered interest parity can therefore only be explained to a small extent by the bid-ask spread.

8 The correction consists of replacing the swap rate on the basis of mid-market rates with the swap rate on the basis of euro ask-spot and bid-forward rates. The euro basis (equation (3)) is thus: $euro\ basis_t^{dollar} = i_t^{euro} - i_t^{dollar} + (w(bid)_{t,t+k}^{euro\ T} - w(ask)_t^{euro\ K})/w(ask)_t^{euro\ K}$. Reformulation produces: $euro\ basis_t^{dollar} = i_t^{euro} - i_t^{dollar} + (w(bid)_{t,t+k}^{euro\ T}/w(ask)_t^{euro\ K} - 1)$. 1 can be replaced by the expression $-(w_{t,t+k}^{euro\ T} - w_t^{euro\ K})/w_t^{euro\ K} + w_{t,t+k}^{euro\ T}/w_t^{euro\ K}$. Taking into account the relevant bid and ask rates, the euro basis is therefore: $euro\ basis_t^{dollar} = i_t^{euro} - i_t^{dollar} + w(bid)_{t,t+k}^{euro\ T}/w(ask)_t^{euro\ K} + (w_{t,t+k}^{euro\ T} - w_t^{euro\ K})/w_t^{euro\ K} - w_{t,t+k}^{euro\ T}/w_t^{euro\ K}$. Finally, reformulation produces equation (4). For information on the importance of the spread between bid and ask rates in the event of deviations from covered interest parity due to a decline in market liquidity, see Borio et al. (2016b), pp. 48-49.

9 If the euro basis were negative, the foreign exchange trader would, by contrast, sell euro on the spot market and buy it back on the forward market. In these circumstances, the selling price of the euro (bid rate) would be relevant for spot transactions and the purchase price of the euro (ask rate) would be relevant for forward transactions.

10 The correction item is positive because the mid-market rate (w) is lower than the ask rate and higher than the bid rate.

11 The bid and ask rates differ for money market instruments, too, although this is not taken into account in the above equation. If these transaction costs were also taken into account, the correction factor would be even greater.

Causes of uncovered interest parity deviations

Risk premia, the resulting liquidity bottlenecks in foreign currencies, additional regulatory provisions for banks and unilateral monetary policy easing measures are cited in the academic literature as possible causes of a violation of covered interest parity. The aforementioned reasons either contribute to a shift in the demand for exchange rate hedging[13] or to a reduction in arbitrage opportunities.

The US dollar often appreciates in times of crisis, as it is considered particularly safe

In times of crisis, investors often weight their portfolios more heavily in favour of US dollar-denominated securities because these investments are considered to be particularly safe. As a result, the euro and other major currencies frequently trade weaker against the US dollar on the spot market.[14] Empirical evidence shows that a positive euro basis can build up in such times. This is because, in these cases, risk and market players' aversion to risk increase so sharply that trading activity, which could exploit profit opportunities, decreases or even dries up completely.

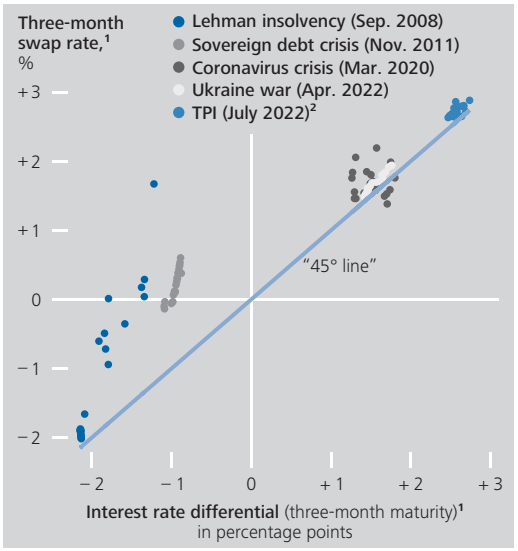
At the same time, risk premia build up

This is mainly due to credit risk. With covered interest arbitrage, arbitrageurs do hedge against exchange rate risk. However, the risk of a counterparty defaulting is not covered. In such a case, the profit opportunities resulting from a covered interest parity deviation are therefore not risk-free. If interest rate arbitrageurs are risk-averse and institutions in the different currency areas are affected by a default risk to varying degrees, the relatively safer counterparty demands a premium for assuming the relative counterparty risk. This premium is likely to be high, especially in times of crisis, and it is reflected in a deviation from covered interest parity. The amount of the premium is influenced, in particular, by market participants' attitude to risk and the level of the assumed relative counterparty risk.

The relevant literature often uses the Cboe Volatility Index (VIX) of the S&P 500 stock index as an important measure of general risk appetite in the financial markets.[15] A more specific measure of counterparty risk is the LIBOR-OIS spread. Unlike LIBOR, the rate at which banks provide each other with unsecured loans on average, the overnight index swap (OIS) involves only the difference between the interest payments owed to each other being exchanged. The OIS therefore entails a comparatively low credit risk. For this reason, the literature uses the LIBOR-OIS spread for the euro to approximate the systemic risk of euro area counterparties defaulting.[16] Empirically, it can be observed that, especially in times of crisis,

Covered interest parity between the United States and the euro area in crisis periods*

Annualised daily data



Sources: Refinitiv and Bundesbank calculations. * A single dot indicates the ratio calculated from exchange rates and interest rates for a given trading day. When covered interest parity holds, the dots should be close to the 45° line. **1** Until end-2021 LIBOR rates for three-month money market funds; from 2022 LIBOR rates for the United States and EURIBOR rates for the euro area. **2** The ECB Governing Council approved the Transmission Protection Instrument (TPI) on 21 July 2022.

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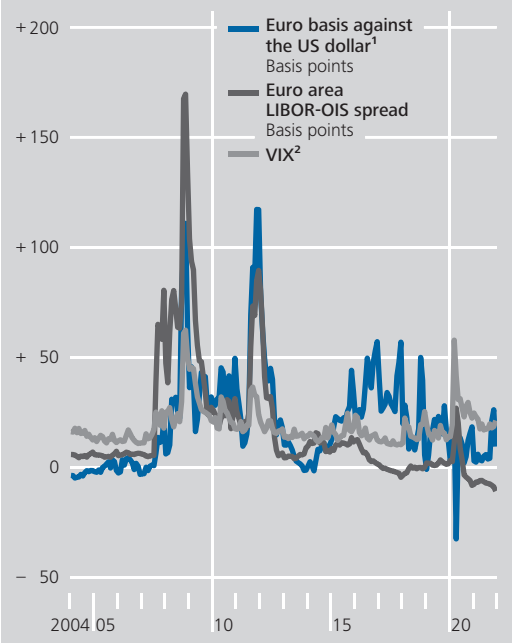
13 See Abbassi and Bräuning (2021).
14 For a more in-depth analysis of the relevant relationships, see Deutsche Bundesbank (2014). On the basis of the empirical results contained therein, the Swiss franc can be described as a safe haven currency in addition to the US dollar.
15 The VIX is calculated and published in real time by the Chicago Board Options Exchange (Cboe). Although it refers to the US stock market, it is also often deployed as a general measure of global uncertainty. See Scheicher (2003).
16 See, for example, Borio et al. (2016b).

Euro basis against the US dollar, euro area LIBOR-OIS spread and volatility index

Monthly averages



Sources: Refinitiv and Bundesbank calculations. **1** Euro basis calculated from money market rates (three-month LIBOR). **2** Cboe Volatility Index derived from the S&P 500 index.

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the VIX and LIBOR-OIS spreads have a positive relationship with the euro basis against the US dollar. All three variables often rise markedly in times of financial turmoil.[17]

Our own econometric estimates point to the importance of relative counterparty risk in the banking sector when explaining the euro basis against the US dollar.[18] They show that investors taking counterparty risk into consideration when financial markets are strained can be one reason for the covered interest parity deviations that have been identified.

Shortage of US dollars forces players to turn to indirect dollar financing

As a result of the sharp loss of confidence in the interbank sector from mid-September 2008 onwards, some players apparently withdrew from those markets that are important for interest rate arbitrage during this period. A US dollar shortage ensued in the sense that European banks were no longer able to refinance their US dollar-denominated loans – raised, for example, to invest in the US mortgage market – through the US interbank market. Since dollar financing through US commercial banks almost came to a standstill at that time, European banks began to finance their dollar liabilities indirectly by entering a swap. To do so, they were able to obtain euro loans from the Eurosystem, which they transferred in US dollars via a foreign exchange swap with other commercial banks. This increased demand for foreign exchange swaps, where euros were sold against US dollars on the spot market and bought back in a forward transaction. As demand for foreign exchange swaps was largely one-sided because US banks were not willing to offer the necessary offsetting transactions at the given exchange rates owing to the high perceived counterparty risk, a forward price premium for the euro built up.[19] This resulted in the aforementioned covered interest parity deviations of up to 289 basis points, which represented a significant increase in the price of indirect dollar financing.

Unlimited swap lines eliminated foreign currency shortage

The establishment of unlimited US dollar swap lines between the Fed and the ECB as well as other central banks as of 13 October 2008 made it possible for banks outside the United States to obtain US dollar funding via their na-

17 See Schlegel and Weiss (2017).
18 See the box on pp. 57 ff.
19 See Baba and Packer (2009). The study concludes that, after the onset of the financial market turmoil, swap rates reflected relative counterparty risks in the period from 9 August 2007 to 12 September 2008. In addition, it comes to the conclusion that "[a]fter the failure of Lehman Brothers in September 2008, deviations from covered interest parity (CIP) were negatively associated with the creditworthiness of US financial institutions (as well as that of European institutions), consistent with the deepening of a dollar liquidity problem into a global phenomenon. US dollar term funding auctions by the ECB, SNB, and BoE, as well as the US Federal Reserve commitment to provide unlimited dollar swap lines are found to have ameliorated the FX swap market dislocations." For data availability reasons, the sample period of our own econometric study does not begin until October 2008, meaning that the effect of the US dollar shortage, which pushed the euro basis against the US dollar to a record level at the end of September and was eliminated by the unlimited swap lines in mid-October, plays only a minor role.

Empirically testing the validity of uncovered and covered interest parity

The validity of uncovered and covered interest parity can be tested using econometric methods.[1] The estimations for different periods and currency pairs presented below are based on data for the period from the beginning of 1999 to the end of 2021.[2]

Uncovered interest parity

To test the validity of uncovered interest parity between the euro area and four other currency areas, the United States (US), the United Kingdom (UK), Japan (JP) and Switzerland (CH), the econometric equation

$$ln(w_{t+k}^K) - ln(w_t^K) = \alpha_0 + \alpha_1(i_{k,t}^* - i_{k,t}) + \varepsilon_{t+k}$$

is estimated for the respective currency pairs using the least squares estimator.

Here, w_t^K denotes the spot rate in quantity quotation (units of foreign currency per euro) at time t, w_{t+k}^K the same rate at time $t+k$, $i_{k,t}$ the interest rate on three-month money market funds in the euro area and $i_{k,t}^*$ the same rate abroad (US, UK, JP and CH). Since the interest instruments have a maturity of three months, the exchange rate change is calculated over the same period.[3] The parameter k is set to 90 calendar days.[4] In order to avoid inherent overlaps in the dependent variables resulting from the use of daily data, only the respective end-of-quarter values are used in the estimations. The estimation results are consistent with uncovered interest parity if the common null hypothesis $\alpha_0 = 0$ and $\alpha_1 = 1$ is not rejected at a given significance level.

The following compares results for three different samples: the first runs from the establishment of monetary union (the first quarter of 1999) up to but not including the outbreak of the financial crisis (the first quarter of 2007),[5] the second runs from the outbreak of the global financial crisis (the third quarter of 2007) to the fourth quarter of 2021, and the third covers both samples, i.e. the first quarter of 1999 to the fourth quarter of 2021. The full sample was subdivided in order to see whether the relationship between the exchange rate change and the interest rate differential might have altered.

The table on p. 58 shows the estimation results for the various samples and currency areas. It includes the point estimates for the constant α_0 and the slope coefficient α_1, their individual statistical significance and also the results of an F-test, which is used to test the validity of the aforementioned null hypothesis implied by uncovered interest parity.

While the validity of uncovered interest rate parity for the pre global financial crisis sample must be rejected at a 5% significance level for all four currency pairs, its validity in the post global financial crisis sample is now rejected at the same significance level

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1 For more information on the theoretical foundations of the econometric methods presented, see Deutsche Bundesbank (2005).
2 Data sources: Refinitiv and Bundesbank calculations.
3 As the interest rate on three-month money market funds is expressed as a percentage per annum, the dependent variable has been multiplied by a factor of 400 so that the rate of change is also expressed as a percentage per annum.
4 If no value is available for the exchange rate at either time t or time t+90, the corresponding observations are excluded from the estimations.
5 As the value of the exchange rate from the following quarter is used in the calculation of the dependent variables, this sample already ends two quarters before the outbreak of the financial crisis.

Estimation results for uncovered interest parity*

Item	USA	UK	Japan	Switzerland
Full sample (Q1 1999 to Q4 2021)				
Constant	0.57	0.19	0.37	–3.91
Slopes	–1.53	0.59	0.30	–2.16
p-value ($H_0: \alpha_0 = 0$ and $\alpha_1 = 1$)	0.18	0.97	0.79	0.22
Pre global financial crisis (Q1 1999 to Q1 2007)				
Constant	4.78*	5.72	–7.90	–9.82**
Slopes	–4.95***	–3.78	–3.56	–6.52**
p-value ($H_0: \alpha_0 = 0$ and $\alpha_1 = 1$)	0.00(***)	0.04(**)	0.05(**)	0.00(***)
Post global financial crisis (Q3 2007 to Q4 2021)				
Constant	–2.37	–4.54*	0.20	–2.94
Slopes	1.29	11.08**	4.01***	0.41
p-value ($H_0: \alpha_0 = 0$ and $\alpha_1 = 1$)	0.60	0.09(*)	0.04(**)	0.11

* The econometric models were estimated using least squares regressions, with Newey-West standard errors being applied to account for potential heteroscedasticity and autocorrelation of the residuals. A p-value of less than 0.01 (***), 0.05 (**) or 0.10 (*) in the bottom row of the respective estimation period-specific table section implies rejection of the null hypothesis, i.e. validity of uncovered interest parity, at a significance level of 1%, 5% and 10%, respectively, for the corresponding period.

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only for the yen.[6] These results should be interpreted with caution due to relatively low estimation accuracy and unstable parameter values.[7] It is noticeable, however, that the estimated slope coefficients in the more recent sample are significantly higher than those in the pre financial crisis sample and now all have a positive sign; in the earlier sample, their signs were still consistently estimated to be negative. The results imply that since the global financial crisis – in contrast to beforehand – it has tended to be the currency in which the higher-interest investment is denominated that depreciates over the investment period. Despite the low estimation accuracy, it can therefore be concluded that the empirical evidence for the post financial crisis sample – when taken as a whole – is more in line with uncovered interest parity than is the case for the earlier sample running from the establishment of European monetary union to the outbreak of the financial crisis.

Covered interest parity

The following econometric equation (which is broadly similar to the above approach) is estimated in order to test the validity of covered interest parity:

$$ln(w^T_{t,t+k}) - ln(w^K_t) = \beta_0 + \beta_1(i^*_{k,t} - i_{k,t}) + v_t$$

This estimation uses all available daily data and not just the end-of-quarter values, as the forward rate $w^T_{t,t+k}$ (unlike the exchange rate 90 calendar days later) is already known at time t, meaning that no information is included in the estimation that is not yet available at time t.[8] Newey-West standard errors are again used to control for autocorrelated residuals. If the common null hypothesis $\beta_0 = 0$ and $\beta_1 = 1$ cannot be rejected, this indicates the validity of covered interest parity.

Based on the results of the F-tests, covered interest parity is clearly rejected for both the pre and post financial crisis samples. This may come as a surprise initially, given that

6 If a significance level of 10% is assumed, the validity of uncovered interest parity must be rejected in the more recent sample for the pound sterling as well.
7 The low estimation accuracy is revealed in the large (in absolute terms) standard errors. Rolling estimations point to a comparatively high degree of instability in the parameters, including within the respective samples.
8 In order for the dependent variable (forward price premium) to be expressed as a percentage per annum like the explanatory variable (international interest rate differential of three-month money market funds), the former was multiplied again by a factor of 400 before the estimations were carried out.

Estimation results for covered interest parity*

Item	USA	UK	Japan	Switzerland
Full sample (1 Jan. 1999 to 31 Dec. 2021)				
Constant	0.16***	0.12*	–0.05	–0.04*
Slopes	0.97***	0.90***	0.99***	0.97***
p-value ($H_0 : \beta_0 = 0$ and $\beta_1 = 1$)	0.00(***)	0.00(***)	0.23	0.10
Pre global financial crisis (1 Jan. 1999 to 31 July 2007)				
Constant	–0.03***	–0.11***	–0.13***	–0.01
Slopes	1.01***	1.01***	0.98***	1.01***
p-value ($H_0 : \beta_0 = 0$ and $\beta_1 = 1$)	0.00(***)	0.00(***)	0.00(***)	0.00(***)
Post global financial crisis (1 Aug. 2007 to 31 Dec. 2021)				
Constant	0.28***	0.15	–0.04	–0.07***
Slopes	0.94***	0.89***	0.92***	0.88***
p-value ($H_0 : \beta_0 = 0$ and $\beta_1 = 1$)	0.00(***)	0.02(**)	0.01(***)	0.00(***)

* The econometric models were estimated using least squares regressions, with Newey-West standard errors being applied to account for potential heteroscedasticity and autocorrelation of the residuals. A p-value of less than 0.01 (***), 0.05 (**) or 0.10 (*) in the bottom row of the respective estimation period-specific table section implies rejection of the null hypothesis, i.e. validity of covered interest parity, at a significance level of 1%, 5% and 10%, respectively, for the corresponding period.

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the point estimates – when compared with those for uncovered interest parity – are very close to the postulated values for the parameters. However, the estimation accuracy is much higher for these estimations than for the estimations of uncovered interest parity, which increases the discriminatory power of the tests and leads to the null hypothesis being rejected if the estimated coefficients deviate even slightly from the postulated values. Notwithstanding the qualitatively unchanged test results, these figures show that the estimated values – in particular for the slope coefficients – for the post global financial crisis sample and for every currency pair differ much more than before from the values that are in line with covered interest parity.

Therefore, a further simple econometric analysis was conducted to examine the impact of some of the explanatory variables described in this article on the euro basis against the US dollar, which denotes the difference between euro area and US money market rates plus the euro-US dollar swap rate.[9] The analysis is complicated by the fact that data are not available for all explanatory variables over the full sample and that some of the various explanatory variables are themselves closely empirically related. Both factors influence the statistical inference. The estimated econometric model is:

$$
\begin{aligned}
euro\ basis_t^{dollar} = \\
&\gamma_0 + \gamma_1 (LIBOR_t^{euro} - OIS_t^{euro}) \\
&+ \gamma_2 (LIBOR_t^{dollar} - OIS_t^{dollar}) \\
&+ \gamma_3 (deposit_t^{euro} - LIBOR_t^{euro}) \\
&+ \gamma_4 (deposit_t^{dollar} - LIBOR_t^{dollar}) \\
&+ \gamma_5 BaselIII_t + \zeta_t
\end{aligned}
$$

The explanatory variables are the LIBOR-OIS spreads in the euro area and the United States, the IOER-LIBOR spreads in the two currency areas and a Basel III dummy.[10] As shown on pp. 56/57 and 62, the LIBOR-OIS spreads are intended to approximate coun-

9 For reasons of consistency with the previous estimations, the euro basis was also calculated in the following empirical analysis on the basis of the logarithmic forward and spot exchange rates. However, this has little impact on the estimation results.

10 In the literature, such equations are usually estimated in first differences, as often the non-stationarity of the basis cannot be rejected. However, as this is not the case for the currency pair and three-month maturity examined here, the estimation can be conducted with data in levels. This approach is also consistent with Borio et al. (2018), according to which the basis for three-month money market funds is stationary, whereas in the case of longer maturities it is usually necessary to assume non-stationarity. Nevertheless, this series also shows some persistence.

Estimation results for the euro basis against the US dollar*

Item	Estimated coefficient
Constant	14.81**
LIBOR-OIS spread euro	117.64***
LIBOR-OIS spread dollar	–67.10**
Deposit-LIBOR euro	11.14
Deposit-LIBOR dollar	–17.34
Basel III	16.54*
Coefficient of determination (R^2)	0.56

* The basis is expressed in basis points. The model was estimated using a least squares regression, with Newey-West standard errors being applied to account for potential heteroscedasticity and autocorrelation of the residuals. ***, ** and * denote coefficients which, at a significance level of 1%, 5% and 10%, are statistically different from 0. Owing to data availability constraints, the estimation period was reduced somewhat compared with the previous estimates to 14 October 2008 to 31 December 2021.

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terparty risk and the IOER-LIBOR spreads are intended to approximate the minimum limit for the cost of equity in the respective currency areas. IOER (interest rate on excess reserves) is the interest rate paid to commercial banks for excess reserves at the central bank. The Basel III dummy has a value of 1 as of 2015, before which it is equal to 0. This is a simple way of controlling for regulatory changes in connection with the implementation of the Basel III decisions.[11]

The estimated coefficients in the above table all show the expected signs.[12] However, only the coefficients of the LIBOR-OIS spreads and those of the Basel III dummy are also statistically significant. The insignificance of the other parameters could, however, be due to the high correlation between the corresponding variables and the spread variables already contained in the model.[13] The econometric estimates identify relative systemic counterparty risk in particular as an important factor in explaining the euro basis against the US dollar. In addition, they suggest that the stricter regulatory rules in the banking sector also have an impact on the level of deviations from covered interest parity.[14]

11 See also Du et al. (2018), in which an equivalently coded dummy variable is used to model the potential effect on the dollar basis of the introduction in 2015 of the leverage ratio. Its statistical significance supports the hypothesis that the leverage ratio introduced in 2015 is a factor in arbitrage considerations.
12 Interest rate spreads have been added to the model separately for both currency areas and not in relation to each other, as it is not necessarily possible to assume that the euro basis against the US dollar will respond symmetrically to changes in the corresponding variables in the United States and the euro area.
13 Adding more explanatory variables, such as the VIX volatility index, would further exacerbate the multicollinearity problem, as this variable and the LIBOR-OIS spreads are likewise closely linearly related.
14 The marginal significance level of the Basel III indicator variable is 0.06. It is thus slightly above the 5% significance level but clearly below the 10% significance level.

tional central banks.[20] The swap agreement enabled the central banks to provide domestic banks with unlimited quantities of US dollars without having to use their foreign reserves.[21] As a result, the US dollar shortage and, in turn, the deviations from covered interest parity receded again, to begin with.[22]

Significant and persistent deviations from covered interest parity possible even outside times of crisis, …

However, the explanations provided so far are less able to explain why, since the end of 2014, there have been repeated instances of noticeable and persistent deviations from covered interest parity, including in periods of market calm. Researchers from the Bank for International Settlements (BIS) provide a possible explanation.[23] According to their studies, two necessary conditions must be met for such deviations to occur outside times of crisis. First, there needs to be imbalanced and relatively price-inelastic demand for hedging FX risk – for example, FX hedging demand for US dollars against the euro. In this example, this led to market pressure towards a positive euro basis. Second, there must be reasons why seemingly risk-free arbitrage does not occur as soon as the basis begins to widen.

… if two conditions are met

According to the studies mentioned, the relatively price-inelastic demand for hedging from the various market participants is key to a positive basis in terms of size. Thus, banks demand foreign exchange swaps to hedge a currency mismatch on their balance sheets. Such mismatches can arise, for example, if a substantial portion of their deposits are denominated in a bank's domestic currency, e.g. euro, but its exposures are denominated at least partially in foreign currency, e.g. US dollars. Institutional investors like insurers and pension funds, meanwhile, hedge a portion of their international exposures against exchange rate risks using forward contracts.[24] Non-financial corporations also demand forward contracts to hedge against exchange rate fluctuations, for instance.

Before looking more closely at the supply-side reasons why seemingly available arbitrage opportunities are left untaken, this article first examines whether the demand-side condition for the existence of a positive and relatively persistent euro basis against the US dollar since the end of 2014 has been met. The unilateral monetary easing in the euro area and the associated increase in the interest rate differential are indeed likely to have contributed to an imbalance in the demand for foreign exchange swaps.[25] Hence, the difference in return probably prompted euro area investors to invest more money in the United States, while at least partially hedging the resulting exchange rate risks.

Monetary policy contributes to deviations from covered interest parity

At the same time, the empirical evidence suggests that US firms stepped up their issuance of euro-denominated bonds. Thus, issuance volumes of euro-denominated US corporate bonds (reverse yankees) rose markedly between 2015 and 2018, for instance, even though hedging costs were high. Brophy et al. (2019) find that quantitative easing in the euro area significantly lowered credit risk premia in euro area bond markets. For some US firms, this reportedly made issuance in euro bond markets more attractive than in US dollar bond markets,[26] while the hedging of the associated

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20 On 13 October 2008, the Bank of England, the Bank of Japan, the ECB, the Federal Reserve and the Swiss National Bank announced joint measures to improve liquidity in short-term US dollar funding markets. These were tenders of US dollar funding at 7-day, 28-day and 84-day maturities at fixed interest rates for full allotment. In order to accommodate whatever quantity of US dollar funding is demanded, unlimited US dollar swap lines were introduced between the Federal Reserve and the three aforementioned European central banks. See Federal Reserve (2008).
21 See European Central Bank (2016).
22 For more information on the effectiveness of the US dollar swap lines, see Bahaj and Reis (2022), who use an empirical study to demonstrate that the swap lines put a ceiling on deviations from covered interest parity.
23 See Borio et al. (2016a, 2016b, 2018).
24 Borio et al. (2018) cite findings by Barclays (2015), which find that Japanese insurers hedge around 60% to 70% of their exchange rate risk, while Japanese pension funds did not transact any such hedging for the foreign currency-denominated bonds in their portfolios.
25 Borio et al. (2016b) refer in this context to divergent monetary policies in an ultra-low interest rate environment. For information on how monetary policy contributed to deviations from covered interest parity, see European Central Bank (2017), p. 42.
26 See also Cerutti et al. (2021).

currency positions contributed to an increase in the swap rate over and above the US interest rate advantage. On balance, the authors note, the violation of covered interest parity had been exacerbated by the increasing issuance of reverse yankees. Both effects thus had a unilateral supportive impact on demand and generated the aforementioned pressure from the demand side. Both euro area investors investing in the United States and US firms issuing euro-denominated bonds hedged against a depreciation of the US dollar against the euro.

Interest rate arbitrage more costly due to regulatory adjustments, …

On the supply side, the BIS's studies refer to regulatory adjustments and a change in banks' risk management practices which, in combination, make it costly to expand the balance sheet, thus inhibiting arbitrage.[27] The BIS found that the balance sheet expansion associated with arbitrage called for the provision of relatively high-yielding capital once it exceeded a certain limit. If the euro basis only just offsets the cost of capital or is even less than that, arbitrage is not worthwhile. Consistent with this approach, there is no return equalisation below the floor represented by the cost of equity associated with the arbitrage trade. Hence, the euro basis does not close.[28]

… as a result of the Basel III decisions …

The Basel III decisions are cited in connection with the rising cost of interest rate arbitrage owing to a tightening of the capital rules. These decisions were announced in December 2010 and envisaged the phasing-in of additional regulatory requirements for banks between 2013 and 2019.[29] The reform package saw the Basel Committee learn the lessons from the financial crisis, in particular by strengthening the resilience of the banking sector by improving the regulatory capital base in qualitative and quantitative terms.

… and due to amendments to the minimum capital requirement

Thus, according to these decisions, the minimum capital requirement – i.e. the prescribed minimum ratio between regulatory capital and risk-weighted assets – has been supplemented by various capital buffers. These buffers were phased in between 2016 and 2019.[30] In addition to stricter quantitative requirements, higher standards have also been set for the quality of equity capital. Thus, the minimum Common Equity Tier 1 ratio was raised by a total of 2.5 percentage points to 4.5% between 2012 and 2015.[31] Banks are thus required to hold more capital of a higher quality against their risk-weighted assets. This gives banks greater scope to absorb going concern losses, but it also drives up the cost of risk-weighted assets and thus tightens limits to arbitrage.

More attention paid to risk

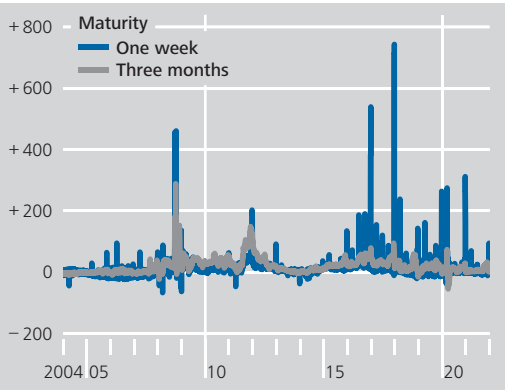
At the same time, the regulatory requirements were increased to give greater consideration to risk and tighten the calculation of risk-weighted assets. This made it less easy to achieve the

27 See Borio et al. (2016a and 2016b).
28 For the calculation of the floor, see Du et al. (2018).
29 See Deutsche Bundesbank (2011) and Basel Committee on Banking Supervision (2010).
30 The revision of the regulatory definition of capital and the introduction of new minimum requirements are discussed in Deutsche Bundesbank (2011), p. 11 and p. 19.
31 The Common Equity Tier 1 ratio expresses Common Equity Tier 1 capital as a percentage of risk-weighted assets. The components of Common Equity Tier 1 capital are presented in Deutsche Bundesbank (2011), p. 11. Overall, the stricter regulatory requirements under Basel III result in additional costs for interest rate arbitrage that cannot be recorded directly. Du et al. (2018) use the positive difference between the interest rate on excess reserves at the Fed (IOER) and the US LIBOR rate/federal funds rate as a proxy floor for the cost of capital at US banks. This is based on the notion that "… [in] the absence of balance sheet costs, banks should borrow at the federal funds rate/U.S. LIBOR rate and invest risk-free at the IOER, until the federal funds rate/LIBOR rate increases and both rates are equal". Capital costs are also incurred in cases where the positive euro basis is used to borrow at favourable interest rates in the United States and invest the principal in the euro area. The assumed profits need to be adjusted for the cost of capital associated with the investment. If the computed deviations in covered interest parity are adjusted using the aforementioned proxy constructed by Du et al. (2018) for a floor on capital costs at US banks, the hypothetical arbitrage profits of the euro basis against the US dollar are, according to own calculations, around 40% lower on average for the period from 1 January 2015 to 30 December 2018. According to the calculations of Du et al. (2018), the hypothetical arbitrage profits of a negative dollar basis against the Swiss franc, the Danish krone, the euro and the yen decline by around 33% on average between 1 January 2009 and 15 September 2016. The calculations suggest that the deviations in the basis from covered interest parity since the Basel III decisions came into force can probably mainly be attributed to the cost of capital backing, especially as the correction represents merely the estimated cost floor.

prescribed Tier 1 capital ratio.[32] To limit a bank's leverage not only relative to its risk-weighted assets, which are usually based on model assumptions, but in general, a leverage ratio was additionally introduced at a general Tier 1 capital ratio of 3% of a bank's total exposures.[33] Although the leverage ratio must be complied with at all times, it only needs to be disclosed at the end of each quarter. This means that swaps with terms of less than three months are initially only reported on the quarterly balance sheet if they have not yet expired at the end of the quarter.

Annualised euro basis against the US dollar for different swap maturities*

Daily data in basis points



Sources: Refinitiv and Bundesbank calculations. * Euro basis calculated using money market rates (three-month LIBOR).

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Empirical evidence for relevance of leverage ratio

One indication of the relevance of the leverage ratio introduced by supervisors is that quarter-end dates since 2015 have seen a marked increase, with numerous deviations from covered interest parity being calculated for a one-week or one-month investment period. As the leverage ratio is calculated at a certain point in time in the EU and reported to supervisors on the basis of quarter-end levels, banks may have desisted from undertaking swap transactions at the end of the quarter in order to report higher leverage ratios and save capital costs.[34]

Basel III decisions safeguarding bank liquidity reduce scope for arbitrage

A further rule under the Basel III decisions is designed to safeguard bank liquidity. The financial crisis saw a decline in trading activity in secured and unsecured money markets – as exemplified by the US dollar shortage – which led to liquidity bottlenecks in the banking sector and meant that short-term funding was no longer assured in some cases. To keep liquidity risk in check, measures aimed at safeguarding bank liquidity were adopted as part of the Basel III regime. Since January 2015, commercial banks have been required to meet a minimum liquidity coverage ratio (LCR), which was phased in incrementally.[35] This requirement is intended to ensure that a bank has an adequate stock of unencumbered high-quality liquid assets (HQLA) to meet its liquidity needs for a 30 calendar day liquidity stress scenario.[36] This rule meant that

32 Overall, the denominator in the Tier 1 capital ratio has increased because greater consideration is given to risk. Thus capital has to be set aside for over-the-counter (OTC) derivatives such as foreign exchange swaps to cover the risk of a deterioration in the derivative counterparty's credit quality. Potential risk under stressed conditions is another factor that is accounted for. Thus, all institutions that have supervisory approval to use their own market risk models must additionally calculate a risk amount that estimates the expected change in value in the current portfolio in a stressed market situation. The idea behind this rule is for the denominator to also include those assets which were classified as safe under the previous trading book rules but are nonetheless a source of risk in the event of systemic tension.

33 The leverage ratio was initially introduced purely as an observation ratio before becoming a binding minimum requirement in January 2018. This ratio expresses a bank's Tier 1 capital as a percentage of the sum of its assets and off-balance sheet items, with the risks associated with an item being given as little consideration as possible.

34 See Abbassi and Bräuning (2021). The Basel Committee issued a statement (2018) in response to such leverage ratio window-dressing behaviour, stressing that such behaviour is unacceptable and that the leverage ratio should be complied with not only at the end of the quarter but on an ongoing basis. The BIS notes in this statement (2018) that window dressing, in the form of temporary reductions of transaction volumes with a view to lowering the leverage ratio, runs counter to the aim of sustainably reducing the vulnerability of the banking sector to crises. The incentive to engage in window dressing can be mitigated by switching from quarter-end levels to quarterly averages. In the European Union, however, it was decided that the disclosure and reporting of average leverage ratios should be limited to "large institutions" (Article 451(2) of EU Regulation No 575/2013). The detailed reporting and disclosure rules were implemented in two Implementing Technical Standards that only entered into force in 2021.

35 Introduced as at 1 January 2015, the LCR is defined as the ratio of the stock of HQLA and net cash outflows over the next 30 days. The term "total net cash outflows" is defined as the total expected cash outflows minus total expected cash inflows in the specified stress scenario for the subsequent 30 calendar days. The minimum requirement was set at 60% in 2015 and rose in equal 10 percentage point annual steps to reach 100% in 2019. The rules are outlined in Basel Committee on Banking Supervision (2013), pp. 2-45.

36 See Basel Committee on Banking Supervision (2013), p. 4.

the potential profits from arbitrage were lower than they would have been, had they been calculated using LIBOR rates.

To illustrate how these factors interact, let us assume that US banks (via their branches in the euro area) are able to use the Eurosystem's deposit facility and, for liquidity reasons, prefer to make a higher-interest investment in the private money market.[37] Under these circumstances, the arbitrage profits available in theory should be calculated not using the euro LIBOR but the rate on the Eurosystem deposit facility (for the three-month investment period under consideration), as in Rime et al. (2019).[38] As the Eurosystem deposit facility rate has been below the euro LIBOR over extended periods since 2015, the authors conclude that the opportunities for reaping arbitrage profits that would appear to exist when calculated based on LIBOR rates either did not exist at all or did not exist in the magnitude shown.

It may be concluded overall that important conditions for interest rate arbitrage – conditions that had previously kept deviations from covered interest parity to a minimum – have no longer been met since the financial crisis.

Uncovered interest parity and euro-US dollar exchange rate

Equilibrium mechanism of uncovered interest parity

If investors attempt to capitalise on international interest rate differentials even without hedging, their realised profits will largely depend on how the spot rate evolves. Thus, for example, an investment in the United States, from a domestic investor's perspective, was more lucrative with hindsight than an investment in the euro area if a given US interest rate advantage was not cancelled out or was in fact more than offset by an appreciation of the euro. Since it is not known at the time of investment how exchange rates will develop in future, the investor's investment decision is determined not only by the interest rate differential but also by the expected exchange rate change. According to the uncovered interest parity theory, in the absence of capital controls and given the complete substitutability of investment alternatives, risk-neutral investors will, in the example described above, shift their portfolio into US investments as long as the US interest rate advantage is not eroded by an expected appreciation of the euro against the US dollar. This reallocation has two effects. First, it narrows the interest rate differential. Second, the capital exports to the United States resulting from said reallocation put downward pressure on the euro's exchange rate against the US dollar, all other things being equal. The theory assumes that, given unchanged fundamentals, the exchange rate expected when the investment is unwound is also fixed. An observed depreciation of the euro therefore generates expectations that the single currency will increase in value. This mechanism, taken together, means that returns align perfectly with each other such that uncovered interest parity holds. Accordingly, if investors are risk-neutral, an assumed US interest rate advantage over the euro area for three-month money would have to be offset by an expected appreciation of the euro against the US dollar over the investment period of three months.

Testing uncovered interest parity empirically …

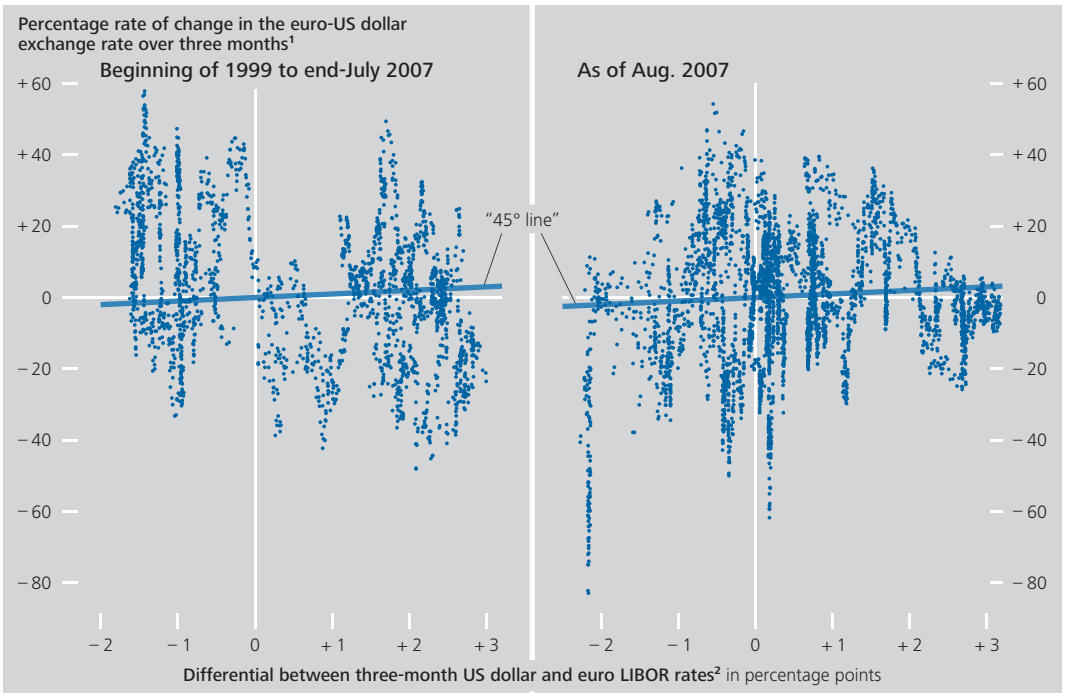
An empirical study of the uncovered interest parity theory conducted recently by the Bundesbank approximates the expected adjustment of the exchange rate based on its actual movements. This approach was already chosen

37 According to the remarks by the Basel Committee on Banking Supervision (2013), assets are eligible as HQLA only if they can be converted easily and immediately into cash at little or no loss of value. The liquidity of an asset depends on the volume to be monetised and the timeframe considered. Assets issued by financial institutions are considered to be relatively illiquid in times of liquidity stress in the banking sector. Balances held in central banks' deposit facility are counted toward the required stock of high-quality liquid assets, meanwhile. The treatment of central bank balances in the LCR is outlined in Federal Financial Supervisory Authority (2015).

38 It should, however, be borne in mind that deposits placed in the deposit facility are callable on a daily basis, which thus gives rise to (minimal) interest rate risk. Covered interest parity, on the other hand, considers investments whose interest rates are fixed over the investment period.

Uncovered interest parity between the United States and the euro area*

Annualised daily data, 4 Jan. 1999 to 31 Dec. 2021



Source: Refinitiv. * A single dot indicates the ratio calculated from exchange rates and interest rates for a given trading day. When uncovered interest parity holds, the dots should be close to the 45° line shown in the chart, which is very flat owing to the different scales of the axes. Deviations from that line should be randomly distributed. **1** A positive value indicates an appreciation of the euro against the US dollar. **2** US dollar LIBOR minus euro LIBOR.

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in the 2005 Monthly Report, meaning that the results are comparable.[39] Assuming rational expectations and risk neutrality on the part of investors, the actual movement of the exchange rate ought to match the expected adjustment on average. Deviations that actually occur ought to be purely random in nature.

… provided no indications of its validity until 2005

If, for individual trading days, the exchange rate change of the euro-US dollar spot rate over three months is compared with the interest rate differential applying in each case to three-month money between the United States and the euro area, marked deviations from uncovered interest parity are evident, with the exchange rate change exceeding the interest rate differential many times over, on average. This phenomenon was evident both between early 1999 and mid-2005 and in the period thereafter. The empirical study presented in the 2005 Monthly Report found, furthermore, that the higher-interest currency tended, on average, to appreciate more than the lower-interest one, which is at odds with the theory.[40] The lack of evidence for the uncovered interest parity theory has been the subject of a host of theoretical and empirical papers.[41] The academic literature listed time-varying risk premia, forecasting errors concerning rational expectations and a phenomenon known as the "peso problem" as potential causes.

Against this backdrop, it is striking that the aforementioned empirical finding cannot be

39 See Deutsche Bundesbank (2005), p. 35. The current study follows the approach used in the 2005 Monthly Report, using the difference between the logarithmic spot rates to approximate the exchange rate change. This avoids the Siegel paradox which arises because otherwise the appreciation rate of one currency does not match the depreciation rate of the other.

40 See Deutsche Bundesbank (2005); this article examines returns on hypothetical currency carry trades between the launch of monetary union and 30 June 2005. As outlined below, a currency carry trade involves borrowing funds in a low-interest currency and investing them in a high-interest currency, and not hedging the transaction.

41 For a comprehensive overview of the literature on the empirical results and explanatory approaches in connection with uncovered interest parity, see Engel (2014).

Less empirical evidence of rejection of this theory since the financial crisis

confirmed for the subsequent period after mid-2005. In the sample from mid-2005 to the end of 2021, the higher-interest currency appreciated on roughly as many days as it depreciated in line with the uncovered interest parity theory. Similar results can be obtained if uncovered interest parity is tested by regressing the actual exchange rate change on the interest rate differential and a constant for different periods.[42] To this end, a dedicated analysis[43] of the euro's exchange rate against the US dollar, pound sterling, yen and Swiss franc was performed, with the investigation period being divided into two samples. The first covers the period from the beginning of 1999 to immediately before the onset of the financial crisis in August 2007, while the second covers the period since its onset to the end of 2021. The full sample was subdivided in this manner in order to see whether the relationship between the exchange rate change and the interest rate differential had altered.

The econometric study does indeed indicate that the results depend heavily on the underlying sample. While the validity of uncovered interest parity for the sample in question (launch of European monetary union until immediately before the global financial crisis) is rejected for all four currency pairs considered here, this is only the case for the yen, statistically speaking, in the post-global financial crisis period. In the more recent sample, the estimated slopes are all significantly higher than those in the pre-global financial crisis sample and – unlike in the earlier sample – now have a positive sign. The results imply that since the onset of the global financial crisis, it has tended to be the currency in which the higher-interest investment is denominated that depreciates over the investment period. Overall, then, the empirical evidence observed post global financial crisis has been more consistent with uncovered interest parity than in the earlier sample. However, whether this finding is robust and can be traced back to an actual change in the underlying relationship cannot be assessed conclusively owing to the high estimation uncertainty and unstable parameter values, even within the respective estimation periods.

Lack of evidence for uncovered interest parity theory possibly amplified or even induced by carry trade strategies

A currency carry trading investment strategy can be used to generate profits from deviations from uncovered interest parity. A currency carry trade involves borrowing funds in a low-interest currency and investing them in a high-interest currency. Since investors choose not to hedge these transactions, returns on currency carry trades crucially depend on how the exchange rate between the currency pair actually develops up to the end of the investment period. A currency carry trade is particularly lucrative if the higher-interest currency appreciates, as was the case on average between 1999 and 2005: the investor makes exchange rate gains on top of the interest rate advantage. Thus, if an investor had applied the currency carry trade strategy to the euro area and the United States in a thought experiment, they would have generated an average annualised return of around 15% between the beginning of 1999 and mid-2005. Seeing the higher-interest currency appreciate may have encouraged speculators to invest further in carry trades, which would have strengthened the appreciation of the higher-interest currency and thus the deviation from uncovered interest parity. On balance, the empirical finding that the higher-interest currency appreciated on average between the beginning of 1999 and mid-2005 may therefore have been amplified or even induced by carry trade strategies.

Carry trade strategies risk heavy losses

However, an assessment of more recent periods shows that this strategy can produce a far smaller return. Thus, the illustrative carry trade strategy described above would have produced

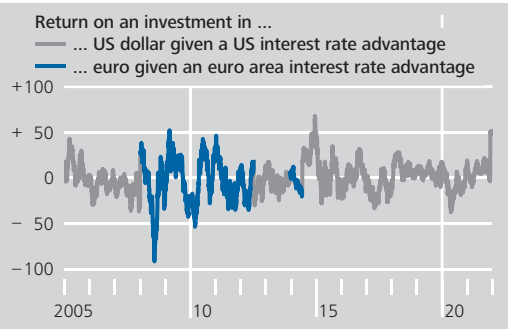
42 For more on this, see also Engel et al. (2022). The authors test the relationship between the US dollar and various currencies for one period up to the end of 2006 and a second period as of 2007. They find that the signs of the estimated coefficients depend on the sample examined and find, for the period as of 2007, that "[…] the evidence for a UIP puzzle is weak". Bussière et al. (2022) conclude that the sign switches primarily because the correlation between interest rate differentials and expectations errors changes.

43 See the box on pp. 57 ff.

a loss on average (-1%) between mid-2005 and the end of 2021, compared with -14% when the financial crisis was at its peak (defined here as the period between the beginning of August 2007 and the end of 2008), and only a slim profit of just over 1% from then until the end of 2021. This shows that the return on carry trade investments fluctuates strongly owing to the high volatility of exchange rates over time, and illustrates that carry trades are a highly speculative and risky investment strategy. The turmoil that has repeatedly weighed on financial markets in recent years is likely to have had two effects. First, it will have dampened the appetite for risk, at least for a time. Second, international interest rate differentials have narrowed in the global low interest rate environment. Taken together, these two factors have probably worsened the expected risk-return profile of carry trade strategies and reduced carry trade activity, at least temporarily.

Return on a hypothetical currency carry trade investment strategy*

%, annualised daily data



Sources: Refinitiv and Bundesbank calculations. * Funds are borrowed in a low-interest currency and invested in a higher-interest currency. Return on investments in three-month money market funds from the point of view of euro area investors.

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Conclusion

The period since the global financial crisis has seen considerable and at times persistent deviations from covered interest parity. This came as a surprise because it had been assumed that these deviations would offer foreign exchange market participants the opportunity to generate risk-free profits. As it turns out, though, important conditions for interest rate arbitrage, which had previously kept deviations from covered interest rate parity low, have no longer been met since the crisis. For example, counterparty risk grew in significance for potential interest rate arbitrageurs, prompting them to demand a correspondingly high premium in return for taking on the risk of default. The Basel III decisions phased in since 2013 have furthermore driven up the costs of interest rate arbitrage, which reduced the scope for arbitrage further still. Swap lines agreed between central banks to improve banks' liquidity in foreign currency counteract an abrupt increase in the cost of hedging against exchange rate risk in times of crisis and help stabilise financial markets.

Deviations from uncovered interest parity are evident throughout the full sample. Econometric studies suggest, however, that the relationship between the spot exchange rate and the interest rate differential has changed since the financial crisis. They indicate that unlike in the pre-financial crisis period, it tends to be the currency in which the higher-interest investments are denominated that depreciates over the three-month period under review. A finding of that kind is generally consistent with the uncovered interest parity theory. However, these results are subject to a high degree of estimation uncertainty. One reason for the change in correlation might be that the expected risk-return profile of carry trade strategies deteriorated during the low interest rate period, resulting in less currency carry trading activity. It cannot be ruled out that this trade strategy will regain importance as interest rate differentials between the currency areas grow larger again.

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Market conditions for Bunds in the context of monetary policy purchases and heightened uncertainty

The overall state of the market for Federal securities (Bundeswertpapiere, or Bunds for short) – also referred to as its market conditions – is characterised by a generally very high degree of robustness. In conjunction with the high credit quality of the Federal Government, this is why Bunds enjoy benchmark status in the euro area. A sound assessment of market conditions in recent years is achieved by using standard and novel market indicators on volatility, price anomalies and, in particular, market liquidity.

Cash, future and repo markets are the three main segments in the market for Bunds. Although there are very close links between price and liquidity formation in these segments, there are also pronounced peculiarities and one-off effects at times. A look at various liquidity dimensions is therefore conducive to obtaining a better understanding of both the respective market segments themselves and their interrelationships. For example, although the Bund future market generally has price leadership over the cash market, liquidity shocks frequently originate in the cash market and can then spill over to liquidity in the future market. Phases of such temporary liquidity declines have been increasingly occurring in recent years. Sudden and highly symmetrical transactions by multiple agents, such as at the beginning of the COVID-19 crisis, are capable of triggering price swings and rapid changes in the liquidity situation in all Bund market segments. This can be illustrated for the Bund future market, in particular, very well with the help of a novel indicator to measure market resilience.

The changes observed in the market for Bunds since 2015 have been driven, above all, by the Eurosystem's role as a "monetary policy buyer". Although trading volumes and market-making activities may initially increase as a result of central bank purchases, in a tense market environment characterised by a high propensity to sell, this could even temporarily reduce transaction costs of purchased bonds. By reducing "free float", however, the extensive central bank purchases lead to scarcity effects and, in some cases, to price anomalies for these bonds, too. Mitigating measures taken by the Eurosystem, such as the securities lending facility, can only partly offset these effects. In the long term, therefore, reductions in Eurosystem holdings are likely to have a positive impact on market conditions for Bunds.

The current high level of uncertainty surrounding the macroeconomic outlook, which is associated primarily with Russia's war of aggression against Ukraine, is also impacting on the indicators of market conditions for Bunds. In this environment, too, the obvious contribution a central bank can make towards ultimately more relaxed market conditions is to keep medium-term inflation expectations as firmly anchored as possible.

Introduction

Market conditions describe the overall state of a market

The overall state of a market, known as the market conditions, is determined by its players, its structure and its framework conditions.[1] Market liquidity – i.e. the tradability of securities – is a significant and measurable component of market conditions. In addition, a high level of volatility can be a reflection of increased information processing but can also indicate a change in market conditions, especially if it is associated with reduced market liquidity and (price) anomalies. This report aims to assess the market conditions for Bunds as holistically as possible and thus looks at many of these facets.

Bunds are a benchmark in the European sovereign bond market

Market conditions for Bunds are of particular interest because they represent a benchmark in the European sovereign bond market. Financial markets are subject to a myriad of influences and constant changes, making the need for a benchmark as a guidepost for market participants particularly clear. Benchmark bonds mirror the current, broad market conditions and should therefore be as free as possible from the influence of idiosyncratic factors such as high and volatile default and liquidity risks. At the same time, they also constitute a key benchmark for macroeconomic financing conditions, which are also influenced to a large extent by monetary policy decisions.

Owing to its high credit quality and the ease with which its bonds are tradable, the Federal Government has the status of benchmark issuer in the euro area. This means that Bunds are generally in high demand and are used in many portfolios held by institutional investors, such as insurers or pension funds, as a risk-free investment and as a benchmark for other asset classes.[2]

Benchmark status hinges on market liquidity

The generally high market liquidity of Bunds is a decisive factor behind their benchmark status. A salient feature of a liquid market is that high volumes of a security can be bought or sold at low transaction costs with no significant impact on its price. Liquidity[3] in financial markets depends largely on the market participants involved. A liquid market is associated with a low resale risk and thus attracts market participants which, by wanting to purchase a security or offering to sell a security, in turn create liquidity. It is especially in times of heightened volatility that a liquid market is of particular importance.

Increasingly frequent episodes of liquidity slumps in recent times, including in highly liquid markets

Episodes of liquidity slumps are rare, but they can occur in isolated cases even in the most liquid markets with benchmark status. However, such episodes have been unusually frequent in the recent past, as was the case at the beginning of the COVID-19 crisis in March 2020. Moreover, in the last few years, monetary policymakers, academics and practitioners have been wondering about the extent to which non-standard monetary policy measures, such as large-scale asset purchase programmes, have been impacting on market liquidity by reducing free float, contributing to such episodes and potentially structurally altering the market conditions for benchmark bonds.

In-depth insights into these observations are provided by studies that examine the dimensions and interrelationships of the market conditions for Bunds in the various, albeit interlinked segments – the cash market, the future market and the repo market. In focusing on recent years, they also look into the effects of the

1 Whereas some facets of market conditions are static or slow to change (for example, statutory provisions or market structure), other aspects of market conditions (such as participants' trading activities and liquidity) are in a constant state of flux. The facets differ not only with regard to the time dynamics but also to their conduciveness to a quantitative description: rules or market structures, in particular, can be described in qualitative terms, whereas market activities and market liquidity lend themselves better to a quantitative analysis. As regards the two lattermost facets, market liquidity is also characterised by a generally much greater degree of transparency and data availability than market participants' activities (for instance, who purchased a given security?). Against this backdrop, the article will primarily focus on well-measurable components of market conditions such as market liquidity, volatility or price anomalies.
2 See Federal Ministry of Finance (2019).
3 In this article, the terms "liquidity" and "market liquidity" are used interchangeably.

regime change from monetary policy easing to a monetary policy tightening cycle.

Key market players and market segments

Dealers and investors are equally important for liquidity developments, …

With regard to market conditions, market participants can be divided into two groups: investors and liquidity providers. Since the start of the large-scale asset purchase programmes in 2015, the Eurosystem central banks have entered the scene as key market players. Unlike the other groups, their motive is not to make a profit. Investors represent the majority of the players and use trading venues, via which they implement their transaction decisions.[4] The second group, composed of dedicated liquidity providers (market-makers or dealers),[5] plays a particular role. These agents' business (sub-) model is aimed at generating earnings through the constant and, mostly, simultaneous buying and selling of securities. To this end, they provide other market players with transaction offers with executable prices and quantities ("quotes"), thereby enabling investors to implement their trading orders almost permanently and quickly. A liquid market usually features a large number of liquidity providers, a highly competitive market among them and high demand for the respective security, which makes transactions inexpensive and simple to effect. Moreover, market-makers' purchasing and selling capacity in the market has a stabilising effect on the trading process and often helps to contain short-term, strong market swings.

… as a mismatch between market players can impair liquidity

In very liquid market segments, such as the Bund future market, ten-year Bund futures alone can account for a combined total of several hundred thousand individual transactions on a normal trading day. In this complex interplay between buyers and sellers, the cumulative sales decisions can potentially significantly exceed market-makers' absorption capacity for a short period, or an abrupt onset of buying pressure can exceed liquidity providers' ability to deliver. In addition, market participants can impair the functioning of the market by withdrawing previously issued buy and sell orders from the market even prior to execution.[6] In these cases, liquidity deteriorates, and the market is more exposed to sharp price swings. Dealing activity in such a market is therefore the result of close interaction between investors and market-makers. It is therefore important to look at all market participants across the varying market segments in order to obtain a holistic understanding of the market.

The cash market

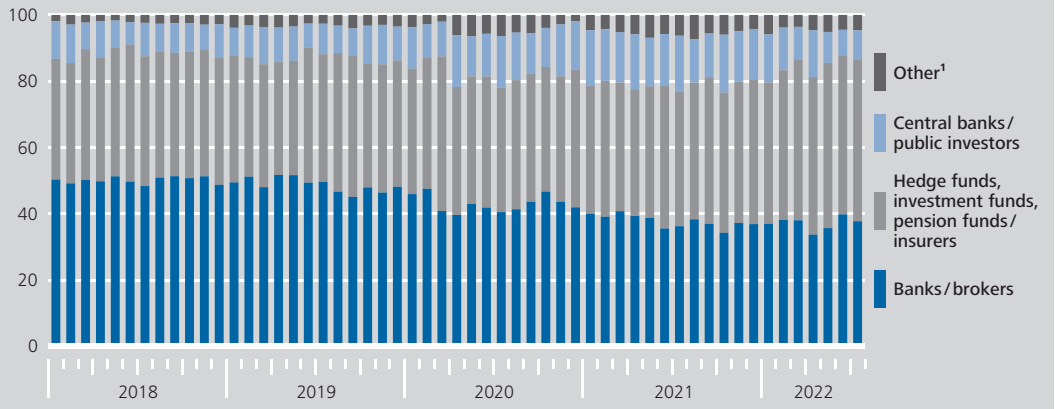
Cash market trading mostly over the counter …

Trading in Bunds takes place largely over the counter (OTC). Investors usually issue requests for quote (RFQs) via electronic trading platforms in order to subsequently receive offers from dealers. In the secondary market for Bunds, these are mostly large banks (dealer banks), which are also members of the Bund Issues Auction Group of the German Finance Agency,[7] and which often maintain close relationships with other market participants. Not

4 At regular stock exchanges, these transaction decisions are mostly entered as a buy or sell order into an electronic order book by the investor (or an intermediary such as a broker or a bank). There are, in principle, two types of orders: market orders and limit orders. A market order expresses an investor's desire for the order to be executed in the most timely manner possible without a specific price limit. In a limit order, by contrast, the investor specifies a fixed maximum ask price or minimum bid price at which they wish to execute. However, the actual execution cannot be guaranteed and depends on the security's price movements and the liquidity situation at the respective trading venue. Limit orders that cannot be executed immediately are transferred to the order book and, along with other pre-existing limit orders, represent the aggregate market interest in buying or selling a particular security.
5 On OTC trading platforms, which are a major factor in the secondary market for Bunds, continuous market-making generally does not occur; instead, dealers submit quotes following a request for quote (RFQ).
6 Such sharp declines in orders in an order book are also referred to as "liquidity evaporation" or "dry-ups". They are often observed, for instance, in the last few minutes before significant and fixed dates for the publication of macroeconomic data or monetary policy decisions.
7 A special feature of this auction group is that – unlike standard procedures in other sovereign bond markets – they are not under any further obligations (such as regarding market-makers) above and beyond a small minimum purchase amount in the primary market. See also https://www.deutsche-finanzagentur.de/en/federal-securities/issuances/bund-issues-auction-group

Relative share of cash market trading by sector*

%, monthly data



Source: Finance Agency. * Captures trading counterparties of the Bund Issues Auction Group (both purchases and sales). This covers a large share of the secondary market. 1 Finance Agency, enterprises, private investors and other investors.
Deutsche Bundesbank

only banks but also hedge funds contribute to liquidity in the OTC cash market, but their importance is more difficult to quantify.[8] A smaller percentage of Bunds are traded on conventional exchanges, where the Bundesbank, too, conducts market management operations on behalf and for the account of the Finance Agency.[9,10] In addition, exchange trading between banks takes place on the Italian limit order book platform, MTS.[11]

… and is dominated by the Bund Issues Auction Group

The largest group of liquidity providers in the cash market, the dealer banks, obtain Bunds from the Finance Agency on the primary market.[12] In the past, the trading partners of these dealer banks in the secondary market were also mostly banks. However, the share of banks fell from 50% at the beginning of 2018 to 38% in July 2022 (see the chart above). Over the same period, the share of financial institutions that are not banks or brokers[13] in the monthly trading volume with the dealer banks increased from 36% to 49%. There are several possible reasons for this development, such as new regulatory requirements or changing business models. A further reason could be that banks without access to primary market issues purchased Bunds on the secondary market but, since 2014, have been holding a steadily diminishing amount of these.[14] Banks are usually monetary policy counterparties of the Eurosystem and thus have access to the deposit facility. Given that the interest rate on many Bunds had in recent years remained below the deposit facility rate over longer periods of time, this facility gave them a more attractive substitute for holding high-quality liquid assets (HQLA).

Central banks' share of the trading volume has increased in the aftermath of the monetary policy purchase programmes. Since net purchases under the pandemic emergency pur-

8 In this vein, they can contribute to levelling out valuation differences, such as between the Bund cash and future market, via relative value trades (see pp. 79 ff.).
9 These market management operations are targeted at prices which do not discriminate between different types of market participants such as institutional and private investors.
10 The Finance Agency's data generally show with whom the Bund Issues Auction Group is trading in the secondary market. The members of the Auction Group report their dealing activities to the Finance Agency, which then makes these data available in aggregated form. If, for instance, a bank that is not a member of the Auction Group conducts a transaction with a hedge fund, this trade is not contained in the statistics. The Auction Group, however, covers a large swathe of the market.
11 Mercato Telematico dei Titoli di Stato.
12 See also https://www.deutsche-finanzagentur.de/en/federal-securities/issuances/bund-issues-auction-group
13 Hedge funds, investment funds, pension funds and insurers.
14 See Deutsche Bundesbank (2022a).

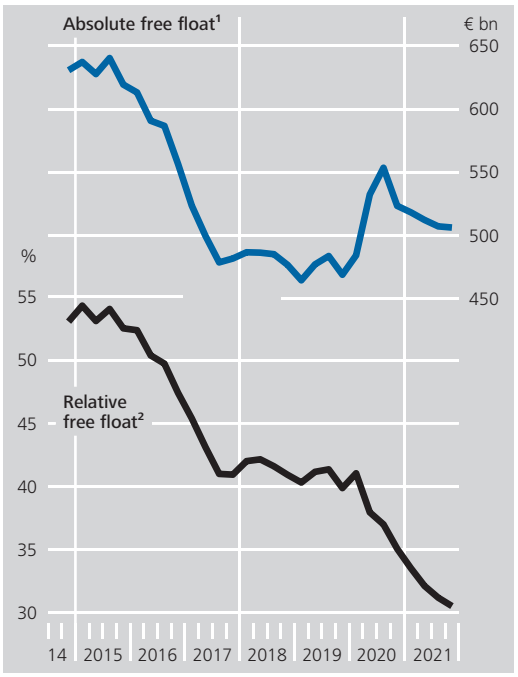
chase programme (PEPP)[15] were discontinued in March 2022, however, a declining trend has become visible.[16] By contrast, the share of the trading volume of Bunds accounted for by the Finance Agency itself is growing.[17]

A large proportion of Bunds are tied up with long-term investors

The composition of investor groups for Bunds impacts on market functioning inasmuch as, for many of these groups, Bunds represent a long-term investment. These long-term investors are typically insurers, pension funds or foreign central banks. The securities in their portfolios are then often no longer available for market trading. The "free float"[18] of an asset class, i.e. the amount which is, in principle, available for trading, is of major importance for market functioning and market liquidity.

Free float of Bunds

Based on nominal data, end-of-quarter data



Sources: ESCB (SHSS database), Finance Agency and Bundesbank calculations. **1** Contains Bundesbank holdings and Finance Agency's proprietary holdings. Does not include the proprietary holdings of the ECB or the national central banks of the euro area. **2** Absolute free float over outstanding volume.

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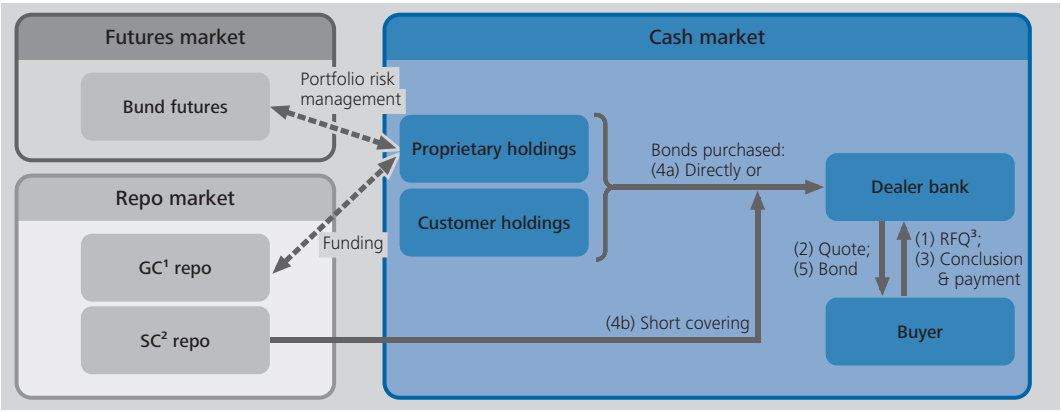
As a large buyer, the Eurosystem significantly reduced tradable free float

In the wake of the Eurosystem's asset purchase programmes, both the relative and absolute free float of Bunds fell between 2014 and the end of 2021. The share of free float in the outstanding volume decreased by around 22 percentage points to 31%.[19] The reduced volume of assets available for trading increasingly led to periods of scarcity that negatively affected market conditions. Following the ECB Governing Council's decision in late 2021 to discontinue net purchases under the PEPP from the end of March 2022, the relative free float rebounded slightly in the first half of 2022.[20] Now that the interest rate environment has returned to positive territory, this could attract banks as investors again going forward; they had previously left the market in greater num-

15 This was a temporary asset purchase programme of private and public sector securities implemented to counter the threats posed by the extraordinary economic and market conditions on the ability of the Eurosystem to fulfil its mandate. It was launched on 26 March 2020 and ran in addition to the asset purchase programme (APP). Its original envelope was €750 billion but was increased over the programme's lifetime to a total of €1,850 billion.
16 The central bank share also includes non-Eurosystem central banks.
17 In its auctions, the Finance Agency regularly sets aside a share of securities for market management purposes, most of which are then allotted to secondary market operations following the auction. In addition, it can also step up its own proprietary holdings. See https://www.deutsche-finanzagentur.de/en/federal-securities/trading/secondary-market/activities
18 Free float refers to holdings of an issuance that are freely available for trading – as opposed to the stock held by investors who acquire bonds and then hold them to maturity (known as "buy and hold investors"). There is no uniform definition of free float. However, using the Eurosystem's Securities Holdings Statistics by Sector (SHSS), this can be approximated by the sum of private sector holdings less insurers and pension funds. Assets in circulation not captured by the SHSS are assigned in equal shares to free float and buy-and-hold investors. Under this approach, free float is interpreted in a broader sense, as many investment funds and banks likewise hold instruments to maturity. These percentage shares can only be estimated, however, and have therefore not been recorded. Further details on the data chosen and the analysis for the December 2014 to December 2021 period can be found in the May 2022 issue of the Monthly Report. See also Deutsche Bundesbank (2022a).
19 As a result of the higher net issuance stemming from the fiscal measures and the monetary policy measures taken, percentage and absolute free float have diverged since the second quarter of 2020. The Federal Government's strong issuance activity during the pandemic exceeded the Eurosystem's purchases of German government bonds. However, a large percentage of the issues were retained, thereby increasing the Federal Government's proprietary holdings. The percentage share of the free float thus declined further to around 30% at the end of the period under review. However, at the same time, the absolute volume in free float rose slightly by just over €38 billion to a little more than €500 billion. See also Deutsche Bundesbank (2022a).
20 The absolute free float still declined slightly as the outstanding volume went down somewhat.

Schematic relationship between the three Bund markets when selling a bond as viewed from a dealer bank's perspective



1 General collateral. **2** Specific collateral. **3** Request for quote.
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bers in the low interest rate environment (see p. 73 f.). This ought to help increase free float as banks generally participate actively in trading. The Federal Government's net new issuance is another key determinant. Higher sovereign debt boosts supply in the market and thus also tends to increase free float.

Cash market transaction often triggers chain reaction

Cash market dealers do not necessarily have to hold a sold security in their own portfolio since the delivery time of the instrument sold is two working days after the purchase date. What they can attempt to do instead is to obtain the security through their own customer relationships, external market contacts or the repo market (short covering).

The repo market

SC repo market helps to obtain short-term securities and thus provide liquidity in the cash market

Repo transactions are the most important instrument in the secured money market, which also includes instruments such as securities lending and securities swaps.[21]

A repo consists of two transactions in which a sum of money is exchanged for a security. At the start of the transaction, the repo buyer is lent a security as collateral for a pre-defined period of time and compensates the repo seller with a monetary amount. The repo market is therefore also of central importance when looking at liquidity (and liquidity provision) in the cash market. The overwhelming majority of trades in this market are conducted via central counterparties (CCPs).[22,23] If, after a transaction has been concluded on the cash market, the dealer cannot obtain the security directly, they can temporarily cover their demand for this security via the secured money market. To do so, they enter into a specific collateral (SC) repo transaction in which this security has been posted as collateral.[24] If demand for this particular security in the repo market rises and there is little free float, the price that repo buyers have to pay to borrow this security also rises. This leads to a higher scarcity premium, the difference between general collateral (GC)

21 See Deutsche Bundesbank (2022b).
22 CCPs are financial market infrastructures that interpose themselves between the original counterparties of a financial market transaction in securities, derivatives or goods, etc. In doing so, a CCP replaces the original transaction between these two counterparties with two separate transactions between the CCP and the respective counterparty. See https://www.bundesbank.de/en/tasks/payment-systems/oversight/central-counterparties-626482
23 According to the Euro money market study, this share amounts to 70%; see https://www.ecb.europa.eu/pub/euromoneymarket/html/ecb.euromoneymarket202104_study.en.html
24 In addition to these securities-driven SC transactions, it is also possible to borrow or lend a security from a pool of several securities against cash collateral. In these cases, transactions are liquidity-driven, as the repo buyer cannot influence what security they are provided with as collateral.

and SC rates. Such tensions in the repo market can make it more difficult to intermediate between buyers and sellers of Bunds on the cash market.

Secured euro money market rates have generally been below the Eurosystem's deposit facility rate in recent years. This has been driven by not only the scarcity of securities but also high central bank balances. These were created, in particular, by non-standard monetary policy measures, such as asset purchases, and encourage a concentration of money market activity on transactions between market participants that have access to central banks accounts and those that do not.[25]

The future market

Bund futures are an important pricing and hedging instrument

Bund futures[26] are standardised futures contracts on notional Bunds. They are traded exclusively on the electronic Eurex futures exchange. Market participants can use Bund futures to hedge their bond positions or to speculate on changes in interest rates or prices in Bunds with different maturities. They serve as a pricing and hedging instrument for liquidity providers in the cash market. Turmoil in the future market can therefore also make it more difficult to provide liquidity in the cash market and vice versa. What sets the Bund future market apart from the Bund cash and Bund repo market is a high level of standardisation and centralisation and thus large trading volumes with a significant share of high-frequency traders.[27] This means that it usually has price leadership over the cash market (see the box beginning on p. 79).

EMIR data provide new insights into the Bund future market

Only a relatively small percentage of market players trading in Bund futures have direct access to the Eurex futures exchange. Following the entry into force of the European Markets Infrastructure Regulation (EMIR), there now exists an extensive derivatives transaction register which represents the Bund future market. The data also contain those market participants who do not have direct access to the Eurex futures exchange and thus cannot participate directly in Eurex clearing. An analysis of EMIR data from January 2020 to July 2022 shows that these mostly smaller market participants, such as investment funds or other non-banks, participate indirectly in trading via clearing participants, known as client clearers, which have direct access to Eurex. This causes business activities to be highly centralised as client clearers, which include banks, in particular, are involved in more than four out of five Bund future transactions – often, but not only, as intermediaries.

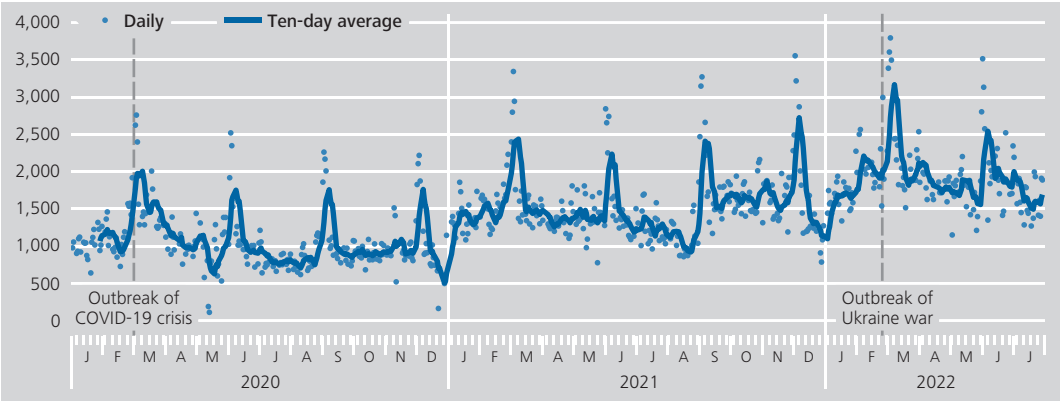
High-frequency traders in futures usually act as liquidity providers but often withdraw in critical phases

High-frequency traders are an additional important factor: they are involved in at least one-quarter of all transactions. Although they account for a large number of transactions, they have a relatively small volume per transaction compared with other market players such as banks.[28] In addition, high-frequency traders operate mainly on an intraday basis and thus short-term, which is why they have only a few open positions at the end of the day. They pursue a variety of different trading strategies, such as "news trading", in which they use their speed advantage to generate short-term profits in anticipation of and following the publication of key macroeconomic data. Most high-frequency traders, however, act as liquidity providers, such as via "market-maker strategies". Yet empirical studies show that, especially in an environment of heightened uncertainty, such

25 See Deutsche Bundesbank (2022) and Åberg et al. (2021).
26 The term Bund futures is used here as a synonym for the various futures contracts where Bunds are the underlying instrument. These notional Bunds have maturities of two (Schatz future), five (Bobl future), ten (Bund future) and 30 years (Buxl future). The nominal value of a contract is €100,000.
27 High-frequency trading (HFT) is an algorithmic trading technique using special computer hardware and particularly fast data connections to the stock exchange. It is characterised by very high daily order counts, relatively small order sizes and, in most cases, very short holding periods for the positions taken. HFT algorithms are capable of responding extremely quickly to changes in the market and to news.
28 High-frequency traders trade an average of four Bund future contracts per individual transaction. At 14, 26 and 131 contracts per transaction respectively, banks, pension funds and insurers have considerably higher contract-to-transaction ratios.

Participants in the Bund futures market*

Number of participants



Sources: EMIR and Bundesbank calculations. * The regular three-month increases in the number of market participants coincide with the maturity dates of the futures in March, June, September and December. The structural increase in the number of market participants may be due to a broader coverage triggered by Brexit, for instance.

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as the publication of important data, they often withdraw quickly by deleting previously submitted trading orders.[29] This is also reflected in the EMIR data, as high-frequency traders, in particular, are cautious immediately before anticipated, landmark ECB Governing Council decisions, such as on 9 June 2022, when the end of net asset purchases and the prospect of initial interest rate moves were announced. However, their activities increase once the news is known. By contrast, the number of market players across all sectors in a volatile market environment, such as at the outbreak of the COVID-19 pandemic or the Russian war of aggression against Ukraine, has temporarily increased. These are usually additional investors who are otherwise active in the Bund future market at only irregular intervals and mostly on a small scale and who are now using future contracts to adjust their positions. Cumulated and symmetrical transactions by these irregular market agents could then cause a trend reduction in liquidity.

The Eurosystem's impact in its role as a market player since 2015

The Eurosystem's share of holdings in the Bund market has been steadily growing since purchases of bonds issued by euro area central governments, agencies and European institutions under the public sector purchase programme (PSPP) began in 2015. High monthly net purchases have made the Eurosystem the largest holder of Bunds. It has therefore assumed a prominent position as a market agent.

Central bank purchases can increase trading volumes and market-making activities, …

From a theoretical point of view, it is unclear whether central bank purchases have positive or negative effects on liquidity or market functioning. On the one hand, asset purchases can stimulate trading volumes since purchases generally encourage portfolio adjustments. Moreover, the presence of the central bank as a large, solvent and reliable buyer may increase market-making activities since it can reduce unwanted positions more quickly and also execute larger orders more easily (the "backstop" buyer channel[30]). This could also enhance market-makers' willingness to hold larger bond portfolios, which would then facilitate trading between market participants.[31]

29 See Schlepper (2016) and Deutsche Bundesbank (2016).
30 See Pasquariello et al. (2018) and Boneva et al. (2018).
31 See Bank for International Settlements (2019).

Relationship between the Bund future and cash market

The standardisation of Bund future contracts and the significantly lower need for funds compared with cash market transactions result in a significant share of high-frequency trading in the Bund future market as well as very liquid trading under normal conditions. For instance, the prices of Bund futures react extremely quickly to news.[1]

By contrast, Bunds in the cash market are largely traded over the counter (OTC) via various electronic trading platforms. The cash market is therefore more fragmented and opaque compared with Bund futures trading on Eurex. In addition, at over 60 Federal securities, the number of securities traded here is significantly greater than the four types of maturity-dependent Bund futures. The transaction figures are lower (and less transparent) than those for Bund futures, which means that price discovery processes take place less regularly.

The future and cash market are closely intertwined, as significant price differences result in arbitrage opportunities. Sellers of futures must deliver a Bund of their choice from a basket of eligible bonds to the future buyer on the maturity date. One of these bonds – the cheapest-to-deliver (CTD) bond – is the cheapest for the supplier. In an efficient market, the prices of the CTD bond and the associated future should therefore correspond after applying a conversion factor that approximates the maturity and coupon differences between the actual and the notional bond. Recently, CTD prices in the Bund market have exceeded the adjusted future prices on a regular basis, possibly driven by the scarcity of Bunds induced by central bank purchases.[2] This difference is known as the cash-future basis (CFB) and is regarded as an indicator of market functionality. A positive CFB indicates relatively high prices in the cash market. Market participants could benefit from these price differences by short selling the bond and buying the future at the same time.[3] The price difference is gross income. At maturity, the arbitrageur receives the CTD from the future seller and can return it to the borrower. In principle, this arbitrage opportunity ensures that prices in both markets diverge only temporarily and to a limited degree in most cases. However, a lack of market liquidity and high trading costs, bond scarcity in the cash and repo markets, regulatory barriers or market turbulence can limit arbitrage opportunities and explain the existence of the CFB.

Up until the end of the 1990s, price discovery primarily took place in the cash market. Since then, new technologies, standardised contracts and the low use of funds have essentially caused price leadership to become established in the future market.[4] Recent studies also confirm that price discovery for both US and euro government bonds primarily takes place in the future market.[5]

On electronic trading platforms such as the Eurex futures exchange, transactions in Bund futures are settled via a central limit order book. All bid and ask quotes, which include the corresponding prices and quantities, are collected here. These quotes are binding. Similarly to Eurex, data from the Italian trading platform MTS[6] can also be used to construct a limit order book with a timestamp in seconds for the cash market for Bunds. Although the share of actual transactions is small compared with the OTC cash market, market participants consistently quote binding prices and quantities here.

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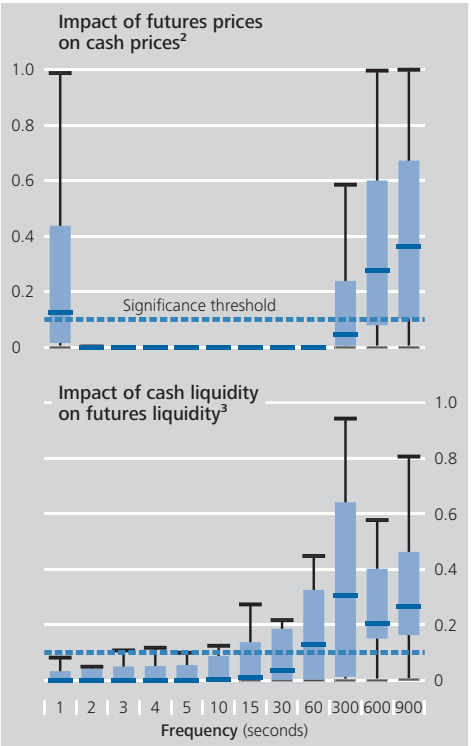
1 See Schlepper (2016) and Deutsche Bundesbank (2016).
2 See Pelizzon et al. (2022).
3 In addition, the repo market can be used to finance the replication business and to receive the Bund for short selling.
4 However, large transactions in the cash market can also affect prices in the future market. For more information, see Upper and Werner (2007).
5 See Puorro et al. (2016) and Jappelli et al. (2022).
6 Mercato Telematico dei Titoli di Stato.

Relationship between the future and cash market

Distribution of p-values[1]



Sources: Eurex, MTS and Bundesbank calculations. The analysis was conducted for the period from January 2020 to June 2022 (563 days in total). **1** p-values of the daily Granger causality tests. Values <0.1 are weakly significant, <0.05 moderately significant, <0.01 highly significant. It can be concluded from significant values that a time series "A" Granger-causes another time series, "B". **2** The distribution of the Granger causalities of price changes in the future market on the cash market. **3** The distribution of the Granger causalities of liquidity (here as order book depth in each case) in the cash market on liquidity in the future market on the 3% most volatile days in the period under review.

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An analysis based on the high-frequency order book data from MTS and the Eurex futures exchange confirms that the price leadership of futures can also be found in the market for Bunds. To this end, a simple bivariate vector autoregressive (VAR) model is used to test for Granger causality between futures and cash prices.[7] The analysis is applied on an intraday basis to all of the days from January 2020 to June 2022 individually, as well as to a total of 12 different frequencies. It is thus clear how long the transfer takes between markets and whether the transfer significance and duration differ on individual days. A distribution of the significances (shown as p-values) across all the individual days considered helps to categorise the results. P-values below 0.1 can be considered statistically significant.

The results show that futures prices have a significant impact on prices in the MTS cash market within two seconds. After more than one minute, the effect is no longer detectable (see the upper panel of the adjacent chart). The spillover effect tends to be less significant on particularly volatile days. Conversely, there is no consistent significant spillover from cash prices to futures prices.

In addition, a similar analysis in the literature reveals a spillover of both price volatility[8] and liquidity in the future market to liquidity in the cash market for sovereign bonds.[9] This relationship is not confirmed for Bunds in short frequencies. The reverse is true since, on particularly volatile days,[10] liquidity from the cash market partly spills over to liquidity in the future market (see the lower panel of the adjacent chart) as well as partly to the volatility of futures.[11] This effect can be seen, for instance, during the COVID-19 pandemic or Russia's war of aggression against Ukraine, when temporary shocks began. These shocks initially occurred in the cash market and then spilled over to the Bund future market.

The empirical studies confirm the close interconnectedness of the two markets in both directions. Therefore, it is always advisable to view these markets together when assessing market conditions.

7 This method borrows from Puorro et al. (2016).
8 Measured as the maximum-minimum price difference and the sum of the log price changes per interval.
9 See Puorro et al. (2016).
10 Top 3% of the most volatile days in the period under review as measured by the volatility of intraday Bund futures.
11 Liquidity is measured here as order book depth, i.e. available liquidity and bid-ask spreads. Similar results can now also be found in Jabbali et al. (2022), but without a distinction between individual countries in some cases and with a different calculation methodology and longer frequency.

… but also lead to higher costs due to the reduction in free float

On the other hand, in addition to regulatory[32] factors, asset purchases affect the quantity of securities available on the market. As a result, central bank purchases can be seen as shocks to the available supply of bonds because free float in this market segment is reduced.[33] This could impact adversely on liquidity and market functioning because the purchase of a certain bond on the market is associated with higher costs or search frictions.

Moreover, due to the relatively stable monthly volume targets (over a long period of time), central banks respond to current price and liquidity conditions when conducting purchases only with a time lag, which could disrupt price formation in the market. That, in turn, could discourage market participants from being involved in trading. If the frequency and target volume of a purchase programme are very high relative to the usual trading activities in the market segment and to bond issuance, this can likewise have a negative effect on market functioning. In that case, the markets could have trouble processing the unusually large amount of capital flows. Lastly, information asymmetries between the central banks' direct trading partners and other market participants could lead to imbalances and disincentivise the latter from participating in trading.[34]

Empirical evidence on the impact of extensive purchase programmes on market liquidity

Empirical evidence regarding impact of purchase programmes on liquidity not conclusive …

Whereas the impact of the announcements concerning the PSPP (stock effects) is clearly associated with falling bond market yields,[35] the empirical evidence for effects directly following the purchase (flow effects) is not conclusive.[36] The few studies which look at the impact on sovereign bond market liquidity likewise fail to reach clear-cut conclusions.

For the European bond market, there is evidence that purchases in less liquid markets lead to improved liquidity ratios.[37] This does not hold for high-demand Bunds, though, for which it was found that central bank purchases improve liquidity in the short term but impair liquidity in the longer term.[38] The scarcity of bonds turns out to be of crucial importance for liquidity. If a bond is particularly scarce, it is also more difficult or more expensive to trade, which in turn implies worse market liquidity. Similar results are obtained by studies on the Japanese government bond market which examine the impact of the Bank of Japan's bond buying programme. These studies likewise show that market liquidity deteriorates relative to the outstanding volume particularly as from a certain threshold of the Bank of Japan's bond holdings.[39] On the other hand, no impact of the Federal Reserve System's purchases of US Treasuries on various liquidity ratios could be identified.[40]

In the box beginning on p. 83, the effects of the purchases on the market liquidity of Bunds are examined in greater detail, taking into account the monetary policy normalisation that began in December 2021. While the results for the full period of net asset purchases (2015 to 2022) are inconclusive – the bid-ask spread expands while the order book depth increases – the exit announcements lead to a deterioration in liquidity indicators.

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32 For example, the liquidity coverage ratio (LCR) leads to an increase in structural demand for HQLA such as Bunds (where they are remunerated above the deposit facility); the leverage ratio (LR), on the other hand, makes it more expensive to expand the balance sheet and thus also to hold Bunds.
33 See Duffie (1996).
34 See Bank for International Settlements (2019).
35 See, for example, Altavilla et al. (2015), Blattner and Joyce (2016) and De Santis (2020).
36 See, for example, Schlepper et al. (2020), De Santis and Holm-Hadulla (2017) and Arrata and Nguyen (2017).
37 See De Pooter et al. (2018) on the effect of the ECB's Security Market Programme on liquidity premia on bonds issued by Ireland, Italy, Portugal and Spain.
38 See Schlepper et al. (2020). Bid-ask spreads on Bunds narrow immediately after the purchase, but liquidity conditions deteriorate overall during the PSPP period under review (2015-16).
39 See Pelizzon et al. (2018) and Han and Seneviratne (2018).
40 See Kandrac and Schlusche (2013) and Kandrac (2018).

The results in the literature for the repo market, on the other hand, are conclusive: PSPP and PEPP purchases amplify scarcity effects, and the scarcity premium for bonds rises accordingly.[41] Moreover, the scarcity effects are particularly strong for bonds held primarily by long-term buy and hold investors such as insurers or pension funds,[42] which tend to reduce free float.

… and depends on the scope and duration of the programme

The experience of various central banks likewise corroborates the empirical results that non-standard monetary policy measures have positive effects particularly in markets with high liquidity premia, as these are reduced by the purchases. On the other hand, adverse effects result if the measures are in effect for an extended period of time or their scope is large. In addition to reduced market-making or lower investor participations, scarcity effects regarding government bonds are of major importance particularly where central bank purchases or already purchased bond holdings are very high relative to the outstanding volume or issuance is very high, thus reducing free float considerably.[43]

Approaches to mitigating the "free float" problem

Rules for implementing the purchase programmes may have mitigated negative side effects

Central banks have been pursuing a variety of measures to mitigate the negative side effects of the extensive asset purchases. First, certain rules are taken into account when implementing the purchase programmes (for instance, envelopes are limited by issuer and bond issuance and, where possible within the scope of these and other restrictions, the purchase of particularly scarce instruments is avoided). Moreover, attempts are made to purchase the bonds in a market-neutral[44] manner in order to avoid interfering with the relative price formation process and mitigate unintended side effects.

The Eurosystem central banks have recently used a considerable amount of flexibility to implement the PEPP programme in some cases, rather than a predefined, strict monthly envelope, in order to adjust the exact amount and timing of purchases to suit monetary policy needs. For instance, although the PEPP was geared in principle to the capital key of the national central banks, fluctuations in the distribution of purchases over time, across asset classes and across countries were also possible. The objective pursued here by the ECB Governing Council was to effectively avert pandemic-related risks to the smooth transmission of monetary policy.

Securities lending can mitigate severe tension in the repo market

Securities lending by Eurosystem central banks was introduced to support liquidity in the cash and repo markets.[45] Under this scheme, sovereign bond holdings under the Eurosystem's PSPP and PEPP are available for lending through repo transactions. The idea behind the conservative pricing of securities lending is to support market liquidity particularly in periods of stress without affecting repo market activity in normal times (backstop function).[46] Recent studies have analysed the impact of Eurosystem securities lending activities on the scarcity premium in the repo market. They show that securities lending was actually successful in mitigating tensions in the repo market for both Bunds and other European sovereign bonds. For Bunds, however, the effect is less pronounced than the quantified contribution of PSPP purchases to the scarcity premium.[47] A further study analyses an adjustment to the price conditions of securities lending. More favourable conditions increase the volume of securities lending and tend to improve market liquidity.[48] In principle, modifications of securities lending conditions need to ensure that the backstop function is

41 See Baltzer et al. (2022), Souza and Hudepohl (2022) and Arrata et al. (2020).
42 See Jank and Mönch (2018).
43 See Bank for International Settlements (2019).
44 See https://www.ecb.europa.eu/mopo/implement/app/html/pspp.en.html
45 See https://www.ecb.europa.eu/mopo/implement/app/lending/html/index.en.html
46 See also Deutsche Bundesbank (2022b).
47 See Baltzer et al. (2022) and Carrera de Souza and Hudepohl (2022).
48 See Greppmair and Jank (2022).

Empirical analysis of the effect of central bank purchases on market liquidity

The effect of Bundesbank purchases under the public sector purchase programme (PSPP) and the pandemic emergency purchase programme (PEPP) on market liquidity can be empirically examined using panel regressions. The results also provide information on how liquidity measures respond to announcements of the launch of, modification to and exit from the two purchase programmes. MTS[1] data for the Bund cash market from 2015 to 2022[2] are used as the dataset, with the more recent period since the PEPP was launched (2020 to 2022) being considered separately.

Based on a difference-in-differences regression analysis, it is possible to measure the effect on market liquidity of purchased bonds relative to bonds not purchased. Both the effect of whether a purchase takes place and the effect of the actual purchase volume (€ million) on the bid-ask spread and on depth are examined.[3] In order to separate the purchase effect from possible other influences on bonds, we control for various bond-specific factors (repo scarcity premium and repo volume, eligibility, purchase one day prior and multiple purchases per bond, age, maturity). In addition, general developments in the bond market are taken into account using variables such as yield spread, volatility and month-end effects.

The results in the table on p. 84 show that central bank purchases lead to a 0.9 basis point increase in transaction costs (relative bid-ask spread) on the day of the purchase. This result hinges on the purchase and less on the purchase volume. In the analysis for the period from 2015 to 2016, however, there is a decrease in transaction costs of purchased bonds relative to bonds not purchased, as expressed by the bid-ask spread.[4] A similar result can be seen when looking at the more recent period since the launch of the PEPP (March 2020 to July 2022): the bid-ask spread falls – at least depending on the volume purchased – by around 1.1 basis points per €100 million of purchases.

One possible reason for these period-dependent results could be the respective interest rate developments. In both the spring of 2015, during the Bund tantrum,[5] and in the first half of 2022 owing to expectations of an exit from the era of low rates, the interest rate level rose distinctly and with it, temporarily, the pressure to sell. In this setting, purchases by the central bank had a particularly dampening effect on the interest rate level and illiquidity, and temporarily overshadowed the effect of the relative scarcity of heavily purchased Federal bonds. In these phases, purchases thus support liquidity. During the full period, by contrast, the more dominant effect seems to be that central bank purchases lead to relative scarcity, evidenced by an increase in the transaction costs of the specific purchased bond, for example.

Bonds that are eligible but which are not purchased on that day have lower bid-ask spreads than bonds that are not eligible. This is shown by the significantly negative

1 Mercato Telematico dei Titoli di Stato.
2 This analysis is based on the paper by Schlepper et al. (2020), which calculates the effect of PSPP purchases from 2015 to 2016 on prices and liquidity in the Bund cash market.
3 Order book skewness and slope were also examined, but no clear effect of central bank purchases was found.
4 See Schlepper et al. (2020).
5 See Riordan and Schrimpf (2015).

Results of the difference-in-differences regressions*

Panel A	2015 to 2022				Panel B	2020 to 2022			
Dependent variable	Bid-ask spread (basis points)		Depth at best bid and ask price (€ million)		Dependent variable	Bid-ask spread (basis points)		Depth at best bid and ask price (€ million)	
Purchase dummy	0.914** (0.424)		0.413* (0.214)		Purchase dummy	– 0.642 (0.426)		0.492** (0.209)	
Volume		– 0.702 (0.477)		0.432** (0.167)	Volume		– 1.143*** (0.292)		0.164* (0.0988)
Announcement PSPP launch 22.1.2015	4.861*** (0.849)	4.639*** (0.837)	3.076*** (0.274)	3.007*** (0.253)	Announcement PEPP exit 16.12.2021	4.733*** (0.723)	4.762*** (0.722)	– 0.342 (0.245)	– 0.358 (0.248)
Announcement PEPP launch 18.3.2020	7.652*** (0.933)	7.404*** (0.919)	– 5.176*** (0.752)	– 5.258*** (0.770)	Announcement PSPP exit 9.6.2022	– 2.011*** (0.344)	– 2.045*** (0.347)	– 1.539*** (0.182)	– 1.516*** (0.174)
Eligibility dummy	– 4.014*** (1.017)	– 3.868*** (1.024)	– 0.426 (0.332)	– 0.393 (0.323)	Eligibility dummy	1.494 (1.794)	1.453 (1.806)	0.573 (0.950)	0.602 (0.958)
Constant	11.32*** (1.976)	11.70*** (1.934)	19.51*** (0.613)	19.63*** (0.601)	Constant	– 0.917 (8.877)	– 1.075 (8.813)	22.82*** (1.528)	23.03*** (1.518)
No of observations	136,080	136,080	136,080	136,080	No of observations	44,346	44,346	44,346	44,346
R^2	0.727	0.726	0.416	0.416	R^2	0.643	0.643	0.588	0.588

* Regressions of the above liquidity measures on PSPP and PEPP purchases. For purchases, a distinction is made between the actual purchase (€ million) and a dummy variable which indicates whether a bond was purchased on a given day. The results of the purchase effects should be interpreted relative to the control group of bonds not purchased. Both regressions incorporate various bond-specific and time-specific control variables as well as dummy variables for announcements of changes to the PSPP and PEPP, which are not shown here. Robust standard errors in brackets *** p<0.01, ** p<0.05, * p<0.1.

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eligibility effect in the full period (panel A). Pure eligibility therefore already leads to a lower liquidity premium.

Order book depth at the best bid and ask price increases as a result of PSPP and PEPP purchases. For a daily purchase volume of €100 million, depth sees an increase of €0.43 million in the full period. The fact that there is a close link between large central bank purchases and market depth is intuitive, on the one hand, as purchases should have a strong impact on the available depth in the order book of the interdealer platform. The positive sign suggests that central bank purchases have contributed to greater resilience and have actually supported market-making activities. Amongst other things, this may be because the central bank's presence as a reliable, major buyer in the market for Federal securities gave rise to a certain degree of competition among market-makers to trade with the central bank.

In the early days of the PSPP, the opposite was the case: order book depth decreases with the purchase volume. This could indicate that there was some adjustment effect to the purchase programmes over time and that the predictability of purchases also played a role for market participants.

Furthermore, the announcements of PSPP and PEPP cause the bid-ask spread to rise by just under 5 basis points (PSPP) and around 7.5 basis points (PEPP) on the day of the announcement (see the lower section of the table above, panel A). However, depth increases for the PSPP announcement and decreases for the PEPP announcement.

Liquidity indicators deteriorated in response to the announcement effects on the termination of PSPP and PEPP purchases (see panel B in the table on p. 84). The bid-ask spread widens significantly upon the announcement of the exit from PEPP, whereas there is a slight narrowing on the day the exit from the PSPP was announced, although this is weaker than the increase six months earlier and probably also due to general selling pressure in the context of higher interest rate expectations.

In both cases, order book depth recedes somewhat, but significantly only for the announcement of the termination of the PSPP. One factor in this could be that market participants perceive the PSPP exit as putting an end to monetary policy purchase programmes and expect less trading activity in the future.

still guaranteed and does not replace normal market activity.

Approaches to quantifying market conditions

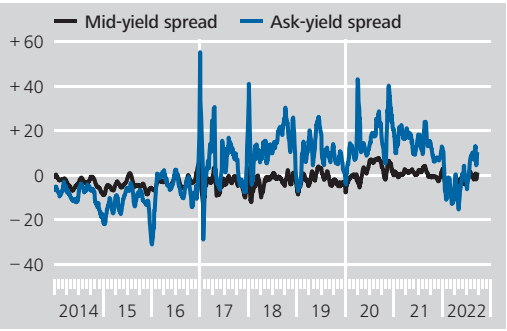
Market liquidity is an essential component of a functioning market

A central factor for the market conditions and the benchmark status of the market for Bunds is the high market liquidity that it generally enjoys, as this provides information on whether the market is functional at any given point in time. However, market liquidity is a multi-layered concept that cannot be viewed in isolation by looking at individual indicators alone. A simultaneous analysis of different dimensions of trading activity is, in fact, crucial. The literature usually distinguishes between the four liquidity dimensions depth, width, immediacy, and resilience, which are explained briefly below. Depth measures the market's ability to process the execution of large market orders for a security without this having a significant impact on its price. Possible indicators are the number and volume of buy and sell orders – both at the best bid and ask price and at lower order book levels. Width refers to the spread between the bid and ask prices in a market (bid-ask spread) or their relative distance to the mid-price (relative bid-ask spread). Width measures the transaction costs incurred when buying or selling a security. The "wider" the spread, the more expensive and thus illiquid the market is. Immediacy measures the time needed to execute a transaction of a certain size. The shorter the time period, the more liquid the market in question is. Possible indicators are "time to unwind"[49] or, more generally, indicators used to measure how long it takes to dis-

49 The time it takes to settle a US$5 million position – see Bank for International Settlements (1999). This measure is important in practice, but in the empirical analysis strongly depends on the data used and can therefore easily lead to inaccuracies in the calculation. It is therefore not used in the analyses on which this article is based.

Yield spread of Bubills over ageing Bunds*

% p.a., daily data



Sources: MTS and Bundesbank calculations. * Difference between mid and ask yields of Bubills and mid and ask yields of ageing Bunds with the closest residual maturity, where the residual maturity is less than one year. Winsorised at 5% and smoothed using the 20-day average.

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cover a security's price.[50] Resilience describes the speed at which a market returns to near "normal" market behaviour in the event of fluctuations in key trading metrics (e.g. the security price) following a shock, for example in response to new information or a large market order. Possible measures are ticket size[51] or the market efficiency coefficient.[52] In addition, this chapter also presents a new method for measuring resilience for the Bund future market.

Trading volume often correlates with volatile periods

The actual trading volume is often used as an additional indicator of market liquidity. However, in some instances, a high trading volume correlates with a deterioration in other liquidity dimensions. Nevertheless, it is important for quantifying market conditions, as high trading volumes often indicate exceptional market situations.

Volatility is regarded as a market stress indicator and is often a sign of high uncertainty

Price volatility also has an important role to play in assessing market conditions. Periods of high volatility often point to increased uncertainty among market participants in terms of their risk assessment for the security concerned. Volatility can thus be an indication of market stress and is considered a measure of risk. However, it also occurs as new information is priced into a security. Generally, volatile price developments up the risk for dealers and market-makers, which is why they sometimes respond by increasing the cost at which they provide liquidity (higher bid-ask spread) or by reducing their provision of liquidity (lower market depth).

Price anomalies as another indication of adverse effects on market conditions

Finally, market conditions and inefficiencies can lead to (price) anomalies. For example, the Eurosystem's asset purchase programmes reduced the free float (see p. 75), causing a certain scarcity of many bonds. This can be seen, amongst other things, in rising scarcity premia in the repo market for Bunds that are particularly sought after. Consequently, price differences between bonds which are otherwise broadly similar may become more frequent.[53]

Anomalies in the Bund yield curve as a possible sign of disruptions to market functioning

One example of such price anomalies are yield deviations between ageing, originally long-dated Bunds and short-dated Treasury discount paper (Bubills) with the same residual maturity. Since 2017, these deviations have increasingly affected ask yields[54] and, from 2020 onwards, are also more evident in mid yields.[55] In an efficient, frictionless market, if these bonds have the same residual maturity, they should also have the same yield. With the abolition of the maturity restriction (from a remaining maturity of 70 days) and the increase in the purchase limit under the PEPP, the ageing Bunds were increasingly purchased, and have since then traded at higher prices than short-dated bonds with the same residual maturity. The shorter the residual maturity, the more pronounced the difference was. Before the start and at the be-

50 See International Monetary Fund (2002).
51 In the event of impaired functioning, larger orders may have to be split into several smaller ones.
52 The market efficiency coefficient measures the ratio between short-term and longer-term price changes: large short-term price changes accompanied by constant long-term price changes can be an indication of noise trading and therefore point to decreasing liquidity; see Da Silva (2013).
53 This can be quantified, for example, using "spline spreads", in other words, yield deviations from the estimated yield curve. However, these can also increase due to shifts in the yield curve.
54 Ask yields are the yields relevant from the buyer's point of view (for example, in the context of monetary policy purchases), at which a dealer offers a Federal security for sale.
55 Average of the best bid and ask yields.

Indicators by dimension and market

Composite indicator	Indicator type	Liquidity dimension	Market segment			Data frequency
			Spot market	Future market	Repo market	
Cross-segment indicator of market conditions (MCI)	Liquidity	Width (actual/ executable)	Bid-ask spread	Bid-ask spread		Daily
		Depth (executable)	Top 3 levels order book depth	Top 15 levels order book depth		
		Order book slope[1]	Top 3 levels order book slope	Top 15 levels order book slope		
		Depth (actual)	Trading volume	Trading volume	Trading volume (SC)[2]	
	Price anomalies		Spline spread KfW-Bund spread	Cash-Future-Basis	GC-SC repo spread[2]	
	Volatility		Standard deviation of intraday prices	Standard deviation of intraday prices		
Special indicator of market conditions (FCI)[3]	Liquidity	Width (executable)		Bid-ask spread		Seconds
		Depth (executable)		Top 1 level order book depth bid		
		Depth (executable)		Top 1 level order book depth ask		
		Order book slope		Top 1 level order book slope		
		Depth (executable)		Frequency of the changes per sec. top 1 level bid		
		Depth (executable)		Frequency of the changes per sec. top 1 level ask		
		Depth (actual)		Trading volume per sec.		
		Depth (actual)		Transactions per sec.		
Special resilience indicator[3]	Resilience	Time to normalisation		Average duration of extreme price movements >5 standard deviations		Seconds

1 Measures the price effect per tradable additional quantity in the order book. **2** Special collateral, general collateral. **3** For 2-year, 5-year, 10-year and 30-year Bund futures.

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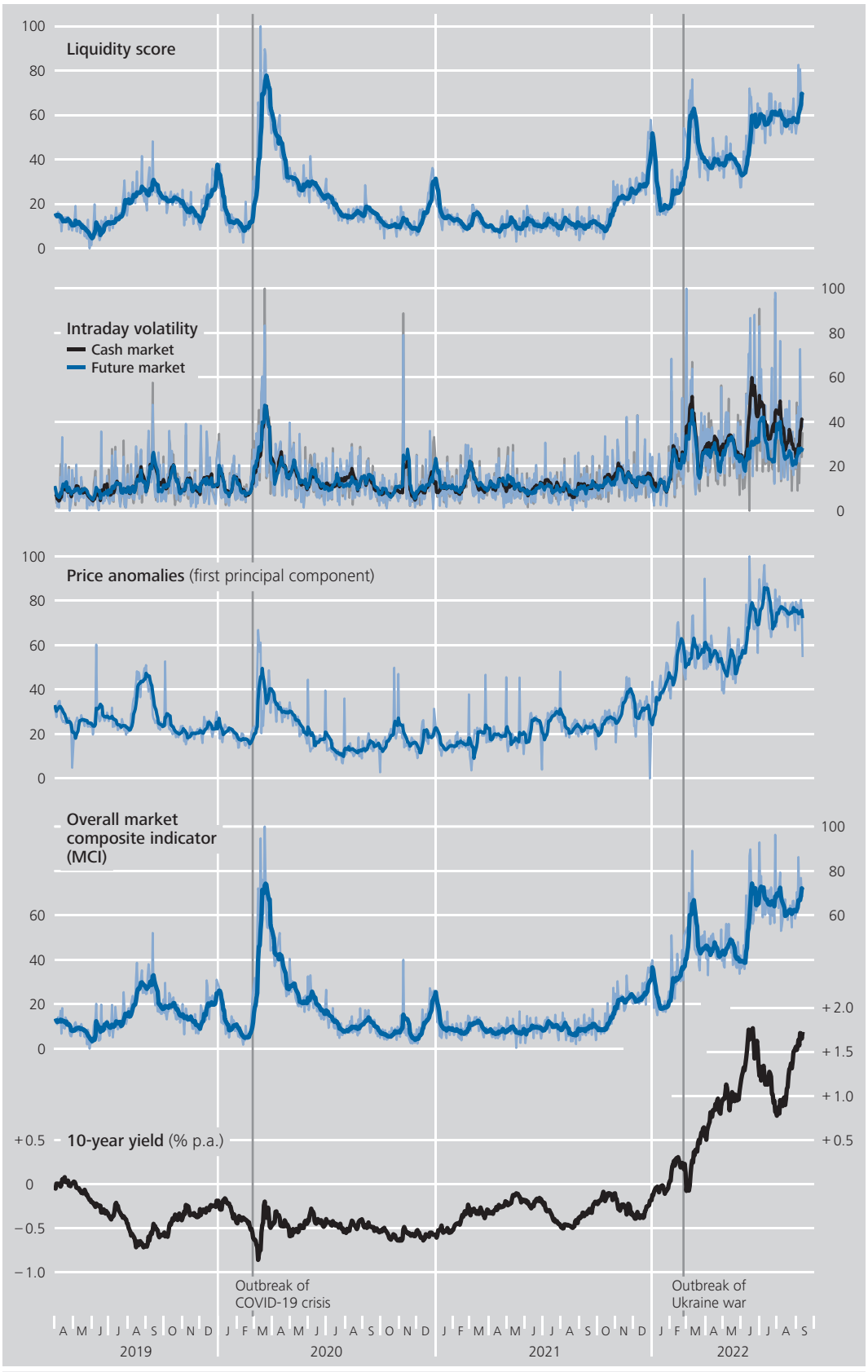
ginning of the PSPP, the relationship had been the reverse, i.e. the yield on Bubills was higher than the yield on ageing, originally long-dated Bunds, mainly because Bubills are more liquid. Regression analyses have been used to show that PEPP purchases now promoted the abnormal[56] yield spreads. Moreover, the higher issuance volumes of Bubills from 2020 onwards are probably also a key reason why Bubills have higher yields in relative terms. Since the decision to end the PEPP in December 2021, the positive deviation of short-dated and ageing bonds with the same residual maturity has come back down again, and has even entered negative territory at times. However, it has risen again significantly over the course of 2022.

The difference in the price of bonds with the same residual maturity but issued by agencies with the same default risk, such as the Federal Republic of Germany and Kreditanstalt für Wiederaufbau (KfW), could also point to certain scarcities in the market for Bunds. A small yield spread between the two bond issuers

56 "Abnormal yield spread" is understood to mean a yield spread between ageing, originally long-dated Bunds and Bubills with the same residual maturity, which should average close to zero in normal times, but actually differs significantly from zero.

Dimensions of market conditions and composite indicator

The indicators are normalised to between 0 and 100 — Moving 10-day average — Daily data



Sources: Bloomberg, Eurex, MTS, Refinitiv, Trax and Bundesbank calculations.
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may be fundamentally justified, for example, because Bunds have higher issuance volumes. This difference can be understood as a liquidity premium[57] for KfW bonds as compared to Bunds. However, it has widened sharply of late, which illustrates the particularly high demand for Bunds and the scarcities that this has caused. Price anomalies between the Bund cash and the Bund future market, two very closely related markets, are examined in the box on pp. 79 ff.

Holistic analysis helpful in identifying exceptional market phases

The dimensions outlined above suggest that a comprehensive assessment of market conditions must necessarily be based on a holistic approach encompassing a wide range of indicators. At the same time, however, it is desirable to use as few indicators as possible to present market conditions in order to better understand and communicate the outcome. The wide-spread method of principal component analysis[58] can be employed to reduce the number of dimensions used to explain an empirical situation without significantly curtailing the information content of the resulting composite indicator. Indicators that can be used to measure market conditions empirically will therefore be presented below.

Cross-segment indicators allow an assessment of market conditions as a whole

A principal component analysis can be used to calculate a liquidity score from the nine liquidity indicators on the Bund cash, Bund future and SC repo market (see the table on p. 87).[59] By contrast, the level of intraday volatility is shown individually for the cash and the future market, as no aggregation is necessary. Developments in the four indicators of possible price anomalies can be clearly seen in their first principal component.[60] Moreover, all 15 indicators can be merged into a cross-segment composite indicator (overall market composite indicator, or MCI).[61] The MCI thereby maps events in the three segments cash, Bund future and repo market on a daily basis. To make interpretation easier, all indicators are normalised to values between 0 and 100.

Intraday indicator allows depiction on small time scales

The high-frequency indicators on the Bund future market can be used to represent a composite indicator (future market composite indicator, or FCI) for which measured values are available for every second of trading. It is primarily intended to allow an analysis of dynamic processes and developments on small time scales (for example, market reactions to the publication of economic data or monetary policy decisions) on an intraday basis.[62] The possibility provided by the FCI of examining short time scales is particularly important given that market conditions are heavily influenced by algorithmic trading strategies.

Set of indicators points to differences between the various crisis phases

Overall, the indicators (see the chart on p. 88) and the resilience indicator presented in the box on pp. 90 f. represent clear and complementary methods for quantifying market conditions. They can help to bundle dynamic market developments that are driven by numerous simultaneous factors and thus make them easier to understand and communicate. Essen-

57 See Deutsche Bundesbank (2018).
58 Principal component analysis is a statistical method that extracts common time-varying determinants from several correlated variables. Each determinant is a linear combination of the variables used. In most cases, only one or two common factors, known as the principal components, are considered, as these generally explain the majority of the total variance in all the variables included. See also Deutsche Bundesbank (2008).
59 The liquidity score is calculated from the first (46% of variance) and the second principal component (17% of variance), weighted by their empirical explanatory power. The first principal component is determined relatively evenly from all input variables – except trading volume. Trading volumes and other indicators are inverted in some cases so that low (high) values always represent good (poor) liquidity.
60 It represents 48% of the variance of the input variables.
61 The first principal component of the MCI represents 45% of the variance of all individual indicators and is explained relatively homogeneously by all remaining indicators. The second principal component represents 12%. The MCI is derived from the first and second principal component weighted by their empirical explanatory power. Apart from the three inverted volume indicators, all individual indicators are positively correlated. The volume indicators are key determinants of the second principal component.
62 With the exception of a few details, the model is designed using the same procedure as for the first indicator. Important differences are the much larger amount of data available for the future markets (for two and a half years, data are available for around 14.7 million trading seconds), the smaller number of individual indicators that are incorporated into the model (8 rather than 15) and the use of four principal components rather than two.

A novel approach to measuring market resilience

When it comes to measuring market conditions, resilience, as mentioned above, plays a special role. Resilience implies that, even during periods of high market stress, market participants can still make investment decisions without complications or interruptions to trading as part of a continuous trading process. In resilient markets, shocks therefore do not cause disruptions with prolonged phases of illiquidity, but instead lead rapidly to a new steady state and to a level of trading activity that does not differ significantly from that of the previous days.

Quantifying resilience is a complex process that involves a degree of discretionary scope and for which there is no uniform standard. Below, we will introduce an empirical method for quantifying resilience in the Bund future market separately from the other indicators in order to more clearly communicate the exact procedure and to allow the results to be replicated.[1]

To measure resilience, we look at the duration of particularly unusual market events accompanied by extreme fluctuations in securities prices.[2] We examine how long the price changes persist outside their normal range following a strong price shock. The more resilient the market is to extreme price volatility, the faster trading activity should normalise and revert to the steady state after such a shock.[3]

The calculations produce a simple indicator that provides information with a high temporal resolution on the market's ability to "process" strong price fluctuations. For each time period, the value of the indicator shows how many seconds an extreme price event lasted on average.[4] Here, a higher value equates to weaker resilience to price fluctuations. The longer-term trend clearly shows the marked period of stress at the beginning of the COVID-19 pandemic (in which the market took an average of five seconds to normalise again after an extreme event) and a further period of reduced resilience in February 2021. Interestingly, in recent months, the resilience indicator has not pointed to a marked decline in market resilience. This can be interpreted to mean that the reduction in market liquidity for ten-year Bund futures currently measured by the overall market composite indicator and the FCI has not yet had the same effect on resilience up until the summer as was the case at the start of the COVID-19 crisis.

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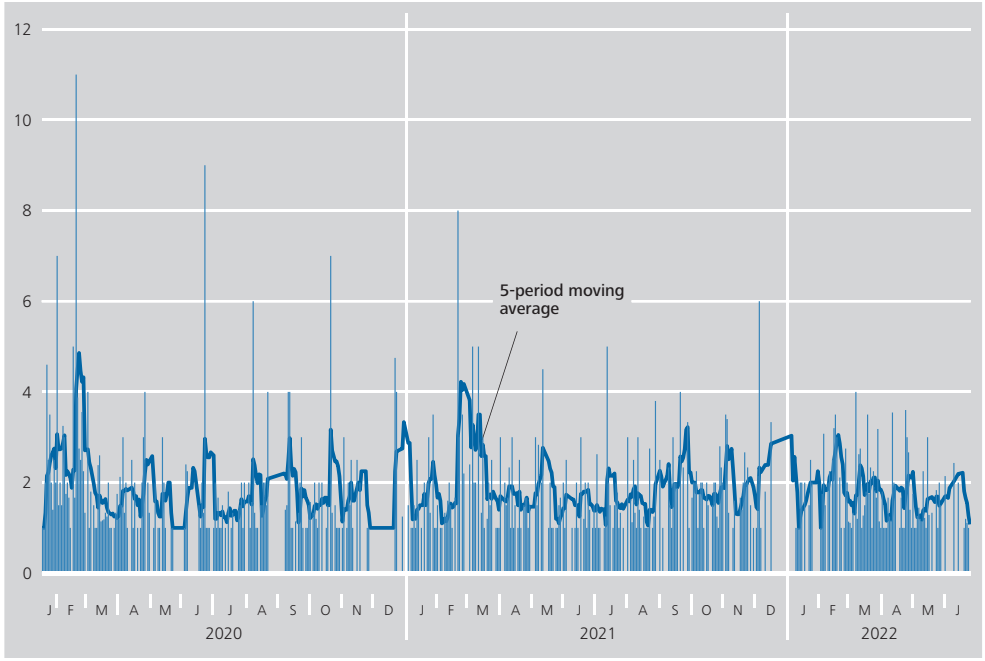
1 Given the fast pace at which electronic markets respond, the resilience study focuses on short time scales (frequency: one second), which helps gain a clearer picture of the observed rapid market fluctuations and dynamic development processes in the order books. The underlying data sample is the same as that used for the futures market composite indicator (FCI). The data sample runs from 17 January 2020 until 24 June 2022. It contains data totalling around 15 million seconds of trading activity. These data are taken from normal German trading hours (9:00 to 17:45).
2 This method is based on Danielsson et al. (2018).
3 In order to identify extreme price events, we begin by calculating intraday volatility for each individual trading day since the beginning of 2020 based on the one-second price changes. The point at which an extreme price change begins is defined as the second in which the percentage price change is more than five times the standard deviation for that day. For simplicity, normal distribution is assumed for the underlying price changes at the one-second level. In this context, a 5-sigma price change represents an intense and rare event which, for example, occurred only 1,578 times within the 14.7 million-second time frame for the ten-year Bund future under review here. This means that a price movement such as this occurs approximately once every 9,500 seconds on average. In actual fact, however, extreme events tend to occur in clusters. Several "calm" days without any extreme movements may then be followed by a short period featuring a particularly large number of major price events (volatility clustering). Starting from this moment, we analyse the price change over the next 60 seconds, measuring the time that price volatility takes to return to normal levels. As markets and liquidity change over time, this normal range is not static either. The limit of the normal range is defined as a five-day moving median, +/- two standard deviations from the last four trading days prior to the event and on the day of the event itself and thus contains data from around 140,000 trading seconds. Each successive change in the price outside the defined normal range counts toward the duration. This means that the duration indicates the length of the extreme event up to the point at which the price movements first return to normal.
4 The average duration of an extreme price event for ten-year Bund futures is 1.9 seconds. This means that, on average, it takes two seconds for the intensity of the price changes to return to the normal range observed in the four preceding trading days.

Resilience indicator for ten-year Bund futures*

Daily data



Sources: Bloomberg and Bundesbank calculations. The analysis was performed for the period from January 2020 to June 2022 (563 days in total). * For each day, the resilience indicator shows the average duration of an extreme price event in seconds. A higher value indicates greater market tension.

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tially, the indicators identify three periods in which market conditions have been tense since 2019: the COVID-19 crisis, the Ukraine war, and the increasing expectations of monetary policy normalisation as a result of the inflationary environment.

Developments in market conditions in an environment of heightened uncertainty

The COVID-19 crisis

The COVID-19 pandemic has caused tensions in the Bund market as elsewhere

In the spring of 2020, the COVID-19 pandemic dominated the capital markets and led to, in some cases, massive disruptions in many market segments. As of 1 March 2020, yields on Bunds initially declined as risk aversion rose. This flight to safety is not unusual in uncertain times.[63] However, starting on 9 March, ten-year Bund yields temporarily spiked up 75 basis points within the space of eight trading days,[64] thereby displaying volatility that is many times higher than is usual for this asset class. In this uncertain environment, there were also repeatedly periods of high illiquidity. Such price dynamics are exceptional for a benchmark segment such as Bunds, especially given that yields were rising and not falling (as is more common in risk-averse periods). This episode illustrates that even market segments generally regarded as very robust, such as Bunds, are not immune to temporary market distortions.

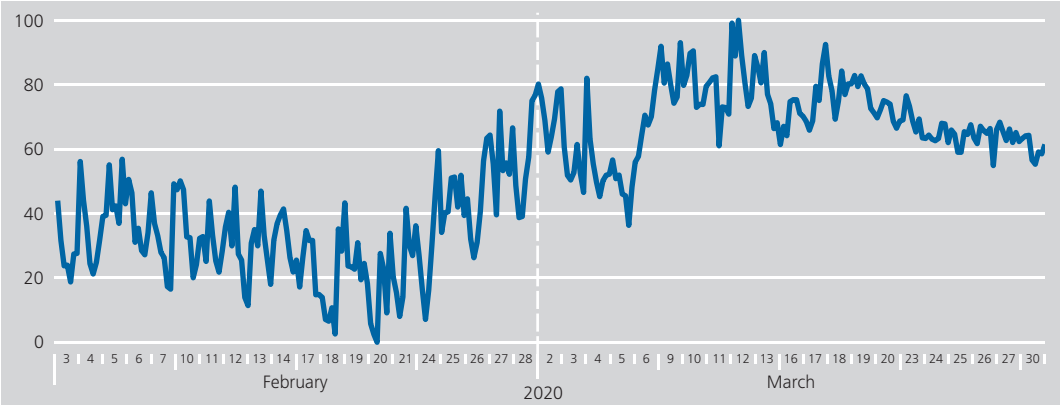
Worldwide sales of benchmark bonds in March 2020 prompting central bank interventions

The turmoil was largely triggered by a global supply shock in leading government bond markets owing to numerous sell orders from market participants whose liquidity needs had shot up at short notice (dash for cash). A prime example are foreign central banks, for whom Bunds constitute an important component of

63 See Deutsche Bundesbank (2018).
64 Taking account of intraday movements. On a closing price basis, this figure works out at 56 basis points.

Futures market composite indicator for ten-year Bund futures at the start of the COVID-19 crisis

Hourly values over the course of the day; normalised to values between 0 and 100[1]



Sources: Bloomberg and Bundesbank calculations. **1** Higher values indicate greater market tension.
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euro reserve assets. In March 2020, they sold an exceptional volume of Bunds, possibly in order to allow them to intervene more flexibly in the foreign exchange market should the situation escalate. However, Bunds were by no means the only market with benchmark status to experience the above-described phenomena. For example, a similar supply shock also led to a sharp drop in the liquidity of US Treasury bonds.[65] Moreover, as compared with the Bund market, the US Treasury market came under comparatively greater pressure.[66] In response, the Federal Reserve System absorbed considerable volumes of US Treasuries. On 18 March 2020, the Eurosystem, too, announced, that it was responding to the pandemic by launching a temporary pandemic emergency purchase programme (PEPP) of private and public sector securities, with an initial envelope of €750 billion. The announcement and start of purchases on 26 March 2020 helped to calm the market.

Inflation and the war in Ukraine

After a period of around 16 months in which market conditions were robust, a new market phase started to emerge at the end of October 2021. This was mainly due to the high degree of uncertainty about future interest rate developments in an increasingly inflationary environment, which was initially driven by global supply chain bottlenecks. In a zero interest rate environment, bonds are particularly sensitive to rising interest rates, which meant that investors were also very uncertain about the valuations of Bunds. As a result, liquidity conditions deteriorated.

First expectations of interest rate changes since the end of 2021 due to growing inflationary concerns

In this situation, with supply chains already vulnerable and inflation rising, the Russian war of aggression against Ukraine had a multiplier effect. The rapid rise in energy prices and renewed shocks to global supply chains not only weighed on the capital markets, they simultaneously put pressure on large swathes of the real economy. Faced with the sharp deterioration in the outlook for inflation over the medium term, the ECB Governing Council initiated monetary policy normalisation in the euro area by ending net purchases under the APP and PEPP monetary policy purchase programmes and undertaking its first interest rate hikes. Growing expectations of rising key interest

War in Ukraine is additionally fuelling uncertainty and concerns about inflation

65 See Fleming and Ruela (2020) and Duffie (2020). Furthermore, dealers had already increased their holdings of Treasuries sharply at the outbreak of the crisis, limiting their ability to absorb more. For more information, see He et al. (2020). Schrimpf et al. (2020) also identify sales by hedge funds as a reason for the supply shock.
66 See Barone et al. (2022).

rates as a result of the inflationary environment and the high level of uncertainty in the real economy were accompanied by a decline in liquidity in the cash and future market for Bunds.

Scarcity premia in the repo market and asset swap spreads very high since 2022

Other selected indicators, such as repo market rates and asset swap spreads,[67] are also displaying signs of certain tensions in the trade in Bunds. In 2022, the scarcity premium in the repo market again hit the record level last seen in 2016 and 2017, when monthly PSPP purchases were carried out at their maximum volume of €80 billion. One factor here was increased risk aversion as a result of Russia's war of aggression on Ukraine, which has significantly buoyed demand for Bunds, another was adjusted market positioning by investors due to expectations of an interest rate hike.[68] There is therefore nothing yet to suggest that the scarcity issue will ease given the end of the APP and PEPP monetary policy purchase programmes. Asset swap spreads have also risen significantly, which may be due to demand for hedging interest rate risk given rapidly rising expectations of an interest rate hike and market uncertainty about the extent of monetary policy tightening. At the Governing Council meeting on 8 September 2022, the deposit rate was raised to 0.75%. In order to prevent an abrupt outflow of deposits into the market and the associated collateral scarcity in some segments of the repo market, the ceiling for remuneration of government deposits with the Eurosystem was removed for a transitional period up to the end of April 2023. This adjustment contributed to a slight decline in asset swap spreads and the scarcity premium in the repo market in September.

The current environment and the COVID-19 crisis compared

In contrast to developments in the COVID-19 crisis, where market conditions normalised significantly after around two months, market conditions have remained tense ever since the summer, despite a moderate recovery in April and May 2022.[69] Given this high degree of uncertainty and illiquidity reached in recent months, one might think that market conditions for Bunds currently bear similarities to the turbulent initial phase of the COVID-19 pandemic.

Overall market composite indicator

Daily data normalised to values between 0 and 100[1]

Sources: Bloomberg, Eurex, MTS, Refinitiv, Trax and Bundesbank calculations. The analysis was conducted for the period from April 2019 to September 2022. **1** Higher values indicate more strained market conditions.

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Market conditions strained for relatively long period in recent months …

However, a nuanced analysis of the situation shows that the market phase currently being observed differs substantially from the period from mid-February to end-April 2020. In the first few days of the COVID-19 crisis, the indicators moved with significantly stronger momen-

… but not identical to the situation during the COVID-19 crisis

67 The asset swap spread is the difference between the interest rate swap rate and the yield on a bond with the same maturity. A Bund asset swap spread combines the purchase of a fixed interest Bund with an interest rate hedge using an interest rate swap and reflects not only demand for interest rate hedging but also the general liquidity situation, as Bunds are considered to be the most liquid bonds.

68 Numerous investors went short in the cash market as a bet on rising interest rates and financed these positions via the repo market.

69 An important event in this development was the Governing Council meeting on 9 June 2022, as a result of which the end of net purchases under the PSPP was announced and fresh signals of monetary policy tightening were given. Intraday indicators such as the FCI or the resilience indicator show a very strong response from investors, which started immediately in the first few seconds after the announcement of the results of the Governing Council meeting (13:45 CET) and saw market conditions deteriorate sharply. In these first few seconds, the resilience indicator also registered a particularly long 5-sigma price event, which lasted for 12 seconds.

tum than the more gradual changes observed since October 2021, which have taken place over the course of several months. Moreover, during the COVID-19 crisis, market liquidity, in particular, deteriorated amid only temporarily elevated volatility (see the overview of indicators on p. 88). In the current environment, meanwhile, volatility and price anomalies are above the levels seen during the COVID-19 crisis, while liquidity is comparatively less tight. The observation that market conditions were subject to greater strain during the COVID-19 crisis than is the case in the current environment is further corroborated by a supplementary evaluation of the resilience indicator. Looking at the past few months, this indicator likewise suggests that the market has, when experiencing high volatility, remained subject to extreme volatility for longer periods of the day overall than was the case a year ago. However, looking at the average duration of individual extreme price events, it is clear that the market's resilience did not deteriorate significantly up until the summer of 2022 (see the box on pp. 90 f.). Overall, the COVID-19 crisis therefore caused a more severe slump in market conditions, the scale and dynamics of which have not so far been matched during the current market phase.

The current, exceptional market environment puts impairment of market conditions into perspective

Overall, the current market conditions should be seen in the context of the exceptional macroeconomic and geopolitical developments. As the associated uncertainties fade, market conditions for Bunds should pick up again.

Conclusion and outlook

Future market conditions depend on developments in the market environment as well as on central bank activity and structural factors

Looking at Bunds, market conditions in general and market liquidity as a significant component have changed, not least as a result of the Eurosystem's monetary policy purchases. Analyses suggest that the central bank's net purchases may hurt the market liquidity of Bunds. This is particularly true if purchases are carried out over a long period of time and on a large scale. Central bank measures to mitigate undesirable side effects, such as securities lending, can then only partially compensate for these negative effects.

The sudden crises of the past two and a half years, the considerable uncertainty about future inflation developments and, most recently, the transition to a positive interest rate environment have also caused certain tensions in market conditions for Bunds and the market segments directly linked to them. Similar observations have also been made in other countries, such as the leading market for benchmark bonds, the United States.

At least some of the described stress factors are likely to recede over time. A central bank's contribution is to keep medium-term inflation expectations well anchored. Looking forward, the Eurosystem is also likely to reduce its holdings of Bunds again – as other central banks are already doing – thus helping to raise the free float.

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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]							
	M1	M2		3-month moving average (centred)	MFI lending, total	MFI lending to enterprises and households	Monetary capital formation [4]	€STR [5,7]	3 month EURIBOR [6,7]	Yield on European government bonds outstanding [8]
Period	Annual percentage change							% p.a. as a monthly average		
2021 Jan.	16.4	12.2	12.5	12.3	9.4	4.8	– 0.9	– 0.56	– 0.55	– 0.2
Feb.	16.4	12.1	12.3	11.6	9.6	4.7	– 0.9	– 0.56	– 0.54	– 0.1
Mar.	13.7	10.2	10.1	10.6	8.6	4.0	– 0.3	– 0.56	– 0.54	0.0
Apr.	12.4	9.2	9.4	9.4	7.3	3.4	– 0.3	– 0.57	– 0.54	0.1
May	11.7	8.4	8.6	8.8	6.3	2.9	– 1.0	– 0.56	– 0.54	0.2
June	11.8	8.3	8.4	8.3	6.0	3.3	– 0.6	– 0.56	– 0.54	0.2
July	11.0	7.6	7.8	8.1	5.8	3.1	– 0.5	– 0.57	– 0.55	0.0
Aug.	11.1	7.8	8.0	7.8	5.5	2.8	– 0.8	– 0.57	– 0.55	– 0.1
Sep.	11.1	7.6	7.6	7.7	5.6	3.3	– 0.7	– 0.57	– 0.55	0.1
Oct.	10.7	7.5	7.7	7.5	5.6	3.6	– 0.3	– 0.57	– 0.55	0.2
Nov.	10.0	7.1	7.3	7.3	5.8	3.7	– 0.5	– 0.57	– 0.57	0.2
Dec.	9.8	7.0	6.9	6.9	6.1	3.9	– 0.5	– 0.58	– 0.58	0.1
2022 Jan.	9.2	6.8	6.5	6.6	6.2	4.3	– 0.3	– 0.58	– 0.56	0.4
Feb.	9.1	6.8	6.4	6.4	6.2	4.4	– 0.6	– 0.58	– 0.53	0.8
Mar.	8.8	6.6	6.2	6.2	6.1	4.4	– 0.7	– 0.58	– 0.50	0.9
Apr.	8.2	6.3	6.1	6.0	6.4	5.0	– 0.1	– 0.58	– 0.45	1.4
May	7.9	6.0	5.8	5.8	6.2	5.1	0.0	– 0.59	– 0.39	1.7
June	7.2	5.9	5.7	5.7	6.3	5.4	– 0.0	– 0.58	– 0.24	2.2
July	6.8	5.9	5.7	5.8	5.9	5.4	– 0.1	– 0.51	0.04	1.9
Aug.	6.8	6.3	6.1	...	5.6	5.6	– 0.1	– 0.09	0.40	1.8
Sep.	...	...	...	...	...	...	...	0.36	1.01	2.6

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** Euro interbank offered rate. **7** See also footnotes to Table VI.4, p. 43•. **8** 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 [r]								Euro exchange rates [1]		
	Current account		Financial account							Effective exchange rate [3]	
	Balance	of which: Goods	Balance	Direct investment	Portfolio investment	Financial derivatives [2]	Other investment	Reserve assets	Dollar rate	Nominal	Real [4]
Period	€ million								EUR 1 = USD ...	Q1 1999 = 100	
2021 Jan.	+ 16,202	+ 20,504	+ 31,005	+ 55,875	+ 13,672	+ 13,654	– 51,202	– 993	1.2171	101.3	95.3
Feb.	+ 21,855	+ 32,863	+ 47,043	+ 31,501	+ 98,155	– 462	– 80,541	– 1,611	1.2098	100.6	94.5
Mar.	+ 40,387	+ 37,836	+ 22,098	+ 28,899	– 50,962	– 4,926	+ 49,572	– 486	1.1899	100.3	94.1
Apr.	+ 35,687	+ 29,397	+ 11,050	+ 4,306	+ 31,029	+ 6,654	– 31,533	+ 593	1.1979	100.6	94.3
May	+ 11,656	+ 26,793	+ 32,263	+ 5,619	+ 79,738	– 7,115	– 47,302	+ 1,323	1.2146	100.8	94.3
June	+ 30,931	+ 31,425	+ 67,135	– 11,569	+ 44,284	– 2,680	+ 31,903	+ 5,198	1.2047	100.2	93.7
July	+ 36,184	+ 34,231	+ 27,732	+ 46,148	– 8,774	+ 18,412	– 27,716	– 337	1.1822	99.7	93.4
Aug.	+ 20,457	+ 17,145	+ 32,837	+ 61,459	+ 12,932	+ 2,203	– 165,839	+ 122,082	1.1772	99.3	93.1
Sep.	+ 33,115	+ 22,271	+ 14,945	+ 13,409	+ 14,477	+ 2,664	– 17,009	+ 1,404	1.1770	99.4	93.2
Oct.	+ 6,514	+ 12,934	+ 17,186	+ 28,579	+ 20,476	+ 13,355	– 48,393	+ 3,170	1.1601	98.4	92.4
Nov.	+ 13,803	+ 14,913	– 2,546	+ 4,881	+ 56,566	+ 25,649	– 90,183	+ 540	1.1414	97.6	91.7
Dec.	+ 21,920	+ 9,977	+ 15,028	+ 25,582	+ 5,571	+ 1,183	– 16,486	– 822	1.1304	97.1	91.2
2022 Jan.	– 9,342	– 9,912	+ 14,184	– 10,398	+ 78,022	+ 3,628	– 54,747	– 2,320	1.1314	96.6	91.2
Feb.	+ 54	+ 4,160	– 85	+ 26,941	– 27,411	– 2,766	+ 1,623	+ 1,527	1.1342	96.9	91.7
Mar.	+ 5,578	+ 4,261	– 19,420	+ 5,909	– 101,539	– 2,948	+ 79,252	– 95	1.1019	95.9	91.3
Apr.	– 15,096	– 12,271	– 48,564	– 604	+ 23,598	+ 32,911	– 103,831	– 639	1.0819	95.2	89.9
May	– 32,011	– 6,363	+ 45,593	+ 94,095	+ 28,067	+ 1,081	– 78,863	+ 1,213	1.0579	95.6	90.3
June	– 5,117	– 6,873	+ 21,904	– 2,252	– 59,532	– 10,044	+ 91,987	+ 1,745	1.0566	95.9	90.5
July	– 10,098	– 12,718	+ 29,098	+ 1,942	+ 26,892	– 196	– 1,178	+ 1,639	1.0179	94.1 p	89.0
Aug.	...	...	...	...	...	...	...	...	1.0128	93.6 p	88.7
Sep.	...	...	...	...	...	...	...	...	0.9904	94.2 p	89.3

***** 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.10 and 11, pp. 82•/ 83•. **2** Including employee stock options. **3** Bundesbank calculation. Against the currencies of the EER-19 group. **4** Based on consumer price indices.

I. Key economic data for the euro area

3. General economic indicators

Period	Euro area	Belgium	Germany	Estonia	Finland	France	Greece	Ireland	Italy	Latvia
Real gross domestic product [1] Annual percentage change										
2019	1.6	2.1	1.1	3.7	1.2	1.8	1.8	5.4	0.5	2.6
2020	− 6.1	− 5.7	− 3.7	− 0.6	− 2.2	− 7.8	− 9.0	6.2	− 9.0	− 2.2
2021	5.2	6.2	2.6	8.0	3.0	6.8	8.3	13.6	6.7	3.9
2021 Q1	− 0.8	0.0	− 2.3	2.5	− 1.5	1.6	− 0.8	11.4	0.4	− 1.7
Q2	14.4	15.1	10.6	13.9	7.5	19.0	15.0	19.5	17.1	9.9
Q3	3.7	5.0	1.8	8.4	3.0	3.7	11.8	10.4	4.6	4.5
Q4	4.6	5.6	1.2	7.4	3.0	4.7	7.4	13.8	6.0	2.7
2022 Q1	5.4	4.8	3.9	4.5	4.3	4.8	9.0	10.8	6.2	6.4
Q2	4.1	3.2	1.8	0.6	3.3	4.2	7.8	11.1	4.8	2.9
Industrial production [2] Annual percentage change										
2019	− 0.7	4.8	− 3.2	7.1	1.6	0.5	− 0.7	7.0	− 1.1	0.8
2020	− 7.7	− 3.8	− 9.6	− 2.8	− 3.2	− 10.9	− 2.1	14.5	− 11.4	− 1.8
2021	8.0	16.8	4.7	6.8	4.1	5.9	10.4	16.4	12.2	6.5
2021 Q1	5.0	8.4	− 0.3	− 0.2	− 0.1	2.1	4.5	40.6	10.3	3.7
Q2	23.7	29.8	20.3	15.0	4.3	22.4	15.5	33.2	32.6	12.6
Q3	5.9	19.4	2.5	7.2	4.5	2.6	9.9	27.6	4.9	6.3
Q4	0.2	11.2	− 1.2	5.6	7.3	− 0.4	11.9	− 18.2	4.6	3.5
2022 Q1	− 0.3	6.4	− 1.2	4.1	3.3	0.1	4.8	− 15.0	1.4	4.0
Q2	0.4	− 5.1	− 1.3	2.9	6.8	0.1	2.9	− 7.3	2.0	3.6
Capacity utilisation in industry [3] As a percentage of full capacity										
2019	82.2	81.2	84.6	72.6	81.0	84.5	71.5	77.3	77.4	76.3
2020	74.5	75.6	77.3	67.6	76.9	73.8	71.0	68.7	53.4	72.0
2021	81.4	80.1	84.8	78.1	81.2	81.1	75.6	78.2	76.4	75.2
2021 Q2	80.8	79.5	85.0	77.2	82.1	80.2	74.3	73.5	75.4	74.5
Q3	83.0	80.9	86.1	78.2	81.8	82.9	77.8	80.8	77.5	76.1
Q4	82.7	81.1	85.8	83.0	82.5	82.0	77.4	81.6	77.7	77.1
2022 Q1	82.4	80.0	85.9	72.5	81.3	82.7	76.8	78.9	78.6	74.6
Q2	82.5	80.1	85.1	70.6	80.7	82.2	76.6	82.6	78.6	75.4
Q3	82.4	79.0	85.0	74.9	81.2	82.2	74.6	79.7	78.7	76.4
Standardised unemployment rate [4] As a percentage of civilian labour force										
2019	7.5	5.4	3.0	4.5	6.7	8.2	17.3	5.0	10.0	6.3
2020	7.8	5.6	3.6	7.0	7.8	7.8	16.3	5.6	9.2	8.1
2021	e 7.7	e 6.3	3.6	e 6.2	e 7.7	e 7.9	e 14.8	e 6.3	e 9.5	e 7.6
2022 Apr.	6.7	5.6	3.0	5.5	6.2	7.5	12.8	4.6	8.2	6.6
May	6.7	5.8	3.0	5.8	6.1	7.6	12.7	4.2	8.0	6.5
June	6.7	5.9	3.0	5.8	6.8	7.6	12.4	4.3	8.0	6.4
July	6.6	5.9	3.0	5.8	7.2	7.4	12.3	4.2	7.9	6.5
Aug.	6.6	5.8	3.0	5.8	7.3	7.3	12.2	4.3	7.8	6.5
Sep.	...	...	...	...	...	...	...	4.3	...	...
Harmonised Index of Consumer Prices Annual percentage change										
2019	1.2	1.2	1.4	2.3	1.1	1.3	0.5	0.9	0.6	2.7
2020	0.3	0.4	5 0.4	− 0.6	0.4	0.5	− 1.3	− 0.5	− 0.1	0.1
2021	2.6	3.2	5 3.2	4.5	2.1	2.1	0.6	2.4	1.9	3.2
2022 Apr.	7.4	9.3	7.8	19.1	5.8	5.4	9.1	7.3	6.3	13.1
May	8.1	9.9	8.7	20.1	7.1	5.8	10.5	8.3	7.3	16.8
June	8.6	10.5	8.2	22.0	8.1	6.5	11.6	9.6	8.5	19.2
July	8.9	10.4	8.5	23.2	8.0	6.8	11.3	9.6	8.4	21.3
Aug.	9.1	10.5	8.8	25.2	7.9	6.6	11.2	9.0	9.1	21.4
Sep.	e 10.0	12.1	10.9	e 24.2	8.4	6.2	12.1	8.6	9.4	22.0
General government financial balance [6] As a percentage of GDP										
2019	− 0.7	− 2.0	1.5	0.1	− 0.9	− 3.1	1.1	0.5	− 1.5	− 0.6
2020	− 7.1	− 9.0	− 4.3	− 5.6	− 5.5	− 8.9	− 10.2	− 5.1	− 9.6	− 4.5
2021	− 5.1	− 5.5	− 3.7	− 2.4	− 2.6	− 6.5	− 7.4	− 1.9	− 7.2	− 7.3
General government debt [6] As a percentage of GDP										
2019	83.8	97.7	58.9	8.6	59.6	97.4	180.7	57.2	134.1	36.7
2020	97.2	112.8	68.0	19.0	69.0	114.6	206.3	58.4	155.3	43.3
2021	95.6	108.2	68.6	18.1	65.8	112.9	193.3	56.0	150.8	44.8

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										
4.6	2.3	5.9	2.0	1.5	2.7	2.5	3.5	2.0	5.5	2019
− 0.0	− 0.8	− 8.3	− 3.9	− 6.5	− 8.3	− 3.4	− 4.3	− 11.3	− 4.4	2020
6.0	5.1	10.3	4.9	4.6	5.5	3.0	8.2	5.5	6.6	2021
2.8	4.1	− 0.1	− 2.2	− 5.4	− 4.9	0.2	1.6	− 4.8	− 0.2	2021 Q1
9.1	10.7	16.3	10.2	13.0	16.3	9.6	16.2	17.9	12.1	Q2
5.6	2.0	14.0	5.4	5.4	5.3	1.3	5.1	4.2	8.2	Q3
6.5	4.0	11.7	6.2	6.0	6.7	1.4	10.5	6.6	6.9	Q4
4.8	2.9	8.1	6.7	9.3	11.4	3.1	9.6	6.8	6.7	2022 Q1
1.7	1.6	8.9	5.2	6.0	7.9	1.8	8.2	6.7	5.9	Q2
Industrial production [2] Annual percentage change										
2.9	− 3.1	1.1	− 0.9	− 0.0	− 2.2	0.5	2.8	0.5	4.4	2019
− 1.7	− 10.8	− 0.3	− 3.9	− 5.9	− 7.3	− 9.1	− 6.4	− 9.8	− 7.3	2020
20.0	8.4	− 0.2	5.0	11.2	3.5	10.4	10.0	7.5	6.4	2021
13.3	5.1	− 8.5	− 0.8	3.0	− 0.6	6.5	3.4	2.5	1.2	2021 Q1
25.0	24.0	14.3	10.0	24.2	24.3	35.8	24.2	27.2	21.2	Q2
17.8	3.6	− 0.0	6.8	9.0	− 3.8	0.9	6.3	1.9	4.5	Q3
23.9	3.0	− 5.4	4.4	10.3	− 1.7	3.9	7.7	1.8	1.0	Q4
23.5	0.2	− 2.0	1.9	11.3	− 2.9	− 1.7	4.9	1.7	3.3	2022 Q1
8.8	− 1.6	− 5.5	4.8	9.8	2.0	− 4.8	2.8	5.2	3.0	Q2
Capacity utilisation in industry [3] As a percentage of full capacity										
77.3	80.0	77.4	84.1	86.6	78.0	87.2	84.3	80.3	63.7	2019
73.0	72.5	70.7	78.3	79.5	74.9	79.5	78.5	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
76.7	83.6	77.9	81.8	86.3	78.7	82.5	84.2	77.4	48.8	2021 Q2
77.6	83.7	78.4	83.8	89.6	78.9	81.9	85.9	77.5	50.1	Q3
78.3	81.8	75.2	83.6	88.5	80.2	82.1	85.3	79.2	55.6	Q4
77.9	81.9	62.9	84.0	88.4	81.8	82.8	86.1	78.8	55.4	2022 Q1
77.7	79.9	64.6	84.3	88.9	82.5	83.9	85.3	80.0	58.2	Q2
78.8	81.4	67.6	83.9	87.9	81.6	83.5	84.7	78.9	58.2	Q3
Standardised unemployment rate [4] As a percentage of civilian labour force										
6.3	5.6	3.6	3.4	4.5	6.5	5.8	4.5	14.1	7.1	2019
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
5.4	4.3	3.0	3.2	4.4	5.9	6.3	4.4	12.9	6.9	2022 Apr.
5.4	4.2	3.0	3.3	4.7	6.0	6.2	4.5	12.6	7.0	May
5.4	4.2	2.9	3.4	4.2	6.0	6.1	4.4	12.5	7.5	June
5.2	4.3	2.9	3.6	4.6	6.0	6.1	4.2	12.4	8.2	July
5.2	4.4	2.9	3.8	5.2	6.0	6.0	4.1	12.4	8.6	Aug.
...	...	...	...	...	...	...	...	...	...	Sep.
Harmonised Index of Consumer Prices Annual percentage change										
2.2	1.6	1.5	2.7	1.5	0.3	2.8	1.7	0.8	0.5	2019
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
16.6	9.0	5.4	11.2	7.1	7.4	10.9	7.4	8.3	8.6	2022 Apr.
18.5	9.1	5.8	10.2	7.7	8.1	11.8	8.7	8.5	8.8	May
20.5	10.3	6.1	9.9	8.7	9.0	12.6	10.8	10.0	9.0	June
20.9	9.3	6.8	11.6	9.4	9.4	12.8	11.7	10.7	10.6	July
21.1	8.6	7.0	13.7	9.2	9.3	13.4	11.5	10.5	9.6	Aug.
22.5	8.8	7.4	17.1	11.0	9.8	13.6	10.6	9.0	9.0	Sep.
General government financial balance [6] As a percentage of GDP										
0.5	2.3	0.6	1.7	0.6	0.1	− 1.3	0.4	− 3.1	1.3	2019
− 7.3	− 3.4	− 9.5	− 3.7	− 8.0	− 5.8	− 5.5	− 7.8	− 10.3	− 5.8	2020
− 1.0	0.9	− 8.0	− 2.5	− 5.9	− 2.8	− 6.2	− 5.2	− 6.9	− 1.7	2021
General government debt [6] As a percentage of GDP										
35.9	22.3	40.7	48.5	70.6	116.6	48.1	65.6	98.3	91.1	2019
46.6	24.8	53.4	54.3	83.3	135.2	59.7	79.8	120.0	115.0	2020
44.3	24.4	57.0	52.1	82.8	127.4	63.1	74.7	118.4	103.6	2021

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** 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 Jan.	133.3	30.1	4.3	103.2	94.1	38.8	162.4	123.6	– 36.2	– 9.2	0.1	– 16.0	– 11.1
Feb.	99.8	33.8	9.0	66.0	72.7	– 14.7	28.9	43.6	– 1.2	– 5.7	– 0.5	– 2.4	7.4
Mar.	176.0	100.7	8.5	75.3	74.0	– 5.9	– 6.7	– 0.7	12.2	– 9.0	– 0.3	1.2	20.3
Apr.	55.9	13.3	8.6	42.6	29.0	– 11.4	104.5	115.9	– 36.9	– 23.9	– 0.1	– 7.5	– 5.4
May	124.9	48.3	15.2	76.6	77.6	2.6	24.5	21.8	– 23.5	– 1.2	– 0.2	– 15.1	– 6.9
June	94.5	37.2	0.8	57.3	58.6	9.2	– 74.4	– 83.6	26.8	– 6.1	– 0.4	– 4.2	37.6
July	112.9	56.0	8.1	56.8	50.3	– 4.2	74.3	78.6	3.1	– 4.7	– 0.6	9.3	– 0.8
Aug.	35.0	– 16.7	– 7.8	51.7	60.9	– 4.7	141.2	146.0	– 5.9	– 7.3	– 0.4	– 7.0	8.9
Sep.	107.4	72.9	3.6	34.5	43.2	– 40.1	– 58.2	– 18.1	16.6	– 4.5	– 0.4	8.3	13.2
Oct.	80.6	68.3	21.4	12.3	18.5	– 16.4	192.3	208.7	11.4	– 10.7	– 0.7	16.8	6.0
Nov.	156.1	89.3	– 3.6	66.8	67.5	– 26.3	15.0	41.3	– 7.0	– 10.6	– 0.7	1.8	2.5
Dec.	53.0	27.8	20.3	25.2	22.7	– 51.4	– 203.4	– 151.9	4.4	18.0	– 0.8	– 25.0	12.2
2022 Jan.	166.4	91.4	– 10.3	75.0	64.7	– 1.6	136.3	137.9	– 18.3	– 14.7	– 0.1	9.4	– 12.9
Feb.	109.5	43.1	2.0	66.5	73.8	– 14.5	82.6	97.1	– 21.1	– 12.6	– 0.4	– 3.5	– 4.6
Mar.	158.3	113.0	26.4	45.3	36.0	1.9	– 20.6	– 22.5	– 0.4	2.8	– 0.7	– 21.9	19.4
Apr.	111.4	96.3	20.1	15.1	5.1	– 79.7	– 58.2	21.5	8.2	– 10.6	– 0.1	1.3	17.7
May	106.2	64.3	– 19.0	41.9	49.4	– 59.6	39.4	99.0	– 16.2	3.0	– 3.2	– 21.3	5.4
June	116.4	83.6	– 8.7	32.8	33.7	84.9	– 46.0	– 130.9	23.4	– 4.7	– 0.5	1.2	27.3
July	31.2	59.9	– 2.8	– 28.7	– 28.5	– 15.6	61.7	77.4	– 0.0	– 11.7	– 0.4	– 3.9	15.9
Aug.	– 22.1	14.1	– 19.2	– 36.2	– 30.6	43.8	66.6	22.8	– 11.0	– 22.1	0.7	0.8	9.6

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 Jan.	30.1	12.1	3.1	18.1	18.1	41.7	79.7	38.0	– 11.4	– 2.9	– 0.6	– 1.6	– 6.4
Feb.	29.8	18.8	4.6	11.1	13.4	26.3	7.0	– 19.3	0.8	– 1.8	– 0.3	4.3	– 1.4
Mar.	54.1	35.8	1.8	18.3	19.5	– 61.9	1.9	63.9	3.5	– 3.5	– 0.3	7.1	0.2
Apr.	11.4	0.5	2.4	10.8	7.0	67.3	25.3	– 42.0	9.3	– 2.4	– 0.3	6.4	5.6
May	33.4	16.8	3.2	16.6	18.9	– 35.0	– 10.9	24.1	– 10.3	– 2.8	– 0.1	– 7.3	0.0
June	30.0	8.7	2.4	21.4	22.3	– 36.1	– 5.3	30.8	3.2	– 3.4	– 0.2	– 7.3	14.1
July	42.9	22.4	2.2	20.4	18.4	42.8	– 14.6	– 57.4	5.1	– 1.8	– 0.3	4.3	2.8
Aug.	28.5	16.6	1.6	11.9	15.7	– 18.0	18.2	36.2	2.0	– 0.5	– 0.2	0.9	1.9
Sep.	33.1	16.7	5.4	16.4	16.5	– 92.2	– 0.7	91.5	3.8	– 2.2	– 0.2	2.6	3.6
Oct.	37.8	34.7	7.2	3.0	– 0.6	47.0	47.6	0.7	18.6	1.4	– 0.2	15.6	1.8
Nov.	54.0	28.5	3.4	25.4	28.0	– 59.0	– 4.2	54.8	5.0	– 0.6	– 0.2	4.7	1.1
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.	26.2	39.4	– 0.3	– 13.3	– 11.3	– 50.9	5.8	56.7	2.6	– 0.0	– 0.1	0.9	1.8

***** 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]						
78.3	33.2	0.0	69.1	32.3	44.5	2.6	41.9	− 30.6	18.4	29.9	18.5	5.7	2021 Jan.
30.4	5.2	0.0	52.6	65.4	71.8	7.3	64.5	− 18.0	11.6	2.8	− 30.7	13.1	Feb.
19.6	73.2	0.0	83.2	101.6	82.6	10.5	72.2	7.3	11.7	− 18.6	− 4.7	− 13.3	Mar.
− 32.3	14.2	0.0	94.5	69.1	88.9	8.5	80.4	− 27.9	8.1	15.3	8.9	6.8	Apr.
− 8.5	48.9	0.0	110.1	115.6	116.7	13.2	103.5	− 11.7	10.7	− 4.1	− 8.9	8.1	May
16.8	− 4.3	0.0	74.0	88.1	119.7	10.5	109.2	− 33.9	2.3	− 10.8	− 8.4	− 4.6	June
0.4	− 55.8	0.0	151.2	113.5	103.3	14.6	88.6	10.5	− 0.3	17.4	22.6	7.4	July
26.6	− 10.6	0.0	28.3	33.4	32.4	1.7	30.7	− 2.5	3.6	− 12.3	5.3	− 6.2	Aug.
6.5	− 0.8	0.0	31.1	60.4	76.0	5.3	70.8	− 16.5	0.8	12.7	− 31.1	2.9	Sep.
− 2.4	− 75.0	0.0	129.3	84.7	70.5	6.8	63.7	19.2	− 5.0	13.2	31.5	0.8	Oct.
− 48.5	84.9	0.0	95.9	83.7	102.7	6.0	96.7	− 19.7	0.7	− 4.4	26.2	− 5.0	Nov.
− 44.5	− 20.1	0.0	87.6	114.4	104.0	20.6	83.3	6.9	3.6	− 41.8	− 6.7	− 4.0	Dec.
68.1	91.1	0.0	− 23.8	− 23.9	− 51.4	1.0	− 52.3	14.9	12.6	63.5	− 23.2	6.2	2022 Jan.
44.6	31.7	0.0	39.4	69.8	76.7	9.1	67.5	− 14.8	8.0	9.4	− 37.2	− 2.1	Feb.
13.7	52.0	0.0	102.4	113.2	93.1	22.5	70.6	16.0	4.0	− 21.8	− 3.4	1.5	Mar.
− 22.1	− 74.8	0.0	94.1	57.7	52.3	11.2	41.1	3.1	2.4	28.8	21.9	13.4	Apr.
− 28.9	46.7	0.0	52.3	62.4	68.8	7.8	61.1	− 18.4	12.0	4.4	− 11.5	− 4.2	May
69.6	51.5	0.0	74.9	79.1	52.5	6.6	45.9	23.5	3.1	− 35.5	− 1.4	13.8	June
− 31.2	−112.2	0.0	149.0	118.8	64.0	8.6	55.4	49.7	5.1	27.0	− 3.1	16.4	July
− 80.4	48.4	0.0	79.5	72.1	23.7	− 5.1	28.8	38.3	10.1	− 21.5	7.8	6.3	Aug.

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]	
− 40.3	95.7	1.1	0.9	27.8	45.9	− 14.8	1.6	− 3.8	− 0.0	− 1.1	2021 Jan.
15.4	29.1	2.3	1.5	10.8	20.3	− 8.5	1.2	− 2.4	− 0.0	0.3	Feb.
− 2.3	− 38.0	2.5	2.7	29.1	24.3	− 0.6	0.1	5.0	0.5	− 0.1	Mar.
− 7.4	71.2	0.7	2.6	5.5	13.9	− 5.2	0.7	− 3.4	− 0.1	− 0.4	Apr.
18.8	− 44.9	3.0	2.9	34.8	27.8	2.8	0.6	1.7	− 0.1	2.0	May
6.0	− 14.0	3.1	2.3	− 1.2	7.1	− 8.0	− 0.4	− 0.2	0.1	0.3	June
− 12.0	75.2	4.2	3.7	17.4	21.2	− 4.1	− 0.3	0.6	− 0.1	0.1	July
0.7	− 13.2	2.9	0.2	21.0	20.4	− 1.6	− 0.3	0.1	0.0	2.3	Aug.
7.1	− 77.3	4.6	0.8	7.3	7.6	− 1.3	− 0.6	1.5	− 0.0	0.1	Sep.
− 3.9	53.7	3.3	1.6	16.4	3.9	13.0	− 0.4	− 0.4	− 0.1	0.4	Oct.
7.2	− 42.3	3.7	1.2	25.0	40.9	− 12.3	− 0.1	− 4.7	− 0.3	1.4	Nov.
27.8	− 135.3	5.3	4.5	− 0.4	− 12.8	9.1	1.6	− 0.3	0.3	1.7	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	67.8	56.8	13.9	− 2.4	− 1.8	− 0.1	1.3	Aug.

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											
2020 July	30,598.6	19,912.2	14,334.1	12,013.7	1,506.0	814.5	5,578.1	1,006.0	4,572.1	6,291.1	4,395.3
Aug.	30,434.9	19,985.0	14,355.1	12,019.1	1,525.0	811.0	5,629.9	997.8	4,632.1	6,241.9	4,208.0
Sep.	30,522.8	20,084.9	14,349.5	12,019.2	1,520.4	809.9	5,735.4	998.7	4,736.8	6,238.1	4,199.8
Oct.	30,687.0	20,162.5	14,376.6	12,054.8	1,520.5	801.3	5,785.9	1,004.2	4,781.7	6,337.4	4,187.0
Nov.	30,749.4	20,292.0	14,457.7	12,090.4	1,542.2	825.0	5,834.4	1,003.4	4,831.0	6,331.0	4,126.4
Dec.	30,438.8	20,266.1	14,438.3	12,042.9	1,532.2	863.2	5,827.8	990.2	4,837.6	6,108.9	4,063.8
2021 Jan.	30,643.8	20,387.8	14,466.2	12,067.8	1,535.8	862.6	5,921.6	999.4	4,922.1	6,299.8	3,956.2
Feb.	30,546.3	20,463.6	14,500.5	12,090.1	1,541.1	869.3	5,963.1	992.4	4,970.6	6,300.7	3,782.0
Mar.	30,827.0	20,653.7	14,576.8	12,185.3	1,512.6	879.0	6,076.9	993.3	5,083.5	6,360.7	3,812.6
Apr.	30,752.9	20,667.2	14,566.6	12,169.2	1,509.7	887.7	6,100.6	1,007.2	5,093.4	6,396.3	3,689.5
May	30,890.4	20,788.2	14,612.8	12,198.6	1,521.6	892.6	6,175.5	1,006.2	5,169.2	6,434.1	3,668.1
June	30,991.0	20,890.7	14,652.8	12,234.6	1,530.0	888.3	6,237.8	1,004.8	5,233.1	6,400.0	3,700.3
July	31,313.8	21,028.7	14,708.3	12,278.0	1,543.6	886.7	6,320.4	1,011.3	5,309.1	6,504.2	3,781.0
Aug.	31,438.1	21,047.9	14,684.9	12,261.1	1,533.4	890.4	6,363.1	1,002.3	5,360.8	6,653.5	3,736.6
Sep.	31,473.8	21,133.9	14,757.6	12,331.3	1,534.9	891.4	6,376.3	993.6	5,382.7	6,620.6	3,719.3
Oct.	31,776.6	21,201.6	14,817.7	12,379.4	1,548.1	890.2	6,384.0	987.7	5,396.3	6,823.1	3,751.9
Nov.	32,190.9	21,381.2	14,911.2	12,478.0	1,542.2	890.9	6,470.0	985.8	5,484.2	6,915.2	3,894.5
Dec.	31,777.4	21,384.3	14,917.1	12,462.9	1,567.2	887.0	6,467.3	988.5	5,478.8	6,738.8	3,654.3
2022 Jan.	32,404.8	21,564.2	15,039.2	12,602.1	1,553.2	884.0	6,525.0	999.2	5,525.8	6,909.7	3,931.0
Feb.	32,588.9	21,620.0	15,066.6	12,637.1	1,553.6	876.0	6,553.3	991.8	5,561.5	7,007.2	3,961.7
Mar.	32,936.3	21,736.6	15,175.6	12,722.1	1,587.3	866.1	6,561.0	1,001.4	5,559.6	6,994.9	4,204.8
Apr.	33,589.0	21,762.8	15,252.9	12,804.8	1,597.5	850.5	6,509.9	1,011.3	5,498.6	7,082.8	4,743.4
May	33,500.0	21,814.0	15,302.6	12,877.1	1,568.0	857.5	6,511.4	1,003.9	5,507.5	7,032.1	4,653.9
June	33,885.2	21,884.1	15,371.8	12,972.2	1,569.0	830.6	6,512.4	1,003.0	5,509.3	7,063.6	4,937.5
July	33,877.0	21,983.2	15,450.2	13,043.0	1,578.6	828.7	6,533.1	1,003.0	5,530.1	7,216.4	4,677.4
Aug.	34,348.0	21,870.4	15,457.3	13,078.9	1,553.6	824.7	6,413.1	996.9	5,416.2	7,288.9	5,188.7
	German contribution (€ billion)											
2020 July	7,267.6	4,718.8	3,634.9	3,175.5	202.7	256.7	1,083.9	293.4	790.5	1,282.9	1,265.8
Aug.	7,167.3	4,723.0	3,642.2	3,180.7	202.9	258.6	1,080.8	287.4	793.3	1,268.8	1,175.5
Sep.	7,236.4	4,749.2	3,647.1	3,184.0	204.9	258.1	1,102.1	289.7	812.4	1,293.8	1,193.4
Oct.	7,257.1	4,801.4	3,670.3	3,200.4	210.7	259.3	1,131.1	292.0	839.1	1,278.8	1,176.8
Nov.	7,240.5	4,841.7	3,688.6	3,213.7	214.3	260.6	1,153.1	290.2	862.9	1,261.9	1,136.9
Dec.	7,172.5	4,839.4	3,695.5	3,216.4	214.7	264.5	1,143.9	286.4	857.4	1,224.1	1,109.1
2021 Jan.	7,220.7	4,865.5	3,705.9	3,224.4	216.4	265.1	1,159.6	286.5	873.1	1,307.6	1,047.6
Feb.	7,182.0	4,885.0	3,724.3	3,238.8	217.4	268.1	1,160.7	283.8	877.0	1,305.0	991.9
Mar.	7,233.5	4,939.8	3,761.1	3,273.4	217.3	270.4	1,178.7	282.6	896.1	1,315.4	978.3
Apr.	7,228.4	4,946.1	3,760.5	3,270.3	217.6	272.6	1,185.6	285.7	899.9	1,333.6	948.6
May	7,228.0	4,977.5	3,777.2	3,283.3	219.5	274.4	1,200.3	283.4	916.9	1,329.8	920.7
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.	8,553.0	5,364.7	4,132.0	3,600.1	249.0	282.9	1,232.7	281.5	951.1	1,482.8	1,705.5

***** 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]
1,320.9	14,592.9	13,276.6	13,363.7	8,090.1	783.2	186.3	1,882.5	2,381.1	40.4	2020 July
1,326.8	14,668.1	13,304.3	13,391.2	8,117.1	767.8	184.4	1,892.0	2,390.0	40.0	Aug.
1,330.3	14,758.4	13,361.0	13,467.6	8,175.8	781.0	195.4	1,883.6	2,392.0	39.8	Sep.
1,338.1	14,814.8	13,431.7	13,545.6	8,266.0	783.3	181.9	1,880.4	2,394.6	39.4	Oct.
1,349.9	14,813.0	13,527.2	13,621.6	8,358.3	756.5	179.6	1,885.7	2,402.5	39.0	Nov.
1,370.7	14,772.9	13,620.6	13,728.8	8,459.6	772.0	176.9	1,877.6	2,404.2	38.5	Dec.
1,373.3	14,873.9	13,631.3	13,752.9	8,505.4	743.9	173.8	1,870.6	2,421.0	38.1	2021 Jan.
1,380.6	14,957.8	13,678.6	13,807.8	8,569.6	733.7	169.2	1,865.1	2,432.5	37.7	Feb.
1,391.1	15,076.4	13,757.0	13,913.7	8,654.9	753.5	164.3	1,858.8	2,444.8	37.4	Mar.
1,399.6	15,061.0	13,775.4	13,936.1	8,727.0	731.8	159.5	1,827.5	2,453.0	37.3	Apr.
1,412.8	15,147.4	13,870.8	14,018.1	8,811.2	724.4	155.5	1,826.2	2,463.6	37.1	May
1,423.2	15,241.8	13,943.4	14,091.4	8,917.7	698.2	150.4	1,822.0	2,466.2	36.8	June
1,437.6	15,335.4	14,017.3	14,185.7	9,006.8	705.9	153.6	1,817.0	2,466.2	36.3	July
1,439.2	15,386.3	14,039.3	14,196.7	9,030.0	707.3	151.2	1,809.9	2,462.4	35.9	Aug.
1,444.5	15,442.5	14,075.3	14,239.8	9,093.0	701.2	140.0	1,806.7	2,463.3	35.6	Sep.
1,450.3	15,504.6	14,139.4	14,312.3	9,166.1	709.0	148.0	1,795.5	2,458.8	34.9	Oct.
1,456.3	15,518.4	14,188.5	14,345.4	9,224.1	697.5	143.3	1,786.3	2,459.8	34.3	Nov.
1,477.0	15,579.6	14,310.0	14,464.4	9,316.4	714.5	131.3	1,805.2	2,463.5	33.6	Dec.
1,477.9	15,636.8	14,276.9	14,469.0	9,294.6	707.9	135.3	1,820.2	2,478.2	32.9	2022 Jan.
1,487.0	15,731.6	14,323.8	14,506.2	9,356.8	688.6	134.3	1,807.7	2,486.2	32.7	Feb.
1,509.6	15,840.4	14,415.6	14,599.9	9,439.8	703.7	123.5	1,809.7	2,491.1	32.2	Mar.
1,520.7	15,875.9	14,464.1	14,653.8	9,493.4	709.6	123.5	1,801.9	2,493.3	32.1	Apr.
1,528.5	15,891.0	14,510.1	14,681.5	9,537.0	686.6	120.3	1,803.0	2,505.6	29.0	May
1,535.1	16,040.7	14,573.9	14,750.6	9,583.2	705.9	123.4	1,800.2	2,509.4	28.5	June
1,543.7	16,119.8	14,673.8	14,872.9	9,667.1	745.0	127.1	1,790.8	2,514.8	28.1	July
1,538.6	16,103.2	14,735.2	14,926.9	9,694.7	782.4	126.1	1,769.8	2,525.0	28.9	Aug.
										German contribution (€ billion)
300.4	4,170.7	3,880.3	3,716.8	2,409.9	163.5	30.0	552.8	531.5	29.2	2020 July
301.3	4,202.4	3,889.9	3,720.2	2,419.2	159.3	30.1	551.3	531.6	28.8	Aug.
301.9	4,235.6	3,905.7	3,745.0	2,445.3	160.3	30.3	549.2	531.5	28.4	Sep.
303.6	4,245.3	3,935.3	3,781.4	2,476.4	165.4	30.5	549.7	531.5	28.0	Oct.
306.6	4,260.2	3,961.8	3,804.4	2,507.7	157.7	30.6	549.0	531.8	27.6	Nov.
312.2	4,228.5	3,954.1	3,801.5	2,500.9	160.3	31.0	548.8	533.1	27.3	Dec.
313.1	4,218.7	3,980.7	3,829.7	2,541.7	147.0	31.0	548.5	534.8	26.8	2021 Jan.
314.6	4,245.1	3,990.0	3,837.4	2,555.8	141.0	31.1	547.0	536.0	26.4	Feb.
317.3	4,264.3	4,011.8	3,863.4	2,579.8	145.1	31.7	544.6	536.1	26.1	Mar.
319.9	4,262.2	4,013.0	3,874.5	2,594.4	143.0	31.9	542.5	536.8	25.8	Apr.
322.8	4,308.8	4,040.3	3,895.1	2,613.5	146.0	32.2	540.4	537.4	25.7	May
325.1	4,311.0	4,035.3	3,890.5	2,619.4	139.3	31.9	537.5	537.0	25.5	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	4,135.3	2,870.2	153.3	30.6	530.7	528.3	22.2	Aug.

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]												
2020 July	787.6	441.5	264.3	80.1	23.2	51.0	19.4	3.5	271.8	271.6	586.4	2,055.1	1,434.5
Aug.	828.4	448.5	273.6	79.5	22.1	50.3	19.6	3.5	266.9	266.7	587.0	2,036.6	1,425.3
Sep.	848.8	442.1	274.8	74.4	20.8	49.1	19.5	3.4	237.7	237.5	595.2	2,059.6	1,431.0
Oct.	831.5	437.6	277.4	69.6	20.8	47.0	19.5	3.4	243.1	242.9	609.3	2,043.2	1,418.6
Nov.	733.0	458.4	307.1	64.6	17.8	46.1	19.4	3.3	246.4	246.4	610.3	2,025.2	1,406.4
Dec.	604.8	439.3	294.7	60.3	17.2	44.8	19.0	3.3	221.4	221.3	625.9	1,995.5	1,386.3
2021 Jan.	683.2	437.8	294.4	58.9	17.4	44.1	19.2	3.8	251.6	251.5	644.4	1,990.9	1,369.7
Feb.	713.6	436.4	296.4	54.3	19.0	43.9	19.2	3.7	254.6	254.5	613.7	2,004.4	1,369.6
Mar.	733.1	429.6	295.4	52.1	16.4	43.2	18.9	3.7	236.5	236.5	609.1	2,005.5	1,357.4
Apr.	700.9	424.0	293.9	48.5	16.2	42.9	18.9	3.6	251.1	251.0	617.9	1,991.6	1,350.5
May	692.4	436.9	308.3	47.7	15.9	42.4	19.1	3.5	246.7	246.7	608.4	1,980.7	1,339.4
June	709.2	441.2	314.0	46.6	16.3	42.0	18.8	3.5	236.5	236.5	600.0	1,984.2	1,332.5
July	709.6	440.1	313.9	45.6	16.6	42.0	18.6	3.5	253.9	253.9	622.6	1,999.3	1,334.0
Aug.	736.1	453.5	329.1	43.9	17.0	42.0	18.0	3.4	241.7	241.7	627.9	1,988.5	1,334.0
Sep.	742.6	460.1	334.6	46.3	16.6	41.3	18.1	3.3	257.3	257.2	596.8	2,011.7	1,343.3
Oct.	740.3	451.9	323.3	48.1	18.0	41.6	17.7	3.3	270.3	270.3	628.3	2,031.7	1,353.1
Nov.	691.5	481.6	349.8	50.3	19.1	41.7	17.5	3.3	266.4	266.4	654.5	2,040.2	1,352.7
Dec.	646.7	468.4	337.4	49.7	19.4	41.1	17.6	3.2	224.7	223.5	647.7	2,016.3	1,345.8
2022 Jan.	710.9	456.9	307.3	67.4	19.6	41.2	17.6	3.8	288.5	288.3	624.5	2,043.1	1,348.7
Feb.	755.5	469.9	314.1	73.5	19.8	41.3	17.6	3.7	297.9	297.7	587.2	2,037.0	1,355.6
Mar.	769.6	470.9	304.7	82.5	20.5	42.4	17.3	3.4	276.2	276.0	583.8	2,022.5	1,356.5
Apr.	747.6	474.5	306.7	83.4	21.2	42.6	17.2	3.4	306.2	306.0	605.8	2,066.4	1,360.3
May	718.7	490.8	316.7	88.4	22.3	43.3	16.8	3.3	308.8	308.7	594.4	2,031.4	1,334.5
June	788.4	501.8	325.2	90.9	22.9	43.3	16.2	3.2	274.0	273.8	593.0	2,065.5	1,359.4
July	757.2	489.8	302.8	100.4	24.2	42.9	16.2	3.3	302.1	302.0	589.9	2,085.3	1,358.6
Aug.	676.7	499.6	309.1	104.6	24.1	42.5	16.1	3.2	280.9	280.9	597.6	2,105.9	1,372.4
	German contribution (€ billion)												
2020 July	208.5	245.3	109.6	71.4	18.3	43.2	2.5	0.3	2.1	2.0	1.6	523.3	293.3
Aug.	229.5	252.8	118.7	71.3	17.4	42.4	2.6	0.3	1.7	1.5	1.9	517.9	291.1
Sep.	244.7	245.8	119.4	66.0	16.5	41.1	2.5	0.3	1.3	1.1	2.0	525.3	296.1
Oct.	224.8	239.1	119.1	61.7	16.6	39.0	2.5	0.3	1.4	1.3	2.7	519.9	296.2
Nov.	212.1	243.7	131.6	57.3	14.0	38.0	2.5	0.2	9.1	9.1	2.4	515.5	296.1
Dec.	189.2	237.8	131.9	52.8	13.5	36.8	2.5	0.2	12.2	12.2	2.5	503.3	290.1
2021 Jan.	148.9	240.1	136.5	51.6	13.5	35.8	2.4	0.2	8.4	8.4	2.4	503.3	284.6
Feb.	164.3	243.4	142.8	47.3	15.2	35.5	2.5	0.2	6.0	6.0	2.4	510.0	288.4
Mar.	161.9	239.0	144.4	44.9	12.7	34.4	2.4	0.2	11.0	11.0	2.9	523.3	289.8
Apr.	154.6	233.1	142.4	41.5	12.5	34.1	2.4	0.2	7.6	7.6	2.8	524.3	296.2
May	173.3	240.3	150.8	41.0	12.5	33.4	2.4	0.2	9.2	9.2	2.2	518.0	293.2
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	384.6

***** 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]													
– 11.9	19.9	2,047.1	4,744.5	3,017.5	– 54.6	4,064.1	0.0	9,813.1	13,308.1	14,012.0	7,042.1	159.4	2020 July
– 15.4	19.2	2,032.9	4,711.2	3,014.5	– 38.8	3,862.5	0.0	9,856.0	13,340.6	14,027.9	7,033.2	160.0	Aug.
– 14.4	15.3	2,058.7	4,666.9	3,011.2	– 15.9	3,879.2	0.0	9,923.5	13,428.0	14,122.0	7,045.9	163.9	Sep.
– 2.2	15.2	2,030.1	4,789.8	3,038.2	– 47.9	3,858.5	0.0	10,025.3	13,516.4	14,233.1	7,038.6	165.3	Oct.
– 1.5	17.4	2,009.2	4,868.1	2,995.8	– 44.2	3,884.8	0.0	10,167.5	13,629.7	14,354.2	6,979.2	174.0	Nov.
– 4.6	16.9	1,983.2	4,671.6	3,020.5	– 11.3	3,771.5	0.0	10,278.9	13,750.6	14,480.1	6,967.9	176.0	Dec.
1.9	15.7	1,973.3	4,821.4	2,998.4	– 10.2	3,700.0	0.0	10,326.2	13,784.9	14,551.1	6,928.3	177.5	2021 Jan.
13.8	16.4	1,974.2	4,872.9	2,953.0	– 10.8	3,520.1	0.0	10,398.7	13,851.2	14,604.3	6,877.6	176.8	Feb.
– 0.7	16.9	1,989.3	4,944.3	2,967.6	15.9	3,580.6	0.0	10,490.3	13,964.5	14,699.1	6,899.9	173.1	Mar.
6.5	16.6	1,968.5	4,989.3	2,948.0	10.5	3,484.0	0.0	10,569.9	14,021.8	14,781.1	6,827.9	173.5	Apr.
14.8	15.9	1,950.0	4,995.9	2,968.5	53.4	3,476.5	0.0	10,684.4	14,134.6	14,887.1	6,827.9	176.1	May
10.6	16.1	1,957.6	4,964.4	2,979.9	57.4	3,503.6	0.0	10,811.2	14,231.7	14,971.2	6,841.7	180.3	June
16.9	17.1	1,965.4	5,051.0	3,024.8	38.9	3,550.3	0.0	10,915.0	14,345.5	15,122.6	6,888.9	180.9	July
11.9	16.3	1,960.4	5,201.1	3,024.5	29.8	3,499.0	0.0	10,956.6	14,380.6	15,153.0	6,876.1	182.3	Aug.
14.0	17.9	1,979.8	5,226.5	2,997.6	16.1	3,480.9	0.0	11,035.4	14,444.9	15,191.8	6,864.3	187.4	Sep.
14.5	17.8	1,999.5	5,433.0	2,999.7	– 22.8	3,481.5	0.0	11,103.9	14,527.5	15,318.4	6,874.4	188.2	Oct.
12.8	17.8	2,009.6	5,516.9	3,037.4	21.6	3,679.1	0.0	11,196.0	14,607.5	15,414.5	6,912.5	189.7	Nov.
8.9	18.0	1,989.4	5,379.3	3,024.0	54.2	3,374.7	0.0	11,299.6	14,721.8	15,502.3	6,896.4	195.0	Dec.
16.0	18.2	2,008.9	5,554.2	2,999.5	62.3	3,718.0	0.0	11,252.2	14,701.7	15,483.6	6,906.5	196.0	2022 Jan.
25.6	5.5	2,005.9	5,642.2	2,995.1	55.1	3,755.6	0.0	11,331.1	14,772.9	15,523.1	6,886.3	195.0	Feb.
26.5	6.2	1,989.9	5,628.5	3,006.5	81.3	3,987.4	0.0	11,425.6	14,887.8	15,627.4	6,884.1	195.1	Mar.
32.1	15.7	2,018.6	5,765.2	2,986.1	67.7	4,395.1	0.0	11,494.1	14,966.3	15,745.3	6,884.7	197.2	Apr.
28.0	15.1	1,988.3	5,819.3	2,924.5	79.5	4,322.6	0.0	11,557.3	15,021.2	15,789.3	6,791.4	199.0	May
44.0	14.4	2,007.1	5,737.9	2,916.7	76.3	4,646.0	0.0	11,618.4	15,111.6	15,877.6	6,799.0	199.4	June
9.5	16.4	2,059.4	5,869.3	2,978.1	75.0	4,313.8	0.0	11,693.5	15,245.1	15,993.6	6,902.6	203.9	July
10.5	18.8	2,076.5	5,921.2	2,903.8	103.3	4,793.4	0.0	11,721.5	15,323.3	16,076.6	6,824.8	202.7	Aug.
German contribution (€ billion)													
12.8	6.7	503.7	907.0	784.6	– 1,089.1	1,967.5	460.5	2,519.5	3,336.8	3,360.1	1,913.6	0.0	2020 July
12.0	7.2	498.7	891.2	778.4	– 1,114.7	1,888.5	464.3	2,537.9	3,350.2	3,372.9	1,899.9	0.0	Aug.
12.4	6.7	506.2	952.4	787.3	– 1,172.8	1,905.3	467.0	2,564.6	3,371.8	3,394.2	1,912.5	0.0	Sep.
11.1	7.0	501.8	906.4	794.7	– 1,107.6	1,894.1	469.4	2,595.4	3,403.6	3,425.7	1,913.5	0.0	Oct.
10.0	7.1	498.4	923.3	780.2	– 1,109.5	1,859.4	470.7	2,639.3	3,433.2	3,461.8	1,893.5	0.0	Nov.
9.0	6.6	487.7	985.7	787.5	– 1,192.0	1,844.9	473.1	2,632.8	3,426.1	3,456.4	1,888.4	0.0	Dec.
7.8	6.8	488.7	1,026.4	778.3	– 1,113.3	1,796.5	474.2	2,678.2	3,458.5	3,483.9	1,878.3	0.0	2021 Jan.
7.4	7.5	495.1	1,007.6	756.3	– 1,095.7	1,750.3	476.5	2,698.6	3,471.7	3,494.9	1,860.6	0.0	Feb.
8.1	6.8	508.4	1,080.1	754.4	– 1,144.4	1,742.0	479.0	2,724.1	3,497.0	3,525.7	1,868.2	0.0	Mar.
7.8	6.6	510.0	1,029.5	759.2	– 1,074.2	1,717.0	479.7	2,736.8	3,505.0	3,529.7	1,871.8	0.0	Apr.
9.6	6.7	501.7	1,051.5	768.2	– 1,126.5	1,696.6	482.8	2,764.3	3,535.8	3,563.5	1,869.6	0.0	May
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	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	596.3	1,349.3	739.2	– 1,262.6	2,538.3	513.5	2,999.5	3,826.5	3,866.2	1,918.9	0.0	Aug.

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]												
2020 Sep.	865.9	1.3	1,593.2	0.0	3,323.6	413.2	0.0	1,381.2	712.9	651.0	2,625.7	4,420.1
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
Nov.	864.4	1.3	1,707.8	0.0	3,475.8	460.7	0.0	1,389.1	749.0	653.5	2,797.0	4,646.8
Dec.	865.1	0.5	1,754.4	0.0	3,614.7	535.4	0.0	1,403.9	647.0	687.7	2,960.7	4,900.0
2021 Jan.	848.6	0.3	1,792.6	0.0	3,712.9	586.9	0.0	1,429.4	530.3	778.4	3,029.4	5,045.7
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	834.9	0.4	1,792.4	0.0	3,825.1	598.0	0.0	1,433.4	595.8	667.9	3,157.7	5,189.1
Apr.	816.7	0.3	2,054.6	0.0	3,951.4	676.4	0.0	1,447.7	644.5	633.4	3,421.1	5,545.2
May	.	.	.	.	.	.	.	.	.	.	.	.
June	809.8	0.2	2,107.0	0.0	4,092.7	706.5	0.0	1,465.8	586.7	659.1	3,591.7	5,763.9
July	821.7	0.1	2,196.0	0.0	4,244.5	736.6	0.0	1,485.8	652.3	734.5	3,653.1	5,875.5
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
Deutsche Bundesbank												
2020 Sep.	212.1	0.8	284.0	0.0	692.0	136.0	0.0	336.4	239.6	– 298.0	774.8	1,247.3
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
Nov.	212.1	0.7	319.5	0.0	729.0	145.5	0.0	338.1	254.7	– 302.9	826.0	1,309.6
Dec.	213.0	0.3	333.9	0.0	768.7	166.6	0.0	341.2	217.9	– 294.5	884.7	1,392.5
2021 Jan.	208.3	0.1	341.1	0.0	791.3	178.9	0.0	347.3	189.4	– 252.8	878.0	1,404.2
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	205.3	0.1	341.0	0.0	816.9	177.5	0.0	348.3	172.7	– 298.0	962.8	1,488.6
Apr.	198.0	0.0	407.3	0.0	845.8	203.0	0.0	351.7	187.4	– 300.4	1,008.9	1,563.5
May	.	.	.	.	.	.	.	.	.	.	.	.
June	194.3	0.0	420.5	0.0	884.3	208.5	0.0	356.8	187.3	– 301.9	1,046.7	1,612.0
July	197.4	0.0	434.3	0.0	918.5	204.2	0.0	362.0	206.8	– 270.8	1,046.2	1,612.4
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

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]												
− 5.4	+ 0.5	+ 191.7	± 0.0	+ 155.4	+ 57.2	± 0.0	+ 15.5	+ 41.7	− 52.1	+ 279.8	+ 352.6	2020 Sep.
.	.	.	.	.	.	.	.	.	.	.	.	Oct.
− 1.5	± 0.0	+ 114.6	± 0.0	+ 152.2	+ 47.5	± 0.0	+ 7.9	+ 36.1	+ 2.5	+ 171.3	+ 226.7	Nov.
+ 0.7	− 0.8	+ 46.6	± 0.0	+ 138.9	+ 74.7	± 0.0	+ 14.8	−102.0	+ 34.2	+ 163.7	+ 253.2	Dec.
− 16.5	− 0.2	+ 38.2	± 0.0	+ 98.2	+ 51.5	± 0.0	+ 25.5	−116.7	+ 90.7	+ 68.7	+ 145.7	2021 Jan.
.	.	.	.	.	.	.	.	.	.	.	.	Feb.
− 13.7	+ 0.1	− 0.2	± 0.0	+ 112.2	+ 11.1	± 0.0	+ 4.0	+ 65.5	− 110.5	+ 128.3	+ 143.4	Mar.
− 18.2	− 0.1	+ 262.2	± 0.0	+ 126.3	+ 78.4	± 0.0	+ 14.3	+ 48.7	− 34.5	+ 263.4	+ 356.1	Apr.
.	.	.	.	.	.	.	.	.	.	.	.	May
− 6.9	− 0.1	+ 52.4	± 0.0	+ 141.3	+ 30.1	± 0.0	+ 18.1	− 57.8	+ 25.7	+ 170.6	+ 218.7	June
+ 11.9	− 0.1	+ 89.0	± 0.0	+ 151.8	+ 30.1	± 0.0	+ 20.0	+ 65.6	+ 75.4	+ 61.4	+ 111.6	July
.	.	.	.	.	.	.	.	.	.	.	.	Aug.
+ 5.0	+ 0.1	+ 17.2	± 0.0	+ 134.4	+ 30.0	± 0.0	+ 14.1	− 16.6	+ 55.9	+ 73.1	+ 117.3	Sep.
.	.	.	.	.	.	.	.	.	.	.	.	Oct.
+ 8.4	± 0.0	− 3.3	± 0.0	+ 133.4	− 28.1	± 0.0	+ 7.5	+ 35.6	+ 43.3	+ 80.3	+ 59.6	Nov.
+ 4.1	± 0.0	− 1.1	± 0.0	+ 143.3	+ 6.5	± 0.0	+ 14.0	− 43.0	+ 132.0	+ 36.8	+ 57.3	Dec.
.	.	.	.	.	.	.	.	.	.	.	.	2022 Jan.
+ 38.5	+ 0.1	− 7.3	± 0.0	+ 94.6	− 10.8	± 0.0	+ 19.2	− 46.3	+ 194.8	− 31.0	− 22.6	Feb.
+ 9.5	± 0.0	− 0.2	± 0.0	+ 91.8	+ 11.8	± 0.0	+ 10.0	+ 60.6	− 69.4	+ 88.5	+ 110.2	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.
.	.	.	.	.	.	.	.	.	.	.	.	May
+ 21.0	+ 0.1	− 1.0	± 0.0	+ 49.9	− 33.6	± 0.0	+ 15.6	− 43.7	+ 12.4	+ 118.8	+ 100.9	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
.	.	.	.	.	.	.	.	.	.	.	.	Aug.
+ 6.4	+ 0.7	− 24.5	± 0.0	− 4.0	+ 28.3	± 0.0	− 18.7	−113.7	+ 91.2	− 7.2	+ 2.5	Sep.
Deutsche Bundesbank												
− 10.0	+ 0.3	+ 48.9	+ 0.0	+ 36.1	+ 27.9	± 0.0	+ 5.0	+ 34.6	− 59.9	+ 67.6	+ 100.5	2020 Sep.
.	.	.	.	.	.	.	.	.	.	.	.	Oct.
+ 0.0	− 0.1	+ 35.5	− 0.0	+ 37.0	+ 9.5	± 0.0	+ 1.7	+ 15.0	− 5.0	+ 51.2	+ 62.3	Nov.
+ 0.9	− 0.4	+ 14.4	+ 0.0	+ 39.8	+ 21.1	± 0.0	+ 3.1	− 36.8	+ 8.4	+ 58.7	+ 82.9	Dec.
− 4.7	− 0.2	+ 7.1	+ 0.0	+ 22.6	+ 12.3	± 0.0	+ 6.1	− 28.5	+ 41.7	− 6.7	+ 11.7	2021 Jan.
.	.	.	.	.	.	.	.	.	.	.	.	Feb.
− 3.0	− 0.0	− 0.1	− 0.0	+ 25.6	− 1.4	± 0.0	+ 1.0	− 16.7	− 45.2	+ 84.8	+ 84.4	Mar.
− 7.3	− 0.1	+ 66.3	+ 0.0	+ 28.8	+ 25.5	± 0.0	+ 3.4	+ 14.7	− 2.4	+ 46.0	+ 74.9	Apr.
.	.	.	.	.	.	.	.	.	.	.	.	May
− 3.7	+ 0.0	+ 13.2	+ 0.0	+ 38.6	+ 5.5	± 0.0	+ 5.1	− 0.1	− 1.5	+ 37.9	+ 48.5	June
+ 3.1	− 0.0	+ 13.8	− 0.0	+ 34.2	− 4.3	± 0.0	+ 5.2	+ 19.4	+ 31.1	− 0.5	+ 0.4	July
.	.	.	.	.	.	.	.	.	.	.	.	Aug.
+ 1.6	+ 0.1	+ 2.4	+ 0.0	+ 32.3	+ 6.5	± 0.0	+ 3.0	− 2.5	+ 29.9	− 0.9	+ 8.6	Sep.
.	.	.	.	.	.	.	.	.	.	.	.	Oct.
+ 1.3	+ 0.0	+ 2.4	− 0.0	+ 27.8	− 6.4	± 0.0	+ 2.4	+ 13.4	+ 5.7	+ 16.3	+ 12.3	Nov.
+ 1.0	− 0.1	+ 1.2	− 0.0	+ 37.3	+ 2.1	± 0.0	+ 3.5	+ 2.7	+ 15.7	+ 15.6	+ 21.1	Dec.
.	.	.	.	.	.	.	.	.	.	.	.	2022 Jan.
+ 11.1	+ 0.2	− 18.6	+ 0.0	+ 18.2	− 2.0	± 0.0	+ 3.7	− 14.7	+ 54.3	− 28.3	− 26.6	Feb.
+ 3.2	− 0.1	− 0.0	+ 0.0	+ 23.9	+ 7.4	± 0.0	+ 3.5	− 14.5	− 28.6	+ 59.2	+ 70.1	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.
.	.	.	.	.	.	.	.	.	.	.	.	May
+ 6.6	+ 0.1	− 0.6	− 0.0	+ 18.7	− 7.7	± 0.0	+ 3.0	+ 0.2	+ 6.0	+ 24.1	+ 19.4	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
.	.	.	.	.	.	.	.	.	.	.	.	Aug.
+ 0.4	+ 0.0	− 5.5	− 0.0	− 7.5	+ 42.7	± 0.0	− 10.8	− 57.1	+ 13.5	− 0.9	+ 31.0	Sep.

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]									
2022 Mar. 18	8,700.0	559.5	498.4	219.3	279.0	24.6	10.6	10.6	–
25	8,710.6	559.5	498.7	220.4	278.4	24.9	12.4	12.4	–
Apr. 1	8,754.0	604.5	500.2	222.0	278.1	26.4	11.3	11.3	–
8	8,763.7	604.5	498.6	220.2	278.4	25.8	10.0	10.0	–
15	8,787.9	604.5	500.0	220.2	279.8	25.3	10.0	10.0	–
22	8,790.9	604.5	499.3	220.3	279.0	26.6	10.1	10.1	–
29	8,783.6	604.5	499.3	220.2	279.0	27.1	10.4	10.4	–
May 6	8,796.1	604.5	501.1	220.3	280.8	25.9	10.1	10.1	–
13	8,810.3	604.5	500.2	220.2	279.9	27.2	10.2	10.2	–
20	8,814.0	604.3	500.4	220.2	280.1	27.1	10.4	10.4	–
27	8,813.8	604.3	500.3	220.2	280.0	26.7	10.6	10.6	–
June 3	8,817.9	604.3	500.8	220.2	280.6	26.2	10.1	10.1	–
10	8,820.9	604.3	501.3	220.2	281.1	26.8	10.8	10.8	–
17	8,827.9	604.3	503.8	220.2	283.6	25.0	11.2	11.2	–
24	8,836.0	604.3	502.6	220.2	282.4	26.6	12.1	12.1	–
July 1	8,788.8	604.3	519.3	225.9	293.4	26.9	11.6	11.6	–
8	8,774.4	604.3	519.0	226.6	292.4	27.5	10.3	10.3	–
15	8,765.7	604.3	519.5	226.6	292.9	27.0	10.3	10.3	–
22	8,768.3	604.3	520.3	226.6	293.7	26.3	10.2	10.2	–
29	8,764.5	604.3	521.1	226.6	294.5	25.7	10.3	10.3	–
Aug. 5	8,746.0	604.3	520.5	226.6	293.9	26.8	9.8	9.8	–
12	8,747.8	604.3	520.7	226.6	294.1	26.6	9.9	9.9	–
19	8,750.7	604.3	521.4	226.6	294.7	26.5	9.9	9.9	–
26	8,750.0	604.3	523.4	227.1	296.3	25.4	10.0	10.0	–
Sep. 2	8,756.8	604.3	523.8	227.6	296.2	25.3	10.4	10.4	–
9	8,759.1	604.3	525.5	227.8	297.8	23.8	10.5	10.5	–
16	8,756.9	604.3	526.6	227.8	298.8	24.0	10.7	10.7	–
23	8,777.4	604.3	528.0	227.8	300.2	23.3	11.2	11.2	–
30	8,810.1	592.8	544.7	234.6	310.1	25.6	10.8	10.8	–
Oct. 7	8,772.0	592.8	545.3	234.6	310.7	25.8	10.7	10.7	–
Deutsche Bundesbank									
2022 Mar. 18	2,961.2	173.8	88.4	55.1	33.3	0.0	0.0	0.0	–
25	2,925.4	173.8	89.4	55.6	33.7	0.0	–	–	–
Apr. 1	2,972.8	187.8	90.0	56.0	34.0	0.0	–	–	–
8	2,950.8	187.8	89.8	56.0	33.7	0.0	–	–	–
15	2,952.6	187.8	89.8	56.0	33.7	0.0	–	–	–
22	2,945.6	187.7	89.9	56.1	33.8	0.0	–	–	–
29	2,952.6	187.7	90.1	56.1	34.0	0.0	–	–	–
May 6	2,991.6	187.7	90.3	56.1	34.2	0.0	–	–	–
13	2,998.1	187.7	90.3	56.1	34.2	0.0	–	–	–
20	2,975.2	187.6	90.3	56.1	34.2	0.0	–	–	–
27	2,992.4	187.6	90.3	56.1	34.3	0.0	–	–	–
June 3	2,992.8	187.6	90.2	56.1	34.1	0.0	–	–	–
10	2,975.2	187.6	90.5	56.1	34.4	0.0	0.4	0.4	–
17	2,999.7	187.6	90.9	56.1	34.8	0.0	0.9	0.9	–
24	2,968.5	187.6	91.1	56.1	35.1	0.0	1.8	1.8	–
July 1	3,013.1	187.6	93.6	57.7	35.9	0.0	1.5	1.5	–
8	2,950.0	187.6	93.4	57.7	35.8	0.0	–	–	–
15	2,946.9	187.6	93.3	57.7	35.7	0.0	–	–	–
22	2,941.3	187.6	93.4	57.7	35.7	0.0	–	–	–
29	2,964.1	187.6	93.1	57.6	35.5	0.0	0.1	0.1	–
Aug. 5	2,998.7	187.6	93.1	57.6	35.5	0.0	–	–	–
12	3,024.8	187.6	92.9	57.7	35.2	0.0	–	–	–
19	3,028.6	187.6	93.1	57.7	35.5	0.0	–	–	–
26	3,060.0	187.6	93.5	57.7	35.9	0.0	–	–	–
Sep. 2	3,042.0	187.6	93.2	57.9	35.4	0.0	–	–	–
9	3,020.3	187.6	93.0	57.9	35.2	0.0	–	–	–
16	3,036.5	187.6	93.7	57.9	35.9	0.0	–	–	–
23	3,014.7	187.6	94.3	57.9	36.5	0.0	–	–	–
30	3,064.3	184.0	97.2	59.6	37.6	0.0	–	–	–
Oct. 7	3,057.7	184.0	97.5	59.6	37.9	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]													
2,201.3	0.2	2,201.0	–	–	–	–	28.4	5,042.8	4,873.1	169.7	22.1	312.4	2022 Mar. 18
2,201.3	0.2	2,201.0	–	–	–	–	33.5	5,054.1	4,883.7	170.4	22.1	304.2	25
2,199.5	0.4	2,198.9	–	–	0.3	–	34.1	5,045.7	4,877.5	168.2	22.1	310.2	Apr. 1
2,199.3	0.4	2,198.9	–	–	0.0	–	32.4	5,061.2	4,892.6	168.6	22.1	309.9	8
2,199.4	0.5	2,198.9	–	–	0.0	–	32.8	5,082.8	4,914.1	168.6	22.1	311.0	15
2,199.3	0.5	2,198.8	–	–	0.0	–	32.0	5,082.1	4,915.3	166.8	22.1	314.9	22
2,199.6	0.7	2,198.8	–	–	–	–	28.0	5,084.0	4,919.2	164.8	22.1	308.7	29
2,199.4	0.5	2,198.8	–	–	0.0	–	30.7	5,092.8	4,927.8	165.0	22.1	309.5	May 6
2,199.3	0.5	2,198.8	–	–	–	–	29.5	5,105.9	4,940.6	165.3	22.1	311.4	13
2,199.2	0.3	2,198.8	–	–	–	–	29.9	5,114.7	4,949.4	165.3	22.1	306.0	20
2,199.5	0.7	2,198.9	–	–	–	–	28.3	5,117.1	4,952.7	164.4	22.1	305.0	27
2,199.3	0.4	2,198.9	–	–	–	–	30.7	5,119.4	4,954.5	165.0	22.1	304.9	June 3
2,199.3	0.4	2,198.8	–	–	–	–	31.9	5,121.4	4,956.1	165.3	22.1	303.0	10
2,199.5	0.7	2,198.8	–	–	–	–	36.4	5,125.1	4,959.2	165.9	22.1	300.5	17
2,199.5	0.7	2,198.8	–	–	–	–	32.2	5,130.7	4,963.7	167.0	22.1	305.9	24
2,126.1	1.5	2,124.6	–	–	–	–	34.5	5,129.1	4,963.5	165.6	21.7	315.4	July 1
2,125.6	1.0	2,124.6	–	–	0.0	–	28.4	5,123.0	4,956.9	166.1	21.7	314.6	8
2,125.5	0.9	2,124.6	–	–	–	–	28.8	5,119.3	4,953.9	165.4	21.7	309.4	15
2,125.6	1.0	2,124.6	–	–	0.0	–	27.6	5,123.3	4,956.7	166.6	21.7	309.1	22
2,125.8	1.1	2,124.7	–	–	0.0	–	30.8	5,125.6	4,958.9	166.8	21.7	299.2	29
2,125.6	0.9	2,124.7	–	–	–	–	15.2	5,117.9	4,952.2	165.7	21.7	304.2	Aug. 5
2,125.6	0.9	2,124.7	–	–	0.0	–	15.5	5,119.7	4,953.4	166.4	21.7	303.7	12
2,125.5	0.8	2,124.7	–	–	–	–	13.2	5,123.8	4,956.7	167.2	21.7	304.4	19
2,125.5	0.7	2,124.7	–	–	0.0	–	12.9	5,123.1	4,955.5	167.6	21.7	303.8	26
2,129.3	3.9	2,125.4	–	–	0.0	–	14.8	5,122.4	4,956.5	165.9	21.7	304.9	Sep. 2
2,129.1	3.7	2,125.4	–	–	–	–	13.7	5,121.5	4,955.3	166.3	21.7	309.0	9
2,129.3	3.9	2,125.4	–	–	–	–	22.4	5,112.4	4,945.7	166.7	21.7	305.5	16
2,129.1	3.7	2,125.4	–	–	–	–	32.0	5,116.9	4,949.9	167.1	21.7	310.9	23
2,120.8	4.5	2,116.0	–	–	0.3	–	32.2	5,109.5	4,943.0	166.5	21.7	351.8	30
2,119.7	3.7	2,116.0	–	–	0.0	–	19.3	5,109.9	4,943.6	166.2	21.7	326.8	Oct. 7
Deutsche Bundesbank													
421.7	0.0	421.7	–	–	0.0	–	7.0	1,065.6	1,065.6	–	4.4	1,200.2	2022 Mar. 18
421.7	0.0	421.7	–	–	0.0	–	5.2	1,065.9	1,065.9	–	4.4	1,165.0	25
420.3	0.1	420.2	–	–	0.0	–	5.2	1,068.4	1,068.4	–	4.4	1,196.6	Apr. 1
420.2	0.0	420.2	–	–	0.0	–	4.4	1,067.3	1,067.3	–	4.4	1,176.9	8
420.3	0.1	420.2	–	–	0.0	–	4.8	1,074.1	1,074.1	–	4.4	1,171.5	15
420.3	0.1	420.2	–	–	0.0	–	6.1	1,075.6	1,075.6	–	4.4	1,161.6	22
420.4	0.3	420.2	–	–	0.0	–	3.8	1,079.5	1,079.5	–	4.4	1,166.6	29
420.2	0.0	420.2	–	–	0.0	–	4.3	1,084.4	1,084.4	–	4.4	1,200.2	May 6
420.2	0.0	420.2	–	–	0.0	–	3.9	1,089.0	1,089.0	–	4.4	1,202.4	13
420.2	0.1	420.2	–	–	0.0	–	4.0	1,088.4	1,088.4	–	4.4	1,180.2	20
420.5	0.3	420.2	–	–	0.0	–	4.3	1,093.3	1,093.3	–	4.4	1,191.9	27
420.2	0.0	420.2	–	–	0.0	–	5.9	1,095.3	1,095.3	–	4.4	1,189.1	June 3
420.2	0.1	420.2	–	–	0.0	–	5.4	1,091.2	1,091.2	–	4.4	1,175.5	10
420.2	0.1	420.2	–	–	0.0	–	6.3	1,093.9	1,093.9	–	4.4	1,195.4	17
420.3	0.1	420.2	–	–	0.0	–	5.3	1,091.2	1,091.2	–	4.4	1,166.7	24
404.2	0.7	403.6	–	–	0.0	–	4.2	1,091.1	1,091.1	–	4.4	1,226.4	July 1
403.8	0.3	403.6	–	–	0.0	–	4.2	1,078.6	1,078.6	–	4.4	1,178.0	8
403.8	0.3	403.6	–	–	0.0	–	5.6	1,079.4	1,079.4	–	4.4	1,172.7	15
403.9	0.4	403.6	–	–	0.0	–	5.2	1,075.7	1,075.7	–	4.4	1,171.1	22
404.0	0.4	403.6	–	–	0.0	–	0.6	1,077.2	1,077.2	–	4.4	1,197.1	29
403.7	0.1	403.6	–	–	0.0	–	0.3	1,077.7	1,077.7	–	4.4	1,231.8	Aug. 5
403.8	0.2	403.6	–	–	0.0	–	0.2	1,078.5	1,078.5	–	4.4	1,257.4	12
403.8	0.2	403.6	–	–	0.0	–	0.1	1,079.1	1,079.1	–	4.4	1,260.5	19
403.7	0.1	403.6	–	–	0.0	–	0.1	1,076.1	1,076.1	–	4.4	1,294.4	26
404.5	0.8	403.7	–	–	0.0	–	0.3	1,078.5	1,078.5	–	4.4	1,273.4	Sep. 2
403.9	0.3	403.7	–	–	0.0	–	0.0	1,073.5	1,073.5	–	4.4	1,257.7	9
404.1	0.5	403.7	–	–	0.0	–	2.5	1,069.5	1,069.5	–	4.4	1,274.6	16
404.2	0.5	403.7	–	–	0.0	–	3.2	1,069.8	1,069.8	–	4.4	1,251.1	23
400.7	1.4	399.3	–	–	0.0	–	3.5	1,072.2	1,072.2	–	4.4	1,302.1	30
399.8	0.5	399.3	–	–	0.0	–	3.0	1,067.0	1,067.0	–	4.4	1,302.0	Oct. 7

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]														
2022 Mar.	18	8,700.0	1,569.1	4,582.1	3,992.4	587.0	–	–	2.7	48.4	–	854.2	699.4	154.7
	25	8,710.6	1,571.3	4,605.9	3,839.6	763.7	–	–	2.7	52.7	–	866.3	708.2	158.2
Apr.	1	8,754.0	1,575.1	4,646.7	3,886.3	758.2	–	–	2.3	60.6	–	787.0	628.7	158.3
	8	8,763.7	1,578.5	4,722.9	3,987.1	733.3	–	–	2.5	52.8	–	761.7	609.3	152.4
	15	8,787.9	1,586.5	4,690.0	3,967.1	720.4	–	–	2.5	48.7	–	835.7	677.7	158.0
	22	8,790.9	1,585.6	4,720.4	4,155.8	562.0	–	–	2.6	43.8	–	811.0	656.0	155.1
	29	8,783.6	1,587.5	4,701.7	4,022.6	676.4	–	–	2.7	42.0	–	810.1	646.0	164.2
May	6	8,796.1	1,589.2	4,729.1	4,012.8	713.7	–	–	2.7	48.7	–	747.1	589.6	157.4
	13	8,810.3	1,590.5	4,729.8	4,079.6	647.8	–	–	2.4	46.6	–	782.1	620.7	161.4
	20	8,814.0	1,590.9	4,679.3	3,997.8	678.9	–	–	2.6	47.8	–	825.6	660.1	165.5
	27	8,813.8	1,594.0	4,692.9	3,987.3	703.2	–	–	2.5	42.6	–	825.8	662.5	163.2
June	3	8,817.9	1,597.5	4,768.8	4,060.2	706.3	–	–	2.3	52.1	–	758.2	593.9	164.3
	10	8,820.9	1,598.7	4,781.3	4,026.7	752.3	–	–	2.3	49.9	–	756.4	598.7	157.6
	17	8,827.9	1,599.6	4,675.5	4,139.0	534.3	–	–	2.3	49.0	–	847.3	686.2	161.1
	24	8,836.0	1,600.2	4,642.9	3,986.7	654.2	–	–	2.0	51.0	–	895.7	715.0	180.7
July	1	8,788.8	1,603.6	4,591.8	3,853.3	736.3	–	–	2.1	71.0	–	835.0	647.3	187.7
	8	8,774.4	1,606.4	4,642.8	3,914.7	726.0	–	–	2.1	55.9	–	819.9	627.7	192.2
	15	8,765.7	1,608.7	4,622.9	3,910.3	710.3	–	–	2.3	49.8	–	835.3	646.0	189.3
	22	8,768.3	1,606.8	4,605.1	3,904.4	698.5	–	–	2.2	50.9	–	843.5	656.8	186.7
	29	8,764.5	1,600.9	4,568.6	3,855.5	711.1	–	–	2.1	60.5	–	844.2	641.9	202.2
Aug.	5	8,746.0	1,595.8	4,625.6	3,959.7	664.1	–	–	1.8	53.0	–	744.3	546.8	197.5
	12	8,747.8	1,591.9	4,642.2	3,975.0	665.5	–	–	1.7	52.9	–	738.6	543.6	194.9
	19	8,750.7	1,584.0	4,598.5	3,941.0	655.6	–	–	1.8	49.4	–	784.5	583.8	200.7
	26	8,750.0	1,578.0	4,572.8	3,922.3	648.6	–	–	1.8	47.9	–	813.3	595.6	217.7
Sep.	2	8,756.8	1,575.5	4,707.9	4,035.2	670.7	–	–	2.0	51.5	–	692.8	504.8	187.9
	9	8,759.1	1,573.6	4,803.0	3,806.8	994.3	–	–	1.8	55.9	–	626.9	472.8	154.1
	16	8,756.9	1,569.3	4,816.5	548.1	4,266.6	–	–	1.8	72.2	–	655.8	518.1	137.7
	23	8,777.4	1,564.9	4,810.4	403.4	4,405.2	–	–	1.8	63.4	–	678.5	543.1	135.4
	30	8,810.1	1,566.0	4,698.7	318.3	4,378.2	–	–	2.3	76.4	–	768.0	557.2	210.7
Oct.	7	8,772.0	1,562.4	4,880.3	251.4	4,626.7	–	–	2.1	62.3	–	618.0	483.8	134.2
Deutsche Bundesbank														
2022 Mar.	18	2,961.2	385.2	1,299.4	1,167.3	130.0	–	–	2.1	17.7	–	274.4	224.3	50.1
	25	2,925.4	385.9	1,301.1	1,082.0	217.1	–	–	2.1	17.0	–	252.5	200.0	52.4
Apr.	1	2,972.8	382.2	1,347.5	1,110.7	234.6	–	–	2.2	18.7	–	230.4	181.1	49.3
	8	2,950.8	383.5	1,354.0	1,136.8	215.1	–	–	2.1	16.9	–	213.9	166.4	47.5
	15	2,952.6	387.4	1,324.3	1,116.8	205.3	–	–	2.1	15.3	–	248.5	201.7	46.7
	22	2,945.6	387.0	1,338.7	1,215.0	121.4	–	–	2.2	14.6	–	229.7	184.6	45.0
	29	2,952.6	385.0	1,335.7	1,198.1	135.5	–	–	2.2	14.0	–	223.4	178.8	44.6
May	6	2,991.6	386.7	1,350.6	1,133.7	214.6	–	–	2.3	17.1	–	216.3	169.5	46.8
	13	2,998.1	388.3	1,339.4	1,136.1	201.0	–	–	2.4	17.6	–	251.7	206.1	45.7
	20	2,975.2	388.6	1,323.6	1,122.3	198.9	–	–	2.4	15.9	–	240.6	197.7	42.9
	27	2,992.4	390.0	1,320.3	1,116.7	201.2	–	–	2.4	16.0	–	269.1	227.3	41.8
June	3	2,992.8	388.7	1,346.6	1,132.9	211.5	–	–	2.2	18.7	–	248.9	205.6	43.4
	10	2,975.2	389.7	1,329.9	1,116.1	211.5	–	–	2.3	18.1	–	252.0	209.8	42.3
	17	2,999.7	390.9	1,297.9	1,181.7	114.0	–	–	2.2	17.6	–	297.8	250.7	47.1
	24	2,968.5	390.9	1,295.7	1,154.4	139.3	–	–	2.0	15.5	–	284.3	231.7	52.5
July	1	3,013.1	389.1	1,322.5	1,106.4	214.0	–	–	2.1	24.8	–	277.5	218.1	59.5
	8	2,950.0	390.6	1,303.6	1,087.8	213.8	–	–	2.0	21.9	–	255.1	186.8	68.3
	15	2,946.9	391.6	1,280.1	1,077.7	200.3	–	–	2.1	19.1	–	275.6	212.4	63.2
	22	2,941.3	389.4	1,295.5	1,080.1	213.4	–	–	2.0	21.0	–	253.9	195.1	58.8
	29	2,964.1	388.3	1,285.6	1,076.5	207.1	–	–	2.0	22.2	–	245.3	175.5	69.8
Aug.	5	2,998.7	383.3	1,317.4	1,091.8	223.7	–	–	1.8	20.4	–	231.9	164.9	67.0
	12	3,024.8	379.7	1,340.9	1,116.0	223.2	–	–	1.7	23.0	–	232.2	161.9	70.2
	19	3,028.6	373.2	1,317.7	1,101.0	214.9	–	–	1.7	19.8	–	262.1	183.1	79.0
	26	3,060.0	370.7	1,348.4	1,133.9	212.7	–	–	1.8	22.3	–	253.3	153.5	99.8
Sep.	2	3,042.0	382.4	1,381.1	1,148.7	230.5	–	–	1.8	22.8	–	218.4	140.3	78.2
	9	3,020.3	382.1	1,392.6	1,101.0	289.9	–	–	1.8	29.1	–	191.7	121.5	70.2
	16	3,036.5	381.5	1,406.2	254.0	1,150.5	–	–	1.8	30.5	–	212.1	140.1	72.0
	23	3,014.7	380.6	1,402.6	174.9	1,225.9	–	–	1.8	23.3	–	181.8	116.0	65.8
	30	3,064.3	379.8	1,424.3	107.7	1,314.7	–	–	1.9	21.8	–	196.3	129.9	66.4
Oct.	7	3,057.7	377.2	1,473.7	79.0	1,392.9	–	–	1.8	23.7	–	161.1	101.0	60.0

***** 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 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]										
458.3	12.3	4.2	4.2	–	178.8	322.1	–	554.9	115.7	2022 Mar. 18
427.4	11.7	5.2	5.2	–	178.8	320.8	–	554.9	115.7	25
452.5	12.5	5.4	5.4	–	180.2	319.1	–	598.9	115.9	Apr. 1
423.9	11.0	5.4	5.4	–	180.2	312.5	–	598.9	115.9	8
398.7	12.1	5.0	5.0	–	180.2	316.0	–	598.9	115.9	15
395.8	11.7	5.4	5.4	–	180.2	322.1	–	598.9	115.9	22
411.9	11.5	5.6	5.6	–	180.2	318.3	–	598.9	115.9	29
446.1	11.6	5.7	5.7	–	180.2	323.6	–	598.9	116.0	May 6
425.3	11.7	5.7	5.7	–	180.2	323.4	–	598.9	116.0	13
437.2	11.3	5.6	5.6	–	180.2	321.3	–	598.9	116.0	20
426.4	11.1	5.6	5.6	–	180.2	320.5	–	598.9	116.0	27
409.9	11.4	5.5	5.5	–	180.2	320.6	–	598.9	114.9	June 3
403.3	11.7	5.6	5.6	–	180.2	320.1	–	598.9	114.9	10
422.3	11.1	6.2	6.2	–	180.2	322.9	–	598.9	114.9	17
410.6	10.9	6.9	6.9	–	180.2	323.7	–	598.9	114.9	24
434.0	11.5	6.2	6.2	–	184.9	327.5	–	608.5	114.8	July 1
396.5	11.4	6.1	6.1	–	184.9	327.0	–	608.5	114.8	8
397.2	11.5	5.9	5.9	–	184.9	326.2	–	608.5	114.8	15
412.1	11.3	6.0	6.0	–	184.9	324.3	–	608.5	114.8	22
442.2	11.5	5.7	5.7	–	184.9	322.7	–	608.5	114.8	29
476.1	11.3	5.9	5.9	–	184.9	325.6	–	608.5	114.8	Aug. 5
473.7	11.1	5.8	5.8	–	184.9	323.3	–	608.5	114.8	12
484.8	11.4	6.2	6.2	–	184.9	323.7	–	608.5	114.8	19
489.8	11.4	6.7	6.7	–	184.9	321.8	–	608.5	114.8	26
478.6	11.3	6.4	6.4	–	184.9	324.7	–	608.5	114.8	Sep. 2
447.8	11.7	5.9	5.9	–	184.9	326.1	–	608.5	114.7	9
391.9	11.1	6.5	6.5	–	184.9	325.3	–	608.5	114.7	16
407.5	11.0	7.0	7.0	–	184.9	326.5	–	608.5	114.7	23
440.3	11.6	6.8	6.8	–	189.9	326.1	–	611.7	114.7	30
392.3	11.5	6.9	6.9	–	189.9	321.9	–	611.7	114.7	Oct. 7
Deutsche Bundesbank										
208.8	0.3	– 0.0	– 0.0	–	46.5	38.3	514.2	170.7	5.7	2022 Mar. 18
192.6	0.3	0.4	0.4	–	46.5	38.6	514.2	170.7	5.7	25
198.0	0.7	0.5	0.5	–	46.8	37.4	520.0	185.0	5.7	Apr. 1
186.5	0.7	0.3	0.3	–	46.8	37.6	520.0	185.0	5.7	8
181.2	0.7	0.2	0.2	–	46.8	37.7	520.0	185.0	5.7	15
179.2	0.7	0.2	0.2	–	46.8	38.2	520.0	185.0	5.7	22
194.5	0.7	0.2	0.2	–	46.8	38.4	523.3	185.0	5.7	29
220.6	0.7	0.2	0.2	–	46.8	38.6	523.3	185.0	5.7	May 6
200.8	0.5	0.2	0.2	–	46.8	38.8	523.3	185.0	5.7	13
206.0	0.5	0.1	0.1	–	46.8	39.0	523.3	185.0	5.7	20
196.4	0.5	0.1	0.1	–	46.8	39.2	523.3	185.0	5.7	27
185.8	0.5	– 0.0	– 0.0	–	46.8	39.3	526.8	185.0	5.7	June 3
180.9	0.5	0.3	0.3	–	46.8	39.5	526.8	185.0	5.7	10
189.8	0.5	0.7	0.7	–	46.8	40.3	526.8	185.0	5.7	17
175.9	0.5	0.9	0.9	–	46.8	40.5	526.8	185.0	5.7	24
187.7	0.6	0.1	0.1	–	48.0	39.6	530.5	187.1	5.7	July 1
166.1	0.6	0.1	0.1	–	48.0	41.0	530.5	187.1	5.7	8
167.6	0.6	– 0.0	– 0.0	–	48.0	40.9	530.5	187.1	5.7	15
168.5	0.4	0.2	0.2	–	48.0	41.2	530.5	187.1	5.7	22
214.6	0.4	– 0.0	– 0.0	–	48.0	41.7	525.2	187.1	5.7	29
237.4	0.4	0.1	0.1	–	48.0	41.8	525.2	187.1	5.7	Aug. 5
240.8	0.4	– 0.0	– 0.0	–	48.0	41.8	525.2	187.1	5.7	12
247.3	0.4	0.3	0.3	–	48.0	41.9	525.2	187.1	5.7	19
256.2	0.4	0.8	0.8	–	48.0	41.9	525.2	187.1	5.7	26
240.0	0.4	0.2	0.2	–	48.0	42.4	513.5	187.1	5.7	Sep. 2
226.8	0.4	0.1	0.1	–	48.0	43.2	513.5	187.1	5.7	9
207.6	0.4	0.6	0.6	–	48.0	43.3	513.5	187.1	5.7	16
227.2	0.4	1.1	1.1	–	48.0	43.3	513.5	187.1	5.7	23
241.7	0.6	0.6	0.6	–	49.3	41.8	516.8	185.6	5.7	30
221.4	0.6	0.7	0.7	–	49.3	42.0	516.8	185.6	5.7	Oct. 7

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			
			Total	to banks in the home country			to banks in other Member States			Total	to non-banks in the home country		
				Total	Loans	Securities issued by banks	Total	Loans	Securities issued by banks		Total	Enterprises and households	
												Total	Loans
	End of year or month												
2012	8,226.6	19.2	2,309.0	1,813.2	1,363.8	449.4	495.9	322.2	173.7	3,688.6	3,289.4	2,695.5	2,435.7
2013	7,528.9	18.7	2,145.0	1,654.8	1,239.1	415.7	490.2	324.6	165.6	3,594.3	3,202.1	2,616.3	2,354.0
2014	7,802.3	19.2	2,022.8	1,530.5	1,147.2	383.3	492.3	333.9	158.4	3,654.5	3,239.4	2,661.2	2,384.8
2015	7,665.2	19.5	2,013.6	1,523.8	1,218.0	305.8	489.8	344.9	144.9	3,719.9	3,302.5	2,727.4	2,440.0
2016	7,792.6	26.0	2,101.4	1,670.9	1,384.2	286.7	430.5	295.0	135.5	3,762.9	3,344.5	2,805.6	2,512.0
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
2020 Nov.	9,096.0	45.7	2,684.1	2,232.1	1,965.3	266.9	452.0	313.9	138.1	4,198.6	3,723.7	3,293.3	2,991.0
Dec.	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 Jan.	9,150.4	44.9	2,793.5	2,309.4	2,042.2	267.2	484.1	348.8	135.3	4,195.0	3,716.6	3,302.6	2,997.8
Feb.	9,148.1	45.5	2,824.0	2,328.8	2,060.6	268.2	495.2	361.1	134.1	4,210.4	3,731.9	3,318.5	3,011.4
Mar.	9,261.9	45.7	2,904.5	2,419.8	2,145.0	274.8	484.8	351.2	133.6	4,245.8	3,762.0	3,347.6	3,038.5
Apr.	9,269.2	44.9	2,935.1	2,441.4	2,168.7	272.8	493.7	360.0	133.7	4,236.4	3,756.9	3,347.0	3,036.8
May	9,277.1	45.7	2,974.7	2,485.3	2,212.9	272.4	489.4	355.6	133.9	4,246.1	3,772.8	3,363.3	3,049.8
June	9,293.7	46.5	2,959.9	2,469.9	2,197.4	272.5	490.0	356.7	133.3	4,253.7	3,772.0	3,370.7	3,056.9
July	9,321.9	46.8	2,943.6	2,448.2	2,178.3	269.9	495.3	361.1	134.2	4,270.2	3,788.1	3,386.0	3,071.8
Aug.	9,319.3	46.9	2,950.1	2,457.4	2,188.5	268.8	492.8	359.5	133.3	4,283.3	3,799.4	3,400.4	3,085.0
Sep.	9,325.3	47.4	2,952.3	2,472.9	2,203.6	269.3	479.4	344.9	134.5	4,303.0	3,812.2	3,409.8	3,093.8
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.	10,627.8	23.6	3,160.0	2,625.3	2,359.3	266.0	534.7	402.7	132.0	4,555.5	4,039.5	3,664.5	3,331.2
	Changes 3												
2013	− 703.6	− 0.5	− 257.1	− 249.2	− 216.5	− 32.7	− 7.9	1.6	− 9.5	13.6	16.6	23.6	21.6
2014	206.8	0.4	− 126.2	− 128.6	− 95.3	− 33.4	2.4	7.2	− 4.8	55.1	40.0	52.3	36.8
2015	− 191.4	0.3	− 18.2	− 12.1	66.1	− 78.2	− 6.1	6.6	− 12.8	64.8	64.1	68.1	56.6
2016	184.3	6.5	120.3	178.4	195.3	− 16.8	− 58.1	− 49.2	− 8.8	57.5	53.4	88.8	81.0
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
2020 Dec.	− 141.5	1.8	− 59.5	− 53.6	− 51.2	− 2.4	− 5.9	− 5.8	− 0.2	− 18.3	− 13.3	4.2	2.7
2021 Jan.	207.1	− 2.6	170.2	131.4	128.6	2.9	38.8	41.1	− 2.2	17.4	7.9	6.8	5.3
Feb.	− 2.3	0.7	30.3	19.2	18.2	1.1	11.0	12.2	− 1.2	15.9	15.5	15.7	13.4
Mar.	100.0	0.2	78.0	90.0	83.7	6.3	− 12.0	− 11.5	− 0.5	34.3	29.7	28.8	27.0
Apr.	21.2	− 0.8	33.6	23.0	24.6	− 1.6	10.6	10.5	0.2	− 8.8	− 5.2	− 0.1	− 1.1
May	10.7	0.8	38.9	44.1	44.4	− 0.3	− 5.2	− 5.5	0.3	10.4	16.0	15.7	13.0
June	5.3	0.9	− 17.1	− 16.3	− 15.8	− 0.5	− 0.8	− 0.2	− 0.6	7.3	− 0.5	7.6	6.7
July	26.3	0.2	− 15.0	− 19.5	− 17.5	− 2.0	4.5	4.4	0.1	17.3	16.4	15.6	15.3
Aug.	− 3.9	0.2	6.7	9.3	10.3	− 1.0	− 2.6	− 1.7	− 0.9	13.2	11.2	14.7	13.4
Sep.	3.0	0.4	0.1	14.4	13.9	0.5	− 14.4	− 15.6	1.3	19.8	13.0	9.4	8.8
Oct.	70.4	0.5	27.7	17.3	17.6	− 0.3	10.5	11.4	− 1.0	19.2	20.6	28.0	24.1
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.	362.6	− 18.7	81.0	68.3	68.0	0.3	12.6	12.1	0.5	28.7	31.9	36.9	37.9

***** 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													
259.8	594.0	350.3	243.7	399.2	275.1	158.1	124.1	30.4	93.7	970.3	745.0	1,239.4	2012
262.3	585.8	339.2	246.6	392.3	267.6	144.6	124.6	27.8	96.9	921.2	690.5	849.7	2013
276.4	578.2	327.9	250.4	415.0	270.0	142.7	145.0	31.9	113.2	1,050.1	805.0	1,055.8	2014
287.4	575.1	324.5	250.6	417.5	276.0	146.4	141.5	29.4	112.1	1,006.5	746.3	905.6	2015
293.6	538.9	312.2	226.7	418.4	281.7	159.5	136.7	28.5	108.2	1,058.2	802.3	844.1	2016
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
302.2	430.5	256.7	173.8	474.8	325.6	222.5	149.2	29.1	120.1	1,048.0	792.3	1,119.7	2020 Nov.
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	Dec.
304.9	414.0	253.3	160.7	478.4	330.8	224.5	147.6	28.7	118.9	1,087.5	834.6	1,029.5	2021 Jan.
307.1	413.4	250.6	162.9	478.5	334.5	227.0	144.0	28.8	115.2	1,093.8	843.9	974.4	Feb.
309.1	414.4	249.3	165.1	483.8	339.4	232.3	144.4	28.9	115.5	1,105.7	855.5	960.1	Mar.
310.2	409.9	251.0	158.9	479.5	339.8	232.3	139.7	30.3	109.4	1,122.5	876.2	930.3	Apr.
313.5	409.5	250.6	158.9	473.2	339.1	231.9	134.1	28.4	105.7	1,108.3	862.4	902.3	May
313.8	401.4	249.1	152.3	481.7	339.4	231.8	142.3	28.8	113.5	1,111.0	864.8	922.5	June
314.2	402.2	251.3	150.8	482.0	344.2	236.6	137.8	28.6	109.2	1,097.1	849.1	964.3	July
315.4	398.9	248.0	150.9	484.0	346.1	238.8	137.9	28.3	109.6	1,084.8	839.7	954.2	Aug.
316.0	402.4	248.3	154.1	490.7	352.5	241.7	138.2	27.9	110.3	1,087.9	840.8	934.8	Sep.
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	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	375.0	243.4	131.6	516.1	387.0	268.6	129.1	33.7	95.4	1,202.1	942.9	1,686.5	Aug.
Changes [3]													
2.0	– 7.0	– 10.9	3.9	– 3.0	– 3.4	– 9.3	0.5	– 2.6	3.1	– 38.8	– 47.2	– 420.8	2013
15.5	– 12.3	– 15.1	2.9	15.1	0.4	– 4.0	14.6	0.9	13.8	83.6	72.0	194.0	2014
11.5	– 3.9	– 4.2	0.3	0.7	4.4	1.8	– 3.7	– 1.0	– 2.8	– 88.3	– 101.0	– 150.1	2015
7.8	– 35.4	– 12.1	– 23.3	4.0	8.2	14.6	– 4.2	– 0.9	– 3.3	51.4	55.0	– 51.4	2016
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
1.5	– 17.5	– 4.4	– 13.2	– 4.9	1.9	0.3	– 6.9	0.6	– 7.4	– 36.3	– 34.4	– 29.3	2020 Dec.
1.5	1.1	0.9	0.2	9.5	4.1	3.2	5.3	– 0.9	6.3	84.4	83.6	– 62.3	2021 Jan.
2.3	– 0.2	– 2.4	2.3	0.3	3.7	2.4	– 3.4	0.1	– 3.4	6.3	8.9	– 55.4	Feb.
1.9	0.9	– 1.3	2.2	4.6	4.2	4.9	0.4	0.1	0.3	2.8	3.3	– 15.3	Mar.
1.0	– 5.0	1.7	– 6.7	– 3.6	0.9	0.7	– 4.5	1.5	– 6.0	26.0	29.0	– 28.8	Apr.
2.7	0.4	– 0.3	0.7	– 5.6	– 0.1	0.3	– 5.5	– 1.9	– 3.6	– 11.4	– 11.4	– 28.0	May
0.8	– 8.1	– 1.4	– 6.7	7.8	– 0.4	– 0.6	8.2	0.4	7.7	– 5.7	– 5.3	19.9	June
0.4	0.7	2.3	– 1.5	1.0	5.6	4.8	– 4.7	– 0.2	– 4.5	– 15.0	– 16.5	38.7	July
1.2	– 3.4	– 3.5	0.1	1.9	1.8	2.2	0.1	– 0.3	0.4	– 13.1	– 10.0	– 10.8	Aug.
0.6	3.6	0.3	3.2	6.8	6.3	2.9	0.5	– 0.4	0.9	0.1	– 1.5	– 17.4	Sep.
3.9	– 7.4	1.2	– 8.7	– 1.4	3.5	2.6	– 4.8	2.3	– 7.2	47.6	49.5	– 24.6	Oct.
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	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	– 5.0	– 2.3	– 2.7	– 3.2	3.5	2.7	– 6.7	0.4	– 7.0	11.8	10.6	259.8	Aug.

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												
2012	8,226.6	1,371.0	1,135.9	235.1	3,091.4	2,985.2	1,294.9	1,072.8	320.0	617.6	528.4	77.3	31.2
2013	7,528.9	1,345.4	1,140.3	205.1	3,130.5	3,031.5	1,405.3	1,016.2	293.7	610.1	532.4	81.3	33.8
2014	7,802.3	1,324.0	1,112.3	211.7	3,197.7	3,107.4	1,514.3	985.4	298.1	607.7	531.3	79.7	34.4
2015	7,665.2	1,267.8	1,065.9	201.9	3,307.1	3,215.1	1,670.2	948.4	291.5	596.4	534.5	80.8	35.3
2016	7,792.6	1,205.2	1,033.2	172.0	3,411.3	3,318.5	1,794.8	935.3	291.2	588.5	537.0	84.2	37.2
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
2020 Nov.	9,096.0	1,515.4	1,245.5	269.9	4,035.0	3,846.2	2,508.7	778.0	235.3	559.6	532.0	140.2	69.0
Dec.	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 Jan.	9,150.4	1,560.0	1,262.3	297.7	4,044.0	3,855.8	2,536.8	757.4	219.4	561.6	534.8	138.4	65.8
Feb.	9,148.1	1,584.4	1,261.7	322.7	4,053.2	3,865.2	2,552.4	750.1	214.1	562.6	536.1	137.7	68.2
Mar.	9,261.9	1,634.1	1,336.6	297.6	4,068.3	3,876.2	2,569.2	744.7	212.3	562.3	536.2	142.2	71.0
Apr.	9,269.2	1,659.9	1,344.1	315.8	4,079.3	3,886.3	2,588.3	735.3	205.8	562.7	536.9	143.0	70.2
May	9,277.1	1,661.1	1,353.0	308.1	4,103.8	3,909.2	2,614.0	732.0	205.0	563.2	537.5	146.4	70.4
June	9,293.7	1,670.8	1,357.4	313.4	4,088.4	3,890.3	2,605.4	722.3	198.1	562.6	537.1	151.3	76.7
July	9,321.9	1,682.5	1,362.0	320.4	4,110.8	3,918.9	2,638.6	718.3	196.7	562.0	536.8	146.4	74.0
Aug.	9,319.3	1,686.5	1,365.8	320.7	4,119.2	3,925.6	2,648.6	715.5	194.1	561.5	536.6	147.8	74.7
Sep.	9,325.3	1,667.9	1,354.2	313.6	4,108.9	3,913.6	2,640.2	712.7	194.3	560.7	535.9	148.8	77.1
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.	10,627.8	1,788.5	1,406.3	382.2	4,322.0	4,089.0	2,760.7	777.8	272.2	550.5	528.3	185.0	103.0
	Changes [4]												
2013	– 703.6	– 106.2	– 73.9	– 32.3	39.1	47.8	111.5	– 56.3	– 26.6	– 7.3	4.0	2.6	3.3
2014	206.8	– 28.4	– 32.2	3.9	62.7	71.6	106.0	– 32.1	3.1	– 2.4	– 2.4	– 2.5	– 0.0
2015	– 191.4	– 62.1	– 50.3	– 11.9	104.1	104.8	153.2	– 37.0	– 10.1	– 11.3	4.2	– 0.4	– 0.3
2016	184.3	– 31.6	– 2.2	– 29.4	105.7	105.2	124.3	– 11.1	1.4	– 8.0	2.4	2.7	1.9
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
2020 Dec.	– 141.5	– 25.2	– 7.9	– 17.3	– 12.3	– 8.7	0.3	– 10.0	– 8.0	1.0	1.3	– 4.8	– 11.8
2021 Jan.	207.1	66.0	25.3	40.8	21.6	19.0	28.4	– 10.5	– 7.8	1.1	1.6	2.7	9.7
Feb.	– 2.3	24.4	– 0.7	25.1	9.0	9.2	15.5	– 7.3	– 5.3	1.0	1.3	– 0.7	2.4
Mar.	100.0	47.8	73.8	– 26.0	13.6	9.9	15.8	– 5.6	– 1.9	– 0.3	0.1	4.0	2.5
Apr.	21.2	27.6	8.3	19.3	12.5	11.2	20.1	– 9.4	– 6.5	0.4	0.7	1.2	– 0.6
May	10.7	0.6	9.1	– 8.5	24.9	23.2	26.0	– 3.2	– 0.7	0.5	0.6	3.5	0.3
June	5.3	8.2	3.7	4.4	– 16.6	– 19.8	– 9.4	– 9.8	– 7.1	– 0.6	– 0.4	4.5	6.1
July	26.3	14.4	7.4	7.0	22.3	28.6	33.2	– 4.1	– 1.4	– 0.6	– 0.3	– 4.9	– 3.1
Aug.	– 3.9	3.9	3.7	0.2	7.8	6.5	9.9	– 2.8	– 2.6	– 0.5	– 0.3	0.9	0.2
Sep.	3.0	– 19.5	– 11.7	– 7.8	– 7.3	– 8.9	– 6.5	– 1.6	0.4	– 0.8	– 0.6	0.7	2.7
Oct.	70.4	24.1	11.2	12.9	31.1	29.1	16.8	12.9	12.1	– 0.6	– 0.4	2.5	1.1
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.	362.6	16.3	23.0	– 6.7	54.6	47.9	37.7	12.6	13.1	– 2.4	– 2.3	5.6	4.0

***** 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													
42.3	14.7	3.8	2.8	28.9	25.9	80.4	7.3	1,233.1	56.9	611.4	487.3	1,344.7	2012
44.0	16.9	3.5	2.7	17.6	16.0	6.7	4.1	1,115.2	39.0	479.5	503.0	944.5	2013
42.0	15.9	3.3	2.7	10.6	10.5	3.4	3.5	1,077.6	39.6	535.3	535.4	1,125.6	2014
42.2	16.0	3.3	2.8	11.3	9.6	2.5	3.5	1,017.7	48.3	526.2	569.3	971.1	2015
43.9	15.8	3.1	2.6	8.6	7.9	2.2	2.4	1,030.3	47.2	643.4	591.5	906.3	2016
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
68.7	24.3	2.6	2.3	48.5	47.6	9.1	2.5	1,070.0	23.3	696.7	713.1	1,054.3	2020 Nov.
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	Dec.
70.0	23.7	2.6	2.3	49.7	48.3	6.3	2.5	1,058.8	19.7	790.8	708.3	979.7	2021 Jan.
67.0	20.5	2.5	2.3	50.3	48.2	4.5	2.5	1,068.3	19.6	803.5	702.4	929.4	Feb.
68.7	22.0	2.5	2.3	49.9	48.9	6.7	2.9	1,090.4	21.5	833.7	712.0	913.8	Mar.
70.3	23.2	2.5	2.3	50.0	48.6	5.1	2.9	1,091.8	21.0	839.1	705.9	885.3	Apr.
73.5	26.7	2.5	2.3	48.2	46.6	6.0	2.3	1,087.7	23.5	854.7	702.7	858.8	May
72.0	25.9	2.5	2.3	46.9	45.6	4.5	2.3	1,084.6	23.8	836.9	725.4	880.7	June
69.9	22.9	2.5	2.3	45.5	44.3	6.0	2.3	1,087.2	23.5	800.0	719.2	913.9	July
70.7	24.0	2.5	2.3	45.8	44.0	7.4	2.3	1,089.9	25.5	790.7	725.0	898.4	Aug.
69.2	22.4	2.5	2.2	46.6	45.2	7.3	2.2	1,100.5	25.1	840.1	735.9	862.6	Sep.
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	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	1,183.6	38.6	950.1	741.5	1,634.8	Aug.
Changes [4]													
– 0.5	2.2	– 0.3	– 0.1	– 11.3	– 10.0	4.1	– 3.2	– 104.9	– 17.6	– 134.1	18.9	– 417.1	2013
– 2.3	– 1.2	– 0.2	– 0.1	– 6.4	– 4.8	– 3.4	– 0.6	– 63.7	– 0.2	35.9	26.1	178.3	2014
– 0.1	0.0	0.0	0.1	– 0.4	– 1.9	– 1.0	– 0.0	– 86.8	7.7	– 30.3	28.0	– 143.2	2015
1.1	0.0	– 0.3	– 0.1	– 2.2	– 1.2	– 0.3	– 1.1	8.6	– 1.3	116.1	26.4	– 39.5	2016
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
7.0	6.3	0.0	0.0	1.3	1.0	0.3	– 0.0	– 9.0	– 1.9	– 71.4	– 0.7	– 23.2	2020 Dec.
– 7.0	– 6.9	0.0	0.0	– 0.1	– 0.2	– 3.0	– 0.0	2.8	– 0.5	173.2	– 3.7	– 49.8	2021 Jan.
– 3.1	– 3.2	– 0.0	– 0.0	0.6	– 0.2	– 1.8	– 0.0	8.9	– 0.1	12.2	– 6.2	– 48.9	Feb.
1.5	1.3	– 0.0	0.0	– 0.4	0.8	2.1	0.5	15.7	1.7	24.0	7.1	– 10.8	Mar.
1.8	1.3	– 0.0	– 0.0	0.1	– 0.4	– 2.2	– 0.1	7.3	– 0.4	11.1	– 3.7	– 31.3	Apr.
3.2	3.5	– 0.0	0.0	– 1.8	– 1.9	0.9	– 0.1	– 2.7	2.5	17.0	– 2.8	– 27.1	May
– 1.6	– 0.9	– 0.0	– 0.0	– 1.3	– 1.0	– 1.5	0.1	– 7.7	0.2	– 22.7	20.9	24.6	June
– 1.8	– 2.7	– 0.0	– 0.0	– 1.4	– 1.3	1.5	– 0.1	2.3	– 0.2	– 37.2	– 5.4	28.5	July
0.7	1.0	– 0.0	– 0.0	0.3	– 0.2	1.4	– 0.0	2.2	2.0	– 9.9	5.6	– 14.9	Aug.
– 1.9	– 1.6	– 0.0	– 0.0	0.8	1.2	– 0.1	– 0.0	7.0	– 0.5	45.5	10.0	– 32.4	Sep.
1.5	0.9	– 0.0	– 0.0	– 0.5	0.0	0.1	– 0.1	17.3	– 0.5	27.1	– 6.4	– 22.8	Oct.
– 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	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
1.7	1.1	– 0.0	– 0.0	1.1	0.0	0.6	– 0.1	7.4	3.5	23.6	– 3.9	264.0	Aug.

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													
2022 Mar.	1,442	10,025.3	1,137.0	2,666.8	2,194.2	471.4	4,760.3	441.8	3,604.5	0.3	700.1	94.6	1,366.5
Apr.	1,441	10,333.5	1,252.2	2,589.8	2,116.4	471.2	4,780.9	454.6	3,627.3	0.4	682.1	94.6	1,615.9
May	1,439	10,321.7	1,173.6	2,675.5	2,199.3	473.8	4,801.0	458.6	3,640.1	0.3	685.3	94.5	1,577.1
June	1,432	10,491.7	1,143.9	2,695.5	2,222.0	470.5	4,835.6	467.9	3,657.7	0.3	692.3	94.9	1,721.8
July	1,425	10,330.6	1,127.2	2,702.9	2,227.8	471.4	4,874.4	464.5	3,690.2	0.3	703.2	96.2	1,529.9
Aug.	1,417	10,690.4	1,150.7	2,746.7	2,270.5	471.5	4,907.7	484.8	3,714.3	0.2	691.0	95.8	1,789.5
Commercial banks [6]													
2022 July	246	4,583.0	617.8	1,165.6	1,085.7	79.6	1,542.1	299.3	1,004.3	0.2	230.5	31.6	1,225.8
Aug.	246	4,856.1	624.0	1,205.7	1,125.1	80.0	1,549.1	307.9	1,009.4	0.2	221.9	31.6	1,445.6
Big banks [7]													
2022 July	3	2,319.7	184.2	569.0	539.1	29.9	721.3	140.3	454.2	0.0	123.8	26.3	818.8
Aug.	3	2,499.0	175.7	601.1	571.4	29.7	718.8	142.5	454.5	0.0	117.9	26.3	977.1
Regional banks and other commercial banks													
2022 July	136	1,814.4	288.8	436.4	388.2	48.0	687.9	113.2	470.3	0.1	100.4	4.6	396.7
Aug.	136	1,896.3	291.9	448.7	399.3	48.7	693.0	117.6	472.7	0.1	97.6	4.6	458.1
Branches of foreign banks													
2022 July	107	448.8	144.8	160.1	158.5	1.6	133.0	45.9	79.8	0.0	6.3	0.7	10.3
Aug.	107	460.8	156.3	156.0	154.4	1.6	137.3	47.8	82.2	0.0	6.5	0.7	10.4
Landesbanken													
2022 July	6	915.2	111.4	254.2	204.2	49.7	429.6	48.9	338.5	0.0	37.6	9.4	110.8
Aug.	6	944.6	124.8	251.5	202.7	48.5	431.9	51.3	339.9	0.0	36.8	9.4	127.1
Savings banks													
2022 July	364	1,575.9	164.5	170.0	53.7	116.0	1,202.1	52.0	971.2	–	178.4	15.3	24.0
Aug.	362	1,587.4	169.0	171.4	54.5	116.7	1,207.2	51.9	976.7	–	178.0	15.3	24.5
Credit cooperatives													
2022 July	764	1,166.6	66.1	191.0	76.2	114.2	862.7	31.9	706.9	0.0	123.8	19.4	27.4
Aug.	758	1,174.5	65.5	193.9	78.2	115.1	867.9	32.2	711.5	0.0	124.3	19.4	27.7
Mortgage banks													
2022 July	9	233.2	13.5	16.6	10.2	6.1	197.6	2.3	179.4	–	15.8	0.1	5.4
Aug.	9	234.7	15.3	17.5	10.9	6.3	196.7	2.5	179.5	–	14.7	0.1	5.1
Building and loan associations													
2022 July	18	260.0	3.6	45.1	30.1	15.0	207.5	1.3	182.0	.	24.2	0.3	3.6
Aug.	18	258.9	2.4	44.8	29.8	15.0	207.6	1.3	182.7	.	23.6	0.3	3.8
Banks with special, development and other central support tasks													
2022 July	18	1,596.7	150.3	860.5	767.7	90.8	432.9	28.7	307.8	0.0	92.8	20.1	132.8
Aug.	18	1,634.2	149.7	861.9	769.3	90.0	447.2	37.6	314.6	0.0	91.7	19.6	155.7
Memo item: Foreign banks [8]													
2022 July	141	2,192.9	336.3	603.4	570.9	32.3	654.8	153.2	389.7	0.2	107.0	3.6	594.8
Aug.	143	2,367.5	336.2	634.0	600.7	32.6	666.5	162.5	394.1	0.1	103.9	3.6	727.2
of which: Banks majority-owned by foreign banks [9]													
2022 July	34	1,744.0	191.5	443.3	412.5	30.6	521.8	107.3	309.8	0.1	100.7	2.9	584.5
Aug.	36	1,906.7	179.9	477.9	446.3	31.0	529.2	114.6	311.9	0.1	97.4	2.9	716.8

***** 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														
2,481.6	770.4	1,711.2	4,395.3	2,895.6	260.1	650.7	50.7	564.8	541.5	24.1	1,255.4	576.7	1,316.3	2022 Mar.
2,498.2	741.2	1,756.9	4,431.3	2,907.0	287.1	649.5	62.5	563.7	540.5	23.9	1,263.1	578.7	1,562.2	Apr.
2,521.3	783.2	1,738.1	4,438.7	2,941.4	263.1	648.0	62.5	562.3	539.3	24.0	1,261.9	579.5	1,520.4	May
2,484.9	772.6	1,712.3	4,439.4	2,937.1	272.0	645.8	62.8	560.4	537.6	24.0	1,273.7	585.7	1,708.0	June
2,490.7	743.1	1,747.6	4,476.6	2,950.6	296.0	647.2	65.6	558.6	535.9	24.2	1,274.3	586.4	1,502.6	July
2,523.9	746.9	1,777.0	4,534.7	2,998.1	309.1	646.3	70.2	556.1	533.5	25.1	1,276.5	587.5	1,767.7	Aug.
Commercial banks [6]														
1,283.1	553.1	729.9	1,763.7	1,253.0	162.5	237.4	64.4	101.3	97.9	9.5	181.5	197.7	1,156.9	2022 July
1,308.7	564.2	744.5	1,797.5	1,281.6	170.9	234.7	68.5	100.5	97.1	9.9	179.9	198.2	1,371.8	Aug.
Big banks [7]														
510.5	196.9	313.5	845.0	594.8	86.0	77.0	31.9	86.2	83.4	1.1	135.0	71.6	757.6	2022 July
518.2	198.8	319.4	865.3	610.2	91.3	77.2	29.4	85.5	82.8	1.1	135.1	72.6	907.8	Aug.
Regional banks and other commercial banks														
517.5	215.7	301.8	751.2	536.3	56.1	135.8	32.5	14.7	14.1	8.3	46.1	110.7	388.9	2022 July
529.7	219.7	310.0	758.8	544.8	57.1	133.6	39.1	14.6	14.0	8.7	44.4	110.2	453.1	Aug.
Branches of foreign banks														
255.1	140.6	114.6	167.5	121.9	20.5	24.6	–	0.4	0.4	0.1	0.4	15.4	10.4	2022 July
260.7	145.7	115.0	173.4	126.6	22.5	23.9	–	0.3	0.3	0.1	0.4	15.4	10.9	Aug.
Landesbanken														
288.1	52.0	236.1	286.8	152.9	57.4	70.8	0.7	5.6	5.5	0.0	184.8	43.1	112.5	2022 July
283.7	49.9	233.7	300.3	160.4	63.5	70.8	1.5	5.6	5.5	0.1	184.8	43.1	132.7	Aug.
Savings banks														
207.4	2.6	204.8	1,166.7	854.8	14.1	14.0	–	273.4	258.0	10.3	15.7	137.2	48.9	2022 July
207.3	2.9	204.4	1,176.3	865.2	14.1	13.9	–	272.4	257.0	10.6	16.2	137.2	50.4	Aug.
Credit cooperatives														
177.8	1.5	176.3	846.4	617.9	28.8	17.8	–	177.8	174.0	4.1	8.9	100.6	32.9	2022 July
178.7	2.2	176.5	852.3	624.2	28.7	18.0	–	177.2	173.4	4.2	8.7	100.9	33.9	Aug.
Mortgage banks														
62.0	3.8	58.2	53.8	2.5	4.9	46.5	–	–	–	.	100.8	10.4	6.2	2022 July
62.1	3.8	58.2	53.9	2.7	4.9	46.3	–	–	–	.	102.2	10.4	6.3	Aug.
Building and loan associations														
39.8	3.1	36.7	193.6	3.9	1.6	187.6	–	0.5	0.5	0.1	4.6	12.1	10.0	2022 July
38.9	2.8	36.1	193.4	3.8	1.5	187.5	–	0.5	0.5	0.1	4.6	12.1	10.0	Aug.
Banks with special, development and other central support tasks														
432.5	127.0	305.6	165.6	65.6	26.7	73.1	0.6	–	–	.	778.1	85.3	135.1	2022 July
444.5	121.0	323.5	161.1	60.2	25.5	75.1	0.2	–	–	.	780.2	85.6	162.8	Aug.
Memo item: Foreign banks [8]														
742.4	363.5	378.8	715.9	528.6	65.1	99.3	34.1	20.3	20.0	2.6	44.6	95.7	594.2	2022 July
759.2	371.1	388.1	740.7	552.3	66.8	98.7	40.2	20.0	19.7	3.0	44.2	95.9	727.5	Aug.
of which: Banks majority-owned by foreign banks [9]														
487.3	223.0	264.3	548.5	406.7	44.6	74.7	34.1	19.9	19.7	2.5	44.2	80.3	583.8	2022 July
498.4	225.3	273.0	567.3	425.7	44.3	74.8	40.2	19.7	19.4	2.9	43.8	80.5	716.7	Aug.

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 *
2012	18.5	134.3	1,655.0	1,229.1	–	2.4	423.5	2.4	3,220.4	2,785.5	0.6	2.2	432.1
2013	18.5	85.6	1,545.6	1,153.1	0.0	1.7	390.8	2.2	3,131.6	2,692.6	0.5	1.2	437.2
2014	18.9	81.3	1,425.9	1,065.6	0.0	2.1	358.2	1.7	3,167.3	2,712.2	0.4	0.7	454.0
2015	19.2	155.0	1,346.6	1,062.6	0.0	1.7	282.2	1.7	3,233.9	2,764.0	0.4	0.4	469.0
2016	25.8	284.0	1,364.9	1,099.8	0.0	0.8	264.3	2.0	3,274.3	2,823.8	0.3	0.4	449.8
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
2021 Mar.	45.5	983.4	1,419.4	1,160.8	0.0	0.9	257.7	9.8	3,699.1	3,287.5	0.2	6.7	404.7
Apr.	44.7	1,062.1	1,362.4	1,105.7	0.0	0.9	255.8	9.8	3,693.9	3,287.5	0.2	5.6	400.5
May	45.4	1,044.7	1,423.6	1,167.3	0.0	0.9	255.4	10.1	3,709.6	3,300.2	0.1	4.6	404.7
June	46.1	1,042.8	1,409.7	1,153.8	0.0	0.8	255.1	10.3	3,709.2	3,305.7	0.2	5.8	397.6
July	46.3	1,059.2	1,372.0	1,118.1	0.0	0.8	253.2	10.3	3,725.3	3,322.9	0.2	6.1	396.2
Aug.	46.5	1,015.2	1,425.2	1,172.4	0.0	0.8	252.1	10.3	3,736.4	3,332.8	0.1	5.7	397.8
Sep.	47.1	1,054.9	1,399.9	1,147.7	0.0	0.7	251.5	10.3	3,749.8	3,341.9	0.1	4.4	403.3
Oct.	47.6	1,052.4	1,419.3	1,167.7	0.0	0.7	250.9	10.3	3,770.2	3,366.9	0.2	5.0	398.0
Nov.	47.9	1,068.7	1,432.2	1,183.6	–	0.7	248.0	10.0	3,794.0	3,386.4	0.2	5.6	401.9
Dec.	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 Jan.	47.4	1,066.0	1,439.2	1,191.8	–	0.7	246.7	10.1	3,812.8	3,409.0	0.2	3.1	400.5
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	1,480.6	1,232.0	–	1.3	247.3	9.9	3,976.2	3,574.3	0.1	3.9	397.8
													Changes *
2013	+ 0.0	– 48.8	– 204.1	– 170.6	+ 0.0	– 0.7	– 32.7	– 0.2	+ 4.4	+ 0.3	– 0.1	– 0.6	+ 4.8
2014	+ 0.4	– 4.3	– 119.3	– 87.1	+ 0.0	+ 0.4	– 32.6	+ 0.1	+ 36.7	+ 20.6	– 0.1	– 0.6	+ 16.8
2015	+ 0.3	+ 73.7	– 80.7	– 4.3	– 0.0	– 0.4	– 75.9	– 0.1	+ 68.9	+ 54.1	– 0.0	– 0.3	+ 15.1
2016	+ 6.5	+ 129.1	+ 48.1	+ 66.9	–	– 0.9	– 17.9	+ 0.4	+ 43.7	+ 62.8	– 0.1	– 0.1	– 18.9
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
2021 Mar.	+ 0.6	+ 54.3	+ 37.1	+ 30.6	–	– 0.1	+ 6.6	+ 0.2	+ 29.7	+ 25.6	– 0.0	– 1.4	+ 5.4
Apr.	– 0.8	+ 78.7	– 56.7	– 54.9	– 0.0	– 0.1	– 1.7	+ 0.0	– 5.2	+ 0.0	– 0.0	– 1.1	– 4.1
May	+ 0.8	– 17.5	+ 61.2	+ 61.6	–	+ 0.0	– 0.4	+ 0.4	+ 15.6	+ 12.5	– 0.0	– 1.1	+ 4.2
June	+ 0.6	– 1.9	– 13.6	– 13.3	– 0.0	– 0.1	– 0.3	+ 0.1	– 0.4	+ 5.5	+ 0.0	+ 1.3	– 7.1
July	+ 0.2	+ 15.3	– 35.1	– 33.1	–	– 0.0	– 1.9	+ 0.1	+ 16.1	+ 17.2	+ 0.0	+ 0.3	– 1.4
Aug.	+ 0.2	– 43.8	+ 53.4	+ 54.4	–	+ 0.1	– 1.1	– 0.0	+ 10.9	+ 9.7	– 0.0	– 0.5	+ 1.7
Sep.	+ 0.6	+ 39.7	– 26.2	– 25.5	+ 0.0	– 0.1	– 0.6	– 0.0	+ 13.5	+ 9.2	+ 0.0	– 1.2	+ 5.4
Oct.	+ 0.5	– 2.4	+ 19.5	+ 20.0	+ 0.0	– 0.0	– 0.5	– 0.1	+ 20.5	+ 25.1	+ 0.0	+ 0.6	– 5.2
Nov.	+ 0.3	+ 16.6	+ 12.9	+ 15.9	– 0.0	– 0.0	– 2.9	– 0.3	+ 25.5	+ 20.4	+ 0.0	+ 0.6	+ 4.5
Dec.	+ 1.6	– 163.6	– 22.4	– 19.6	–	– 0.1	– 2.7	+ 0.3	+ 4.3	+ 6.2	+ 0.1	– 3.0	+ 0.9
2022 Jan.	– 2.0	+ 161.0	+ 27.8	+ 26.3	–	+ 0.1	+ 1.4	– 0.3	+ 14.7	+ 16.6	– 0.1	+ 0.5	– 2.3
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	+ 28.9	+ 28.3	–	+ 0.2	+ 0.4	+ 0.1	+ 31.1	+ 35.1	– 0.0	+ 0.3	– 4.3

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** 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 *														
–	34.8	90.0	1,135.5	132.9	1,002.6	0.0	36.3	3,090.2	1,306.5	1,072.5	617.6	93.6	34.9	2012
–	31.6	92.3	1,140.3	125.6	1,014.7	0.0	33.2	3,048.7	1,409.9	952.0	610.1	76.6	32.9	2013
–	26.5	94.3	1,111.9	127.8	984.0	0.0	11.7	3,118.2	1,517.8	926.7	607.8	66.0	30.9	2014
–	20.4	89.6	1,065.6	131.1	934.5	0.0	6.1	3,224.7	1,673.7	898.4	596.5	56.1	29.3	2015
–	19.1	91.0	1,032.9	129.5	903.3	0.1	5.6	3,326.7	1,798.2	889.6	588.5	50.4	28.8	2016
–	19.1	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
–	24.3	78.3	1,336.0	135.4	1,200.6	0.0	14.7	3,925.8	2,575.2	761.2	562.3	27.1	34.4	2021 Mar.
–	24.5	77.7	1,343.0	136.2	1,206.8	0.0	15.1	3,935.7	2,594.6	751.6	562.8	26.8	34.4	Apr.
–	24.7	78.6	1,351.9	140.0	1,211.9	0.0	15.5	3,956.3	2,620.5	746.2	563.2	26.3	34.6	May
–	25.0	78.7	1,357.0	132.7	1,224.3	0.0	15.8	3,936.4	2,612.1	735.7	562.6	26.1	34.6	June
–	25.1	78.1	1,360.7	136.1	1,224.5	0.0	15.9	3,964.6	2,646.0	730.7	562.0	25.9	34.5	July
–	25.2	78.2	1,364.7	135.3	1,229.4	0.0	16.1	3,971.0	2,656.0	727.8	561.5	25.6	34.3	Aug.
–	25.2	79.0	1,353.8	128.9	1,224.9	0.0	16.2	3,960.3	2,647.9	726.1	560.7	25.5	34.1	Sep.
–	25.1	79.0	1,363.6	132.9	1,230.7	0.0	16.2	3,989.1	2,664.3	739.3	560.1	25.3	33.9	Oct.
–	25.2	79.1	1,373.9	135.2	1,238.6	0.0	16.3	4,002.4	2,685.9	731.8	559.9	24.8	33.6	Nov.
–	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	Dec.
–	25.7	78.6	1,363.7	137.2	1,226.5	0.0	16.4	4,025.9	2,690.9	750.0	560.8	24.2	33.9	2022 Jan.
–	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	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.
Changes *														
–	– 3.3	+ 2.4	– 79.4	– 24.1	– 55.3	+ 0.0	– 3.4	+ 40.2	+ 118.4	– 53.9	– 7.4	– 17.0	– 1.7	2013
–	– 1.9	+ 2.0	– 29.0	+ 2.2	– 31.2	– 0.0	– 0.6	+ 69.7	+ 107.9	– 25.3	– 2.4	– 10.6	– 2.0	2014
–	– 2.1	– 4.3	– 46.6	+ 3.3	– 50.0	+ 0.0	– 1.3	+ 106.5	+ 156.2	– 28.3	– 11.3	– 10.1	– 1.6	2015
–	– 1.3	+ 1.5	– 1.7	+ 0.3	– 2.0	+ 0.0	– 0.5	+ 104.7	+ 124.5	– 6.9	– 7.9	– 5.0	– 0.5	2016
–	– 0.0	– 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
–	+ 0.3	+ 0.1	+ 75.1	– 2.6	+ 77.7	–	+ 0.5	+ 12.2	+ 17.7	– 4.8	– 0.3	– 0.4	+ 0.1	2021 Mar.
–	+ 0.2	– 0.6	+ 7.1	+ 0.8	+ 6.3	+ 0.0	+ 0.3	+ 9.8	+ 19.6	– 9.8	+ 0.4	– 0.3	– 0.0	Apr.
–	+ 0.3	+ 0.3	+ 8.9	+ 3.9	+ 5.0	–	+ 0.5	+ 20.6	+ 26.0	– 5.3	+ 0.5	– 0.5	+ 0.2	May
–	+ 0.2	+ 0.1	+ 5.0	– 7.3	+ 12.3	+ 0.0	+ 0.3	– 19.8	– 8.5	– 10.5	– 0.6	– 0.2	– 0.0	June
–	+ 0.1	+ 0.1	+ 6.6	+ 3.5	+ 3.1	–	+ 0.1	+ 28.2	+ 33.9	– 5.0	– 0.6	– 0.2	– 0.1	July
–	+ 0.2	+ 0.1	+ 4.1	– 0.8	+ 4.9	– 0.0	+ 0.2	+ 6.4	+ 10.0	– 2.9	– 0.5	– 0.2	– 0.2	Aug.
–	+ 0.0	+ 0.7	– 10.6	– 6.4	– 4.2	+ 0.0	+ 0.1	– 6.7	– 5.4	– 0.3	– 0.8	– 0.2	– 0.2	Sep.
–	– 0.1	+ 0.1	+ 10.5	+ 4.0	+ 6.5	+ 0.0	+ 0.0	+ 28.8	+ 16.4	+ 13.2	– 0.6	– 0.2	– 0.2	Oct.
–	+ 0.1	+ 0.1	+ 10.2	+ 2.3	+ 7.9	–	+ 0.1	+ 13.3	+ 21.5	– 7.6	– 0.2	– 0.3	– 0.3	Nov.
–	+ 0.5	+ 0.1	– 35.4	– 18.0	– 17.4	– 0.0	+ 0.0	– 25.9	– 31.2	+ 4.1	+ 1.4	– 0.2	+ 0.6	Dec.
–	– 0.0	– 0.6	+ 23.5	+ 18.3	+ 5.2	– 0.0	+ 0.0	+ 49.6	+ 36.3	+ 14.1	– 0.4	– 0.4	– 0.3	2022 Jan.
–	+ 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	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.

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 *														
2012	0.8	1,046.0	813.5	545.5	268.1	5.4	227.0	2.6	729.0	442.2	105.1	337.1	9.0	277.8
2013	0.2	1,019.7	782.4	546.6	235.8	7.2	230.1	2.5	701.0	404.9	100.3	304.6	8.2	287.8
2014	0.2	1,125.2	884.8	618.7	266.1	7.9	232.5	1.1	735.1	415.2	94.4	320.8	6.5	313.5
2015	0.3	1,066.9	830.7	555.9	274.7	1.2	235.0	1.0	751.5	424.3	83.8	340.5	7.5	319.7
2016	0.3	1,055.9	820.6	519.8	300.7	0.5	234.9	1.0	756.2	451.6	90.1	361.4	5.0	299.6
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
2021 Mar.	0.2	1,140.4	908.0	646.7	261.3	2.3	230.1	3.8	864.8	559.3	153.3	406.1	11.9	293.5
Apr.	0.2	1,172.3	943.1	680.7	262.3	2.3	227.0	3.9	855.5	555.5	152.6	402.9	13.0	287.0
May	0.2	1,157.2	928.1	669.8	258.3	2.4	226.8	3.9	846.1	550.1	147.3	402.8	11.9	284.2
June	0.4	1,159.3	930.3	666.6	263.7	2.5	226.4	3.9	855.1	551.6	146.7	404.9	10.5	293.0
July	0.4	1,139.3	910.4	651.3	259.1	1.9	227.0	3.8	867.2	565.0	158.4	406.6	13.1	289.2
Aug.	0.4	1,125.9	899.8	647.9	251.8	1.6	224.5	3.7	867.4	566.7	158.7	407.9	15.3	285.5
Sep.	0.3	1,113.1	885.7	634.6	251.1	1.1	226.3	3.6	876.0	569.3	156.6	412.7	15.1	291.6
Oct.	0.3	1,166.7	940.5	672.2	268.2	0.9	225.3	3.5	878.0	579.6	164.1	415.5	17.7	280.6
Nov.	0.3	1,164.8	940.3	674.7	265.6	0.8	223.7	3.4	888.2	585.6	164.4	421.2	14.3	288.3
Dec.	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 Jan.	0.3	1,200.2	977.7	714.1	263.6	1.2	221.3	3.5	911.6	610.7	187.0	423.7	10.3	290.7
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
Changes *														
2013	− 0.5	− 22.7	− 26.9	− 1.3	− 25.6	+ 1.8	+ 2.4	− 0.0	− 21.2	− 33.1	− 5.8	− 27.2	− 0.7	+ 12.6
2014	− 0.0	+ 86.1	+ 80.1	+ 63.2	+ 16.8	+ 0.7	+ 5.3	− 0.6	+ 5.7	− 10.2	− 12.8	+ 2.7	− 1.8	+ 17.7
2015	+ 0.1	− 91.8	− 86.0	− 82.2	− 3.8	− 6.7	+ 0.8	− 0.1	− 6.1	− 9.2	− 6.5	− 2.7	+ 1.1	+ 2.0
2016	+ 0.0	− 25.5	− 14.5	− 38.2	+ 23.7	− 0.7	− 10.3	− 0.0	+ 17.4	+ 28.9	+ 10.1	+ 18.8	− 3.0	− 8.5
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
2021 Mar.	− 0.3	− 11.7	− 10.1	− 15.8	+ 5.6	+ 0.1	− 1.7	+ 0.0	+ 3.9	+ 4.9	+ 0.7	+ 4.1	− 2.8	+ 1.8
Apr.	− 0.0	+ 37.7	+ 40.7	+ 36.8	+ 3.9	− 0.1	− 2.9	+ 0.1	− 4.0	+ 0.6	+ 0.7	− 0.0	+ 1.1	− 5.6
May	+ 0.0	− 14.9	− 14.6	− 11.5	− 3.1	− 0.1	− 0.3	+ 0.0	− 7.7	− 4.2	− 4.4	+ 0.2	− 0.9	− 2.6
June	+ 0.2	− 4.1	− 3.7	− 6.3	+ 2.6	+ 0.1	− 0.5	− 0.0	+ 4.9	− 1.8	− 1.7	− 0.2	− 1.5	+ 8.2
July	+ 0.0	− 21.8	− 20.5	− 15.7	− 4.8	− 0.6	− 0.7	− 0.1	+ 12.9	+ 13.0	+ 11.7	+ 1.4	+ 2.6	− 2.8
Aug.	− 0.0	− 13.9	− 11.2	− 3.6	− 7.6	− 0.2	− 2.5	− 0.1	− 0.1	+ 1.4	+ 0.3	+ 1.1	+ 2.2	− 3.8
Sep.	− 0.1	− 18.7	− 19.8	− 17.0	− 2.9	− 0.6	+ 1.7	− 0.1	+ 10.0	+ 4.6	+ 1.2	+ 3.4	− 0.2	+ 5.6
Oct.	+ 0.0	+ 54.3	+ 55.5	+ 38.3	+ 17.3	− 0.1	− 1.1	− 0.1	+ 1.5	+ 9.9	+ 7.6	+ 2.3	+ 2.6	− 11.0
Nov.	− 0.0	− 5.7	− 3.9	+ 0.2	− 4.0	− 0.1	− 1.8	− 0.1	+ 5.4	+ 1.8	+ 1.1	+ 0.7	− 3.4	+ 7.1
Dec.	− 0.0	− 65.7	− 64.3	− 60.9	− 3.5	− 0.5	− 0.9	+ 0.0	− 17.8	− 14.0	− 12.7	− 1.4	− 6.3	+ 2.5
2022 Jan.	+ 0.1	+ 95.8	+ 96.6	+ 97.4	− 0.8	+ 0.8	− 1.7	+ 0.1	+ 37.7	+ 36.2	+ 34.8	+ 1.4	+ 2.3	− 0.7
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

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

IV. Banks

Memo item: Fiduciary loans	Participating interests in foreign banks and enterprises	Deposits of foreign banks (MFIs)						Deposits of foreign non-banks (non-MFIs)						Period
		Total	Sight deposits	Time deposits (including bank savings bonds)			Memo item: Fiduciary loans	Total	Sight deposits	Time deposits (including savings deposits and bank savings bonds)			Memo item: Fiduciary loans	
				Total	Short-term	Medium and long-term				Total	Short-term	Medium and long-term		
End of year or month *														
32.6	46.4	691.1	289.4	401.7	284.6	117.0	0.1	237.6	107.2	130.3	69.1	61.2	1.2	2012
30.8	39.0	515.7	222.6	293.2	196.0	97.2	0.1	257.8	118.1	139.7	76.8	62.9	1.0	2013
14.0	35.6	609.2	277.1	332.1	242.7	89.4	0.1	221.0	113.0	107.9	47.8	60.1	0.7	2014
13.1	30.5	611.9	323.4	288.5	203.8	84.7	0.1	201.1	102.6	98.5	49.3	49.2	0.7	2015
13.1	28.7	696.1	374.4	321.6	234.2	87.5	0.0	206.2	100.3	105.9	55.2	50.8	0.7	2016
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
11.3	16.6	991.5	520.2	471.3	319.5	151.8	–	288.9	147.8	141.1	73.7	67.4	0.1	2021 Mar.
11.3	16.5	1,008.7	522.1	486.6	343.1	143.5	–	295.8	150.7	145.0	81.0	64.1	0.1	Apr.
11.3	16.5	1,013.1	513.9	499.2	360.2	139.0	–	304.0	148.4	155.6	88.0	67.6	0.1	May
11.3	16.5	1,016.2	539.5	476.7	335.5	141.3	–	290.8	148.4	142.5	79.9	62.6	0.1	June
11.2	16.0	981.6	525.0	456.6	304.9	151.7	–	292.2	151.7	140.5	79.3	61.2	0.1	July
11.2	16.3	969.4	513.0	456.4	293.0	163.5	0.0	298.4	158.9	139.6	78.8	60.8	0.1	Aug.
11.2	16.3	1,003.9	528.2	475.8	315.7	160.1	–	306.0	164.0	142.0	81.5	60.4	0.1	Sep.
11.2	16.3	1,031.2	550.5	480.7	320.4	160.3	0.0	320.9	169.8	151.1	83.3	67.8	0.1	Oct.
11.3	16.4	1,068.2	565.4	502.8	335.0	167.9	0.0	315.5	171.3	144.2	75.5	68.7	0.1	Nov.
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	Dec.
11.1	16.1	1,098.5	635.9	462.7	321.8	140.8	0.0	339.9	177.2	162.7	82.1	80.5	0.1	2022 Jan.
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	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.
Changes *														
– 1.8	– 7.2	– 174.0	– 75.6	– 98.4	– 83.1	– 15.4	– 0.0	+ 13.5	+ 9.6	+ 3.9	+ 6.9	– 3.0	– 0.2	2013
+ 0.1	– 3.8	+ 76.3	+ 47.8	+ 28.5	+ 39.0	– 10.5	– 0.0	– 43.6	– 8.3	– 35.3	– 30.7	– 4.6	+ 0.2	2014
– 0.6	– 6.1	– 15.4	+ 40.6	– 56.0	– 48.6	– 7.4	– 0.0	– 26.5	– 13.9	– 12.6	+ 0.3	– 13.0	– 0.0	2015
– 0.1	– 1.5	+ 82.7	+ 51.0	+ 31.7	+ 27.0	+ 4.7	– 0.0	+ 3.5	– 3.1	+ 6.7	+ 5.9	+ 0.8	– 0.0	2016
– 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
+ 0.1	– 0.0	– 1.8	– 2.6	+ 0.8	– 1.1	+ 1.9	–	+ 3.2	+ 1.6	+ 1.6	+ 1.3	+ 0.3	+ 0.0	2021 Mar.
– 0.0	+ 0.0	+ 23.2	+ 4.3	+ 19.0	+ 26.8	– 7.8	–	+ 7.9	+ 3.7	+ 4.2	+ 7.3	– 3.0	+ 0.0	Apr.
+ 0.0	+ 0.0	+ 4.9	– 7.4	+ 12.2	+ 16.6	– 4.4	–	+ 8.6	– 2.2	+ 10.8	+ 7.2	+ 3.5	– 0.0	May
– 0.1	– 0.0	– 1.9	+ 23.7	– 25.6	– 27.4	+ 1.8	–	– 14.8	– 0.6	– 14.2	– 9.0	– 5.2	– 0.0	June
– 0.1	– 0.5	– 34.8	– 14.6	– 20.2	– 30.6	+ 10.4	–	+ 1.3	+ 2.9	– 1.6	– 0.3	– 1.3	+ 0.0	July
+ 0.0	+ 0.2	– 12.8	– 12.3	– 0.5	– 12.2	+ 11.7	+ 0.0	+ 5.7	+ 6.7	– 1.1	– 0.6	– 0.5	– 0.0	Aug.
– 0.0	+ 0.0	+ 30.5	+ 12.9	+ 17.6	+ 21.4	– 3.9	– 0.0	+ 6.7	+ 4.9	+ 1.7	+ 2.3	– 0.6	+ 0.0	Sep.
+ 0.0	+ 0.1	+ 27.9	+ 22.7	+ 5.2	+ 5.1	+ 0.2	+ 0.0	+ 14.7	+ 5.8	+ 9.0	+ 1.6	+ 7.4	– 0.0	Oct.
+ 0.0	+ 0.1	+ 32.3	+ 12.5	+ 19.9	+ 13.0	+ 6.9	–	– 6.3	+ 0.8	– 7.1	– 8.4	+ 1.3	– 0.0	Nov.
– 0.1	+ 0.2	– 155.0	–110.1	– 44.9	– 34.0	– 10.9	–	– 27.7	– 29.6	+ 1.9	– 7.0	+ 8.9	+ 0.0	Dec.
– 0.0	– 0.6	+ 180.8	+178.4	+ 2.4	+ 19.3	– 16.9	–	+ 50.8	+ 34.9	+ 16.0	+ 13.1	+ 2.9	–	2022 Jan.
+ 0.0	– 0.0	+ 33.4	+ 5.7	+ 27.8	+ 28.3	– 0.5	–	+ 21.2	+ 17.0	+ 4.2	+ 5.0	– 0.8	–	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.

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 *										
2012	3,220.4	2,786.1	376.1	316.8	316.3	0.5	59.3	57.6	1.7	2,844.3	2,310.9
2013	3,131.6	2,693.2	269.1	217.7	217.0	0.6	51.4	50.8	0.6	2,862.6	2,328.6
2014	3,167.3	2,712.6	257.5	212.7	212.1	0.6	44.8	44.7	0.1	2,909.8	2,376.8
2015	3,233.9	2,764.4	255.5	207.8	207.6	0.2	47.8	47.5	0.2	2,978.3	2,451.4
2016	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0
2017	3,332.6	2,894.4	241.7	210.9	210.6	0.3	30.7	30.3	0.4	3,090.9	2,640.0
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
2021 Mar.	3,699.1	3,287.7	261.3	236.6	236.0	0.6	24.7	18.6	6.1	3,437.8	3,048.6
Apr.	3,693.9	3,287.7	248.6	223.5	222.8	0.7	25.1	20.2	4.9	3,445.2	3,061.5
May	3,709.6	3,300.4	248.7	225.4	224.6	0.8	23.3	19.5	3.8	3,460.9	3,075.1
June	3,709.2	3,305.8	250.7	225.8	225.0	0.8	24.9	19.9	5.1	3,458.5	3,082.5
July	3,725.3	3,323.0	248.2	221.0	220.2	0.8	27.2	21.9	5.3	3,477.1	3,102.5
Aug.	3,736.4	3,332.9	245.0	221.1	220.4	0.7	23.9	18.9	4.9	3,491.5	3,116.8
Sep.	3,749.8	3,342.1	247.8	224.5	223.8	0.7	23.4	19.6	3.7	3,501.9	3,123.2
Oct.	3,770.2	3,367.1	256.5	232.5	231.9	0.6	24.0	19.5	4.4	3,513.7	3,142.9
Nov.	3,794.0	3,386.5	255.6	232.9	232.3	0.6	22.7	17.7	5.0	3,538.4	3,164.9
Dec.	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 Jan.	3,812.8	3,409.2	262.6	242.3	241.7	0.6	20.3	17.8	2.5	3,550.2	3,180.4
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.	3,976.2	3,574.4	305.0	287.3	286.4	0.8	17.7	14.7	3.1	3,671.1	3,314.3
	Changes *										
2013	+ 4.4	+ 0.1	– 13.8	– 5.8	– 6.3	+ 0.5	– 8.0	– 7.0	– 1.1	+ 18.2	+ 17.6
2014	+ 36.7	+ 20.5	– 11.6	– 4.5	– 4.5	– 0.0	– 7.1	– 6.5	– 0.6	+ 48.3	+ 52.5
2015	+ 68.9	+ 54.1	+ 1.6	– 1.3	– 0.9	– 0.4	+ 2.9	+ 2.8	+ 0.1	+ 67.2	+ 73.9
2016	+ 43.7	+ 62.7	– 5.2	– 0.3	– 0.4	+ 0.1	– 4.9	– 4.8	– 0.2	+ 48.9	+ 79.8
2017	+ 57.0	+ 70.2	– 6.5	+ 5.6	+ 5.6	+ 0.0	– 12.1	– 12.4	+ 0.3	+ 63.5	+ 103.4
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
2021 Mar.	+ 29.7	+ 25.6	+ 11.2	+ 12.5	+ 12.5	– 0.0	– 1.3	+ 0.0	– 1.4	+ 18.5	+ 16.3
Apr.	– 5.2	– 0.0	– 12.8	– 13.1	– 13.2	+ 0.1	+ 0.3	+ 1.6	– 1.2	+ 7.5	+ 13.0
May	+ 15.6	+ 12.5	+ 0.1	+ 1.8	+ 1.7	+ 0.1	– 1.8	– 0.6	– 1.2	+ 15.5	+ 13.4
June	– 0.4	+ 5.5	+ 2.0	+ 0.3	+ 0.4	– 0.1	+ 1.7	+ 0.4	+ 1.3	– 2.4	+ 7.3
July	+ 16.1	+ 17.2	– 2.0	– 4.2	– 4.3	+ 0.0	+ 2.3	+ 2.0	+ 0.3	+ 18.1	+ 19.5
Aug.	+ 10.9	+ 9.7	– 3.2	+ 0.1	+ 0.2	– 0.1	– 3.3	– 2.9	– 0.4	+ 14.1	+ 14.2
Sep.	+ 13.5	+ 9.3	+ 3.3	+ 3.7	+ 3.8	– 0.0	– 0.5	+ 0.7	– 1.2	+ 10.2	+ 6.2
Oct.	+ 20.5	+ 25.1	+ 8.7	+ 8.1	+ 8.2	– 0.1	+ 0.5	– 0.2	+ 0.7	+ 11.8	+ 19.8
Nov.	+ 25.5	+ 20.5	+ 1.2	+ 2.4	+ 2.4	+ 0.0	– 1.2	– 1.8	+ 0.6	+ 24.4	+ 19.9
Dec.	+ 4.3	+ 6.3	– 5.8	– 0.6	– 0.3	– 0.3	– 5.2	– 2.5	– 2.7	+ 10.1	+ 9.8
2022 Jan.	+ 14.7	+ 16.5	+ 12.9	+ 10.1	+ 9.8	+ 0.3	+ 2.8	+ 2.6	+ 0.2	+ 1.8	+ 5.8
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.	+ 31.1	+ 35.1	+ 13.7	+ 15.5	+ 15.5	+ 0.0	– 1.9	– 2.1	+ 0.3	+ 17.4	+ 20.8

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

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

IV. Banks

lending												
prises and households					to general government							
Loans						Loans						
Total	Medium-term	Long-term	Securities	Memo item: Fiduciary loans	Total	Total	Medium-term	Long-term	Securities [1]	Equalisation claims [2]	Memo item: Fiduciary loans	Period
End of year or month *												
2,119.5	249.7	1,869.8	191.4	31.4	533.4	292.7	39.4	253.3	240.7	–	3.5	2012
2,136.9	248.0	1,888.9	191.7	28.9	534.0	288.4	38.8	249.7	245.6	–	2.7	2013
2,172.7	251.7	1,921.0	204.2	24.4	532.9	283.1	33.5	249.6	249.8	–	2.1	2014
2,232.4	256.0	1,976.3	219.0	18.3	527.0	277.0	27.9	249.0	250.0	–	2.1	2015
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	2016
2,399.5	273.5	2,125.9	240.6	17.4	450.9	254.0	22.5	231.5	196.9	–	1.7	2017
2,499.4	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
2,802.4	314.5	2,487.9	246.1	23.1	389.3	230.7	15.2	215.5	158.6	–	1.1	2021 Mar.
2,813.9	313.6	2,500.3	247.6	23.4	383.7	230.8	15.0	215.8	153.0	–	1.1	Apr.
2,825.1	311.7	2,513.5	249.9	23.6	385.9	231.1	14.9	216.2	154.8	–	1.1	May
2,831.8	310.0	2,521.8	250.7	23.9	376.0	229.2	14.7	214.5	146.8	–	1.1	June
2,851.4	310.7	2,540.8	251.0	24.0	374.6	229.5	14.9	214.6	145.1	–	1.1	July
2,864.5	311.5	2,553.1	252.2	24.2	374.7	229.1	14.7	214.4	145.6	–	1.1	Aug.
2,870.0	310.1	2,559.9	253.2	24.2	378.7	228.7	14.3	214.4	150.1	–	1.0	Sep.
2,885.5	313.5	2,572.0	257.4	24.1	370.9	230.2	14.6	215.6	140.7	–	1.0	Oct.
2,906.5	315.6	2,590.9	258.4	24.2	373.5	230.0	14.5	215.6	143.5	–	1.0	Nov.
2,915.7	314.5	2,601.2	258.9	24.7	373.8	229.9	14.3	215.6	143.9	–	1.0	Dec.
2,920.6	312.8	2,607.8	259.8	24.7	369.8	229.1	13.9	215.2	140.7	–	1.0	2022 Jan.
2,935.4	313.8	2,621.6	259.9	24.6	363.8	228.5	13.9	214.5	135.4	–	1.1	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	356.8	228.7	13.5	215.2	128.0	–	1.0	Aug.
Changes *												
+ 17.7	– 0.1	+ 17.8	– 0.1	– 2.5	+ 0.6	– 4.3	– 0.7	– 3.6	+ 4.9	–	– 0.8	2013
+ 39.9	+ 5.6	+ 34.3	+ 12.5	– 1.8	– 4.1	– 8.5	– 5.1	– 3.4	+ 4.3	–	– 0.2	2014
+ 59.0	+ 4.5	+ 54.6	+ 14.8	– 2.1	– 6.6	– 6.9	– 4.8	– 2.0	+ 0.2	–	+ 0.0	2015
+ 75.1	+ 9.7	+ 65.4	+ 4.7	– 0.9	– 30.9	– 7.3	– 4.0	– 3.3	– 23.6	–	– 0.4	2016
+ 87.6	+ 9.4	+ 78.2	+ 15.8	+ 0.1	– 39.9	– 10.6	– 1.3	– 9.3	– 29.4	–	– 0.1	2017
+ 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
+ 14.4	+ 4.7	+ 9.7	+ 1.9	+ 0.3	+ 2.1	– 1.4	– 0.2	– 1.2	+ 3.5	–	– 0.0	2021 Mar.
+ 11.5	– 0.9	+ 12.4	+ 1.5	+ 0.2	– 5.5	+ 0.1	– 0.2	+ 0.3	– 5.6	–	– 0.0	Apr.
+ 11.0	– 1.9	+ 13.0	+ 2.3	+ 0.2	+ 2.1	+ 0.3	– 0.1	+ 0.4	+ 1.8	–	+ 0.0	May
+ 6.5	– 1.7	+ 8.2	+ 0.8	+ 0.3	– 9.7	– 1.8	– 0.2	– 1.5	– 7.9	–	– 0.0	June
+ 19.2	+ 0.2	+ 19.0	+ 0.3	+ 0.1	– 1.4	+ 0.3	+ 0.2	+ 0.1	– 1.7	–	– 0.0	July
+ 13.0	+ 0.8	+ 12.3	+ 1.2	+ 0.2	– 0.1	– 0.6	– 0.1	– 0.4	+ 0.5	–	– 0.0	Aug.
+ 5.2	– 1.4	+ 6.6	+ 1.0	– 0.0	+ 4.0	– 0.4	– 0.5	+ 0.0	+ 4.4	–	+ 0.0	Sep.
+ 15.6	+ 3.5	+ 12.1	+ 4.1	– 0.1	– 7.9	+ 1.4	+ 0.3	+ 1.1	– 9.4	–	– 0.0	Oct.
+ 18.9	+ 4.4	+ 14.5	+ 1.0	+ 0.1	+ 4.4	+ 0.9	– 0.1	+ 1.0	+ 3.5	–	– 0.0	Nov.
+ 9.3	– 1.1	+ 10.4	+ 0.5	+ 0.5	+ 0.2	– 0.1	– 0.1	+ 0.0	+ 0.4	–	+ 0.0	Dec.
+ 4.9	– 1.7	+ 6.6	+ 0.8	– 0.0	– 4.0	– 0.8	– 0.4	– 0.4	– 3.2	–	– 0.0	2022 Jan.
+ 14.8	+ 1.0	+ 13.8	+ 0.1	+ 0.0	– 6.0	– 0.7	– 0.0	– 0.6	– 5.3	–	– 0.0	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	– 3.4	– 0.2	– 0.0	– 0.2	– 3.2	–	+ 0.0	Aug.

IV. Banks

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

€ billion

Period	Lending to domestic enterprises and households (excluding holdings of negotiable money market paper and excluding securities portfolios) [1]														
		of which:				Lending to enterprises and self-employed persons									
			Housing loans												
	Total	Mortgage loans, total	Total	Mortgage loans secured by residential real estate	Other housing loans	Total	of which: Housing loans	Manufacturing	Electricity, gas and water supply; refuse disposal, mining and quarrying	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Agriculture, forestry, fishing and aquaculture	Transportation and storage; post and telecommunications	Financial intermediation (excluding MFIs) and insurance companies
Lending, total															**End of year or quarter ***
2020	2,993.0	1,601.8	1,565.6	1,285.1	280.5	1,623.4	443.3	146.7	123.4	82.7	135.8	55.3	59.8	176.0
2021 June	3,056.8	1,634.6	1,619.5	1,316.7	302.8	1,654.3	461.4	142.5	122.1	85.7	135.5	56.0	57.9	182.6
Sep.	3,093.7	1,653.1	1,648.9	1,337.4	311.4	1,666.9	467.9	143.9	122.2	87.7	136.7	56.2	56.3	182.6
Dec.	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 Mar.	3,204.0	1,613.7	1,701.0	1,391.9	309.0	1,742.4	485.1	150.9	134.3	101.3	145.3	56.3	54.9	193.2
June	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
Short-term lending															
2020	221.2	–	8.0	–	8.0	192.1	4.6	29.0	6.9	16.0	37.0	3.6	6.1	31.6
2021 June	225.0	–	7.8	–	7.8	195.9	4.5	28.8	5.5	16.7	34.7	4.2	4.4	34.4
Sep.	223.8	–	7.8	–	7.8	193.7	4.4	30.4	5.1	17.1	35.6	4.0	4.1	34.1
Dec.	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 Mar.	254.0	–	7.0	–	7.0	224.1	4.5	36.5	14.0	19.5	39.3	3.6	4.1	38.0
June	270.5	–	7.0	–	7.0	239.5	4.6	44.7	11.6	20.1	42.2	3.9	4.3	42.2
Medium-term lending															
2020	310.5	–	38.5	–	38.5	230.4	18.5	30.2	5.4	14.8	19.3	4.8	15.0	51.4
2021 June	310.0	–	39.7	–	39.7	232.8	19.8	27.7	5.0	15.3	19.5	4.5	14.1	51.2
Sep.	310.1	–	40.2	–	40.2	233.3	20.2	27.8	5.2	15.8	19.3	4.5	12.3	51.7
Dec.	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 Mar.	316.1	–	40.8	–	40.8	242.2	21.0	28.9	5.6	20.0	22.0	4.2	11.7	53.1
June	322.2	–	42.0	–	42.0	249.2	22.2	29.1	5.8	21.0	22.3	4.3	13.3	53.7
Long-term lending															
2020	2,461.4	1,601.8	1,519.1	1,285.1	234.0	1,201.0	420.2	87.5	111.2	51.8	79.4	47.0	38.7	93.0
2021 June	2,521.8	1,634.6	1,572.0	1,316.7	255.3	1,225.5	437.2	86.0	111.6	53.7	81.3	47.3	39.4	97.0
Sep.	2,559.9	1,653.1	1,600.9	1,337.4	263.5	1,240.0	443.4	85.6	111.9	54.9	81.8	47.7	39.9	96.8
Dec.	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 Mar.	2,633.9	1,613.7	1,653.1	1,391.9	261.2	1,276.0	459.6	85.5	114.8	61.8	84.0	48.4	39.2	102.1
June	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
Lending, total															**Change during quarter ***
2021 Q2	+ 17.9	+ 20.9	+ 30.7	+ 21.0	+ 9.7	– 3.2	+ 9.6	– 6.7	– 0.9	+ 1.1	– 3.7	+ 0.6	– 2.2	– 0.0
Q3	+ 37.1	+ 18.5	+ 29.1	+ 19.7	+ 9.4	+ 12.7	+ 6.3	+ 1.4	+ 0.1	+ 2.0	+ 0.5	+ 0.1	– 1.7	+ 1.0
Q4	+ 54.1	+ 18.0	+ 28.6	+ 18.9	+ 9.7	+ 34.9	+ 9.0	+ 2.2	+ 5.9	+ 1.5	+ 3.7	– 0.2	– 0.6	+ 3.7
2022 Q1	+ 57.9	+ 17.9	+ 22.0	+ 16.6	+ 5.3	+ 42.0	+ 7.0	+ 4.8	+ 6.3	+ 3.2	+ 4.7	+ 0.4	– 1.1	+ 8.9
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
Short-term lending															
2021 Q2	– 11.1	–	– 0.2	–	– 0.2	– 11.6	– 0.2	– 4.6	– 0.9	– 0.1	– 4.2	+ 0.4	– 1.7	+ 0.2
Q3	– 0.3	–	– 0.1	–	– 0.1	– 1.3	– 0.1	+ 1.7	– 0.4	+ 0.4	+ 0.6	– 0.2	– 0.3	– 0.3
Q4	+ 10.3	–	– 0.2	–	– 0.2	+ 10.5	+ 0.0	+ 1.1	+ 3.9	+ 1.0	+ 0.9	– 0.6	– 0.2	+ 1.0
2022 Q1	+ 23.5	–	+ 0.1	–	+ 0.1	+ 22.7	+ 0.1	+ 4.9	+ 4.9	+ 1.6	+ 2.9	+ 0.3	+ 0.2	+ 4.4
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
Medium-term lending															
2021 Q2	– 4.5	–	+ 0.8	–	+ 0.8	– 3.5	+ 0.7	– 1.5	– 0.1	+ 0.0	– 0.3	– 0.1	– 0.6	– 1.8
Q3	– 0.4	–	+ 0.6	–	+ 0.6	– 0.1	+ 0.4	+ 0.1	+ 0.2	+ 0.5	– 0.6	+ 0.0	– 1.8	+ 0.7
Q4	+ 6.8	–	+ 0.4	–	+ 0.4	+ 8.0	+ 0.5	+ 0.5	+ 0.2	+ 3.5	+ 1.6	– 0.1	+ 0.0	+ 0.5
2022 Q1	+ 1.7	–	+ 0.3	–	+ 0.3	+ 2.7	+ 0.4	+ 0.5	+ 0.3	+ 0.7	+ 1.2	– 0.0	– 0.7	+ 1.2
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
Long-term lending															
2021 Q2	+ 33.6	+ 20.9	+ 30.2	+ 21.0	+ 9.1	+ 12.0	+ 9.1	– 0.7	+ 0.1	+ 1.1	+ 0.7	+ 0.3	+ 0.2	+ 1.5
Q3	+ 37.8	+ 18.5	+ 28.6	+ 19.7	+ 8.9	+ 14.1	+ 6.0	– 0.4	+ 0.3	+ 1.1	+ 0.5	+ 0.2	+ 0.5	+ 0.6
Q4	+ 37.0	+ 18.0	+ 28.4	+ 18.9	+ 9.5	+ 16.4	+ 8.4	+ 0.6	+ 1.8	– 3.0	+ 1.2	+ 0.6	– 0.5	+ 2.2
2022 Q1	+ 32.7	+ 17.9	+ 21.5	+ 16.6	+ 4.9	+ 16.5	+ 6.5	– 0.7	+ 1.1	+ 0.9	+ 0.7	+ 0.1	– 0.6	+ 3.4
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

* 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, are

IV. Banks

Lending to employees and other individuals												Lending to non-profit institutions		
Services sector (including the professions)				Memo items:				Other lending						
	of which:								of which:					
Total	Housing enterprises	Holding companies	Other real estate activities	Lending to self-employed persons [2]	Lending to craft enterprises	Total	Housing loans	Total	Instalment loans [3]	Debit balances on wage, salary and pension accounts	Total	of which: Housing loans	Period
End of year or quarter *													**Lending, total**	
843.7	286.6	53.8	204.1	464.0	47.9	1,353.4	1,118.3	235.2	177.4	6.7	16.2	4.0	2020
872.0	296.9	58.2	208.6	473.6	48.7	1,386.3	1,154.0	232.4	174.8	6.6	16.2	4.1	2021 June
881.4	304.0	57.5	210.5	478.3	48.9	1,410.5	1,176.6	233.9	176.4	7.0	16.3	4.3	Sep.
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	Dec.
906.2	315.6	66.2	209.8	489.1	49.1	1,444.9	1,211.4	233.5	184.4	7.1	16.8	4.4	2022 Mar.
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	June
												Short-term lending	
61.9	15.7	9.6	10.5	20.9	3.7	28.6	3.4	25.2	1.3	6.7	0.6	0.0	2020
67.1	16.0	11.5	10.4	21.0	4.1	28.6	3.4	25.2	1.4	6.6	0.5	0.0	2021 June
63.3	16.9	10.3	9.8	20.5	4.3	29.6	3.4	26.2	1.5	7.0	0.5	0.0	Sep.
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	Dec.
69.2	15.3	14.0	10.5	20.3	4.4	29.2	2.5	26.7	1.6	7.1	0.7	0.0	2022 Mar.
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	June
												Medium-term lending	
89.6	20.4	11.8	24.5	32.0	3.5	79.6	20.0	59.6	56.1	–	0.5	0.0	2020
95.7	22.2	14.4	26.4	31.3	3.4	76.7	19.8	56.9	53.1	–	0.5	0.0	2021 June
96.7	23.2	13.8	27.4	31.1	3.4	76.3	20.0	56.3	52.4	–	0.6	0.1	Sep.
97.0	23.1	15.2	27.1	30.0	3.3	74.4	19.8	54.6	50.6	–	0.6	0.1	Dec.
96.8	22.8	15.5	27.2	30.0	3.2	73.4	19.7	53.7	49.6	–	0.5	0.1	2022 Mar.
99.8	24.1	17.1	26.6	29.9	3.2	72.5	19.8	52.7	48.6	–	0.5	0.1	June
												Long-term lending	
692.3	250.5	32.4	169.1	411.1	40.7	1,245.3	1,094.9	150.4	120.0	–	15.1	4.0	2020
709.2	258.7	32.3	171.8	421.3	41.1	1,281.1	1,130.8	150.3	120.3	–	15.2	4.1	2021 June
721.3	263.9	33.3	173.3	426.7	41.2	1,304.7	1,153.3	151.4	122.6	–	15.3	4.2	Sep.
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	Dec.
740.2	277.5	36.8	172.1	438.8	41.4	1,342.3	1,189.2	153.1	133.2	–	15.6	4.4	2022 Mar.
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	June
Change during quarter *													**Lending, total**	
+ 8.7	+ 3.2	– 0.9	+ 4.3	+ 5.8	+ 0.4	+ 21.3	+ 21.1	+ 0.2	– 0.4	– 0.1	– 0.2	+ 0.0	2021 Q2
+ 9.4	+ 6.5	– 0.8	+ 1.7	+ 4.2	+ 0.2	+ 24.3	+ 22.7	+ 1.6	+ 1.1	+ 0.5	+ 0.1	+ 0.1	Q3
+ 18.8	+ 7.3	+ 4.2	+ 2.8	+ 5.2	– 0.6	+ 18.8	+ 19.6	– 0.7	– 0.1	– 0.2	+ 0.4	+ 0.1	Q4
+ 14.9	+ 6.7	+ 2.4	+ 1.7	+ 5.0	+ 0.7	+ 15.8	+ 14.9	+ 0.9	+ 0.5	+ 0.2	+ 0.1	+ 0.0	2022 Q1
+ 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	Q2
												Short-term lending	
– 0.8	– 0.5	– 0.8	+ 0.2	+ 0.5	+ 0.2	+ 0.6	+ 0.0	+ 0.6	+ 0.1	– 0.1	– 0.1	+ 0.0	2021 Q2
– 2.7	+ 0.9	– 1.2	– 0.6	– 0.5	+ 0.2	+ 1.0	+ 0.0	+ 1.0	+ 0.1	+ 0.5	– 0.0	+ 0.0	Q3
+ 3.4	– 1.1	+ 2.5	+ 0.5	– 0.6	– 0.5	– 0.3	– 0.2	– 0.1	– 0.0	– 0.2	+ 0.1	+ 0.0	Q4
+ 3.6	+ 0.8	+ 0.9	+ 0.5	+ 0.6	+ 0.7	+ 0.6	+ 0.0	+ 0.6	+ 0.2	+ 0.2	+ 0.1	+ 0.0	2022 Q1
+ 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	Q2
												Medium-term lending	
+ 0.8	+ 0.3	– 0.0	+ 1.2	– 0.2	– 0.2	– 0.9	+ 0.1	– 1.0	– 1.1	–	– 0.1	+ 0.0	2021 Q2
+ 0.8	+ 0.8	– 0.5	+ 0.9	– 0.2	– 0.1	– 0.4	+ 0.2	– 0.6	– 0.7	–	+ 0.1	+ 0.0	Q3
+ 1.7	+ 1.3	+ 1.4	– 0.4	– 0.4	– 0.1	– 1.3	– 0.1	– 1.1	– 1.3	–	+ 0.0	+ 0.0	Q4
– 0.3	– 0.3	+ 0.2	+ 0.1	– 0.1	– 0.1	– 1.0	– 0.1	– 0.9	– 0.9	–	– 0.1	– 0.0	2022 Q1
+ 3.0	+ 1.3	+ 1.6	– 0.6	– 0.1	– 0.0	– 0.9	+ 0.1	– 1.0	– 1.1	–	+ 0.0	– 0.0	Q2
												Long-term lending	
+ 8.8	+ 3.4	– 0.1	+ 2.9	+ 5.5	+ 0.3	+ 21.6	+ 21.0	+ 0.6	+ 0.6	–	– 0.0	+ 0.0	2021 Q2
+ 11.3	+ 4.7	+ 1.0	+ 1.3	+ 4.9	+ 0.1	+ 23.6	+ 22.5	+ 1.2	+ 1.7	–	+ 0.1	+ 0.1	Q3
+ 13.6	+ 7.2	+ 0.4	+ 2.7	+ 6.2	+ 0.1	+ 20.4	+ 19.9	+ 0.5	+ 1.2	–	+ 0.3	+ 0.1	Q4
+ 11.5	+ 6.3	+ 1.2	+ 1.1	+ 4.5	+ 0.1	+ 16.2	+ 15.0	+ 1.2	+ 1.3	–	+ 0.0	+ 0.0	2022 Q1
+ 10.0	+ 5.5	+ 0.3	+ 1.8	+ 5.4	+ 0.3	+ 22.0	+ 20.8	+ 1.3	+ 1.4	–	+ 0.1	+ 0.1	Q2

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 ***
2019	3,661.0	2,236.3	816.2	202.7	613.5	52.7	560.8	575.2	33.2	32.5	14.7	0.2
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
2021 Sep.	3,960.3	2,647.9	726.1	152.7	573.5	47.8	525.7	560.7	25.5	34.1	14.4	1.6
Oct.	3,989.1	2,664.3	739.3	163.6	575.7	49.1	526.6	560.1	25.3	33.9	15.3	1.4
Nov.	4,002.4	2,685.9	731.8	157.1	574.7	49.9	524.8	559.9	24.8	33.6	15.3	0.9
Dec.	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 Jan.	4,025.9	2,690.9	750.0	175.9	574.1	49.5	524.6	560.8	24.2	33.9	17.1	1.1
Feb.	4,037.8	2,704.5	748.5	175.5	573.0	48.7	524.3	560.9	23.9	33.8	17.1	1.2
Mar.	4,033.7	2,695.6	755.2	183.4	571.7	49.2	522.5	559.0	23.9	33.8	17.2	1.6
Apr.	4,046.7	2,705.6	759.4	189.8	569.6	50.1	519.5	557.9	23.8	33.8	17.3	1.1
May	4,056.8	2,724.3	752.1	183.3	568.7	51.2	517.5	556.6	23.8	33.6	17.1	0.8
June	4,051.8	2,714.4	758.8	194.7	564.1	49.0	515.1	554.8	23.8	33.4	17.2	0.7
July	4,086.4	2,729.0	780.4	213.7	566.7	50.9	515.8	553.0	24.1	33.0	17.3	1.2
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
											Changes *
2020	+ 221.6	+ 273.7	− 32.7	− 15.0	− 17.7	− 4.8	− 12.9	− 14.5	− 4.9	+ 1.9	− 0.3	− 0.1
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
2021 Sep.	− 6.7	− 5.4	− 0.3	+ 2.1	− 2.4	− 0.6	− 1.8	− 0.8	− 0.2	− 0.2	+ 0.1	+ 0.2
Oct.	+ 28.8	+ 16.4	+ 13.2	+ 11.0	+ 2.2	+ 1.3	+ 0.9	− 0.6	− 0.2	− 0.2	+ 1.0	− 0.2
Nov.	+ 13.3	+ 21.5	− 7.6	− 6.4	− 1.2	+ 0.8	− 2.0	− 0.2	− 0.3	− 0.3	+ 0.0	− 0.6
Dec.	− 25.9	− 31.2	+ 4.1	+ 3.9	+ 0.2	− 0.2	+ 0.4	+ 1.4	− 0.2	+ 0.6	+ 1.8	+ 0.4
2022 Jan.	+ 49.6	+ 36.3	+ 14.1	+ 15.0	− 0.9	− 0.2	− 0.7	− 0.4	− 0.4	− 0.3	− 0.0	− 0.2
Feb.	+ 11.9	+ 13.6	− 1.6	− 0.4	− 1.2	− 0.8	− 0.3	+ 0.1	− 0.2	− 0.2	+ 0.1	+ 0.2
Mar.	− 4.1	− 9.0	+ 6.6	+ 7.9	− 1.3	+ 0.5	− 1.8	− 1.8	+ 0.0	−	+ 0.0	+ 0.3
Apr.	+ 13.0	+ 9.5	+ 4.2	+ 6.4	− 2.2	+ 0.8	− 3.0	− 0.6	− 0.1	+ 0.0	+ 0.1	− 0.5
May	+ 10.1	+ 18.8	− 7.3	− 6.5	− 0.9	+ 1.1	− 2.0	− 1.3	+ 0.0	− 0.2	− 0.1	− 0.2
June	− 5.0	− 9.9	+ 6.7	+ 11.3	− 4.6	− 2.2	− 2.5	− 1.8	− 0.0	− 0.1	+ 0.1	− 0.1
July	+ 33.5	+ 14.3	+ 20.7	+ 18.5	+ 2.2	+ 1.6	+ 0.6	− 1.8	+ 0.3	− 0.5	+ 0.1	+ 0.5
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
	Domestic government										**End of year or month ***
2019	237.1	74.7	154.9	76.0	78.9	26.1	52.8	3.4	4.1	24.7	2.2	0.2
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
2021 Sep.	210.8	84.8	120.1	42.2	78.0	20.8	57.2	2.5	3.4	25.2	2.0	−
Oct.	213.9	85.2	122.9	43.5	79.5	22.2	57.3	2.5	3.3	25.2	2.0	−
Nov.	213.7	86.1	121.8	41.4	80.4	23.5	56.9	2.5	3.3	25.1	2.0	−
Dec.	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 Jan.	233.5	88.5	139.2	59.2	80.0	24.0	56.0	2.5	3.3	25.5	2.0	−
Feb.	237.9	91.4	140.7	61.0	79.7	23.7	56.0	2.5	3.3	25.5	2.0	−
Mar.	241.0	85.2	150.0	69.7	80.3	24.4	56.0	2.4	3.4	25.5	2.0	−
Apr.	243.7	86.2	151.8	70.8	80.9	25.0	55.9	2.4	3.4	25.6	2.0	−
May	255.6	91.4	158.4	76.1	82.2	25.9	56.3	2.4	3.4	25.6	2.0	−
June	254.9	84.8	164.2	84.6	79.7	23.3	56.3	2.4	3.5	25.4	2.0	−
July	258.3	78.0	174.5	93.0	81.5	24.6	57.0	2.4	3.4	25.4	1.9	−
Aug.	272.6	89.1	177.8	96.2	81.5	24.8	56.7	2.4	3.4	25.5	1.9	−
											Changes *
2020	− 6.9	+ 5.7	− 11.6	− 16.5	+ 4.8	− 5.3	+ 10.1	− 0.6	− 0.4	+ 0.7	− 0.1	− 0.2
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
2021 Sep.	+ 4.3	+ 1.8	+ 2.6	+ 3.2	− 0.7	− 0.4	− 0.3	− 0.1	− 0.0	− 0.1	− 0.0	−
Oct.	+ 3.1	+ 0.4	+ 2.9	+ 1.3	+ 1.6	+ 1.4	+ 0.2	− 0.0	− 0.0	+ 0.0	− 0.0	−
Nov.	− 0.1	+ 0.9	− 1.0	− 2.1	+ 1.1	+ 1.3	− 0.3	− 0.0	+ 0.0	− 0.1	+ 0.0	−
Dec.	− 3.6	− 3.7	+ 0.0	+ 0.6	− 0.6	+ 0.3	− 0.8	+ 0.0	− 0.0	+ 0.7	+ 0.0	+ 1.0
2022 Jan.	+ 23.4	+ 6.1	+ 17.4	+ 17.3	+ 0.1	+ 0.2	− 0.1	− 0.0	−	− 0.3	− 0.0	− 1.0
Feb.	+ 4.3	+ 2.9	+ 1.4	+ 1.7	− 0.3	− 0.2	− 0.1	− 0.0	− 0.0	+ 0.0	+ 0.0	−
Mar.	+ 3.2	− 6.2	+ 9.4	+ 8.7	+ 0.7	+ 0.6	+ 0.1	− 0.0	+ 0.1	− 0.0	− 0.0	−
Apr.	+ 2.7	+ 1.0	+ 1.7	+ 1.1	+ 0.6	+ 0.6	− 0.0	− 0.0	+ 0.0	+ 0.1	+ 0.0	−
May	+ 11.5	+ 5.2	+ 6.2	+ 5.2	+ 1.0	+ 0.9	+ 0.1	− 0.0	+ 0.1	− 0.0	− 0.0	−
June	− 0.7	− 6.6	+ 5.9	+ 8.5	− 2.6	− 2.6	− 0.0	− 0.0	+ 0.0	− 0.2	− 0.0	−
July	+ 3.5	− 6.7	+ 10.3	+ 8.4	+ 1.9	+ 1.2	+ 0.6	− 0.0	− 0.1	− 0.0	− 0.1	−
Aug.	+ 14.3	+ 11.1	+ 3.2	+ 3.2	− 0.0	+ 0.2	− 0.3	− 0.0	+ 0.0	+ 0.1	+ 0.0	−

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

1 Including subordinated liabilities and liabilities arising from registered debt securities. **2** Including deposits under savings and loan contracts (see 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 ***
2019	3,423.9	2,161.6	661.4	126.7	534.7	26.6	508.0	571.8	29.1	7.8	12.6	0.0
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
2021 Sep.	3,749.4	2,563.1	606.0	110.5	495.5	27.0	468.5	558.2	22.1	8.9	12.4	1.6
Oct.	3,775.1	2,579.2	616.4	120.2	496.2	27.0	469.3	557.6	22.0	8.7	13.4	1.4
Nov.	3,788.6	2,599.8	610.0	115.7	494.3	26.3	467.9	557.4	21.4	8.5	13.3	0.9
Dec.	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 Jan.	3,792.4	2,602.4	610.8	116.6	494.1	25.5	468.6	558.3	20.8	8.4	15.0	1.1
Feb.	3,799.9	2,613.1	607.8	114.5	493.3	24.9	468.3	558.4	20.6	8.2	15.1	1.2
Mar.	3,792.7	2,610.4	605.1	113.7	491.4	24.8	466.6	556.6	20.5	8.2	15.2	1.6
Apr.	3,802.9	2,619.4	607.6	119.0	488.6	25.1	463.6	555.5	20.4	8.2	15.2	1.1
May	3,801.2	2,632.9	593.7	107.2	486.5	25.3	461.2	554.2	20.4	8.0	15.1	0.8
June	3,796.9	2,629.7	594.5	110.1	484.4	25.6	458.8	552.4	20.3	8.0	15.2	0.7
July	3,828.1	2,650.9	605.9	120.7	485.2	26.3	458.9	550.6	20.7	7.6	15.4	1.2
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
												Changes *
2020	+ 228.5	+ 268.0	− 21.1	+ 1.5	− 22.6	+ 0.5	− 23.0	− 13.9	− 4.6	+ 1.2	− 0.2	+ 0.1
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
2021 Sep.	− 11.0	− 7.2	− 2.9	− 1.1	− 1.7	− 0.2	− 1.5	− 0.8	− 0.1	− 0.2	+ 0.1	+ 0.2
Oct.	+ 25.7	+ 16.0	+ 10.3	+ 9.7	+ 0.7	− 0.0	+ 0.7	− 0.6	− 0.2	− 0.2	+ 1.0	− 0.2
Nov.	+ 13.5	+ 20.6	− 6.6	− 4.3	− 2.3	− 0.6	− 1.7	− 0.2	− 0.3	− 0.2	− 0.0	− 0.6
Dec.	− 22.3	− 27.5	+ 4.1	+ 3.3	+ 0.8	− 0.5	+ 1.2	+ 1.3	− 0.2	− 0.1	+ 1.8	− 0.6
2022 Jan.	+ 26.2	+ 30.2	− 3.3	− 2.3	− 1.0	− 0.4	− 0.6	− 0.4	− 0.4	+ 0.0	− 0.0	+ 0.8
Feb.	+ 7.5	+ 10.7	− 3.0	− 2.1	− 0.9	− 0.6	− 0.3	+ 0.1	− 0.2	− 0.2	+ 0.0	+ 0.2
Mar.	− 7.4	− 2.7	− 2.8	− 0.8	− 2.0	− 0.1	− 1.9	− 1.8	− 0.1	+ 0.0	+ 0.0	+ 0.3
Apr.	+ 10.3	+ 8.5	+ 2.5	+ 5.3	− 2.8	+ 0.2	− 3.0	− 0.6	− 0.1	− 0.1	+ 0.1	− 0.5
May	− 1.4	+ 13.5	− 13.6	− 11.7	− 1.9	+ 0.2	− 2.1	− 1.3	− 0.0	− 0.2	− 0.1	− 0.2
June	− 4.2	− 3.2	+ 0.8	+ 2.9	− 2.1	+ 0.4	− 2.4	− 1.8	− 0.0	+ 0.0	+ 0.1	− 0.1
July	+ 30.0	+ 21.0	+ 10.4	+ 10.1	+ 0.3	+ 0.4	− 0.1	− 1.8	+ 0.4	− 0.5	+ 0.2	+ 0.5
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
of which: Domestic enterprises												**End of year or month ***
2019	1,031.5	614.4	399.7	81.1	318.6	15.5	303.1	6.7	10.7	2.4	10.1	0.0
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
2021 Sep.	1,141.4	772.1	355.1	78.1	277.0	15.5	261.5	5.7	8.5	2.3	9.6	1.6
Oct.	1,160.1	779.7	366.3	88.4	277.9	15.6	262.3	5.7	8.4	2.3	10.6	1.4
Nov.	1,166.2	791.7	361.1	84.3	276.7	15.5	261.3	5.5	8.0	2.3	10.5	0.9
Dec.	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 Jan.	1,170.4	795.8	361.6	85.3	276.4	15.9	260.4	5.1	7.8	2.4	12.2	1.1
Feb.	1,165.1	793.2	359.0	83.4	275.6	15.4	260.2	5.2	7.8	2.2	12.2	1.2
Mar.	1,171.9	802.1	356.9	82.7	274.2	15.5	258.7	5.2	7.8	2.3	12.3	1.6
Apr.	1,165.3	792.4	360.0	88.0	272.0	16.0	256.1	5.2	7.7	2.3	12.4	1.1
May	1,165.6	806.0	346.7	76.4	270.4	16.3	254.1	5.1	7.7	2.3	12.3	0.8
June	1,158.9	798.2	347.9	78.6	269.3	16.9	252.3	5.1	7.7	2.3	12.4	0.7
July	1,168.8	797.0	358.8	88.5	270.3	17.5	252.8	5.1	7.9	1.9	12.5	1.2
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
												Changes *
2020	+ 81.0	+ 101.2	− 18.0	+ 7.0	− 25.0	− 0.4	− 24.6	− 0.8	− 1.3	− 0.0	− 0.5	+ 0.1
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
2021 Sep.	− 5.4	− 2.5	− 2.9	− 1.1	− 1.8	− 0.1	− 1.6	+ 0.0	− 0.0	+ 0.0	+ 0.0	+ 0.2
Oct.	+ 18.7	+ 7.7	+ 11.1	+ 10.2	+ 0.8	+ 0.1	+ 0.7	− 0.1	− 0.0	− 0.0	+ 1.0	− 0.2
Nov.	+ 6.1	+ 11.9	− 5.4	− 3.9	− 1.5	− 0.1	− 1.4	− 0.2	− 0.2	+ 0.0	− 0.0	− 0.6
Dec.	− 23.4	− 26.5	+ 3.3	+ 3.1	+ 0.2	+ 0.3	− 0.1	− 0.2	− 0.0	+ 0.0	+ 1.8	− 0.6
2022 Jan.	+ 27.8	+ 30.8	− 2.6	− 2.1	− 0.5	+ 0.1	− 0.7	− 0.2	− 0.2	+ 0.0	− 0.1	+ 0.8
Feb.	− 5.3	− 2.6	− 2.7	− 1.9	− 0.7	− 0.5	− 0.3	+ 0.0	− 0.0	− 0.1	+ 0.0	+ 0.2
Mar.	+ 6.6	+ 8.8	− 2.2	− 0.7	− 1.5	+ 0.0	− 1.6	+ 0.0	+ 0.0	+ 0.0	+ 0.0	+ 0.3
Apr.	− 6.6	− 9.6	+ 3.2	+ 5.4	− 2.2	+ 0.4	− 2.6	− 0.0	− 0.1	+ 0.0	+ 0.1	− 0.5
May	− 0.5	+ 12.6	− 13.0	− 11.7	− 1.4	+ 0.3	− 1.7	− 0.0	+ 0.0	− 0.0	− 0.1	− 0.2
June	− 6.7	− 7.8	+ 1.2	+ 2.2	− 1.1	+ 0.6	− 1.7	− 0.0	− 0.0	+ 0.1	+ 0.1	− 0.1
July	+ 8.8	− 1.4	+ 10.0	+ 9.3	+ 0.7	+ 0.4	+ 0.3	+ 0.0	+ 0.2	− 0.4	+ 0.2	+ 0.5
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

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 *										
2019	2,392.4	1,547.2	1,507.9	266.3	1,081.6	160.1	39.3	261.7	248.3	20.8	190.2	37.3
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 Mar.	2,620.8	1,808.3	1,761.9	303.6	1,296.3	162.0	46.4	248.3	236.3	18.6	182.9	34.9
Apr.	2,637.6	1,827.0	1,780.5	309.6	1,308.1	162.8	46.4	247.6	235.9	18.6	182.5	34.9
May	2,635.6	1,827.0	1,780.3	311.6	1,308.0	160.8	46.7	247.0	235.0	18.6	181.8	34.6
June	2,638.0	1,831.5	1,784.9	308.1	1,316.2	160.7	46.6	246.6	234.4	19.0	181.0	34.4
July	2,659.3	1,853.9	1,807.6	317.0	1,328.2	162.4	46.3	247.1	234.8	19.3	181.0	34.4
Aug.	2,656.3	1,850.8	1,803.8	320.0	1,323.2	160.5	47.0	248.8	235.7	19.8	181.7	34.1
	Changes *											
2020	+ 147.5	+ 166.9	+ 165.0	+ 26.0	+ 131.5	+ 7.5	+ 1.8	− 3.1	− 3.2	− 1.5	− 1.6	− 0.2
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 Mar.	− 14.0	− 11.6	− 12.4	− 6.8	− 3.3	− 2.3	+ 0.8	− 0.5	− 0.5	+ 0.2	− 0.5	− 0.2
Apr.	+ 16.8	+ 18.2	+ 18.2	+ 6.0	+ 11.4	+ 0.8	+ 0.0	− 0.7	− 0.4	+ 0.0	− 0.4	+ 0.0
May	− 0.9	+ 1.0	+ 0.8	+ 2.0	− 0.2	− 1.1	+ 0.2	− 0.6	− 0.9	−	− 0.6	− 0.3
June	+ 2.4	+ 4.5	+ 4.6	− 3.5	+ 8.2	− 0.1	− 0.1	− 0.3	− 0.6	+ 0.4	− 0.9	− 0.1
July	+ 21.3	+ 22.4	+ 22.7	+ 8.9	+ 12.5	+ 1.2	− 0.3	+ 0.4	+ 0.3	+ 0.3	+ 0.1	− 0.1
Aug.	− 2.8	− 3.2	− 3.9	+ 3.0	− 5.1	− 1.9	+ 0.7	+ 2.0	+ 1.2	+ 0.5	+ 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 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 *												
2019	237.1	11.2	5.4	1.5	4.2	0.1	11.6	53.8	21.1	17.1	14.5	1.0	13.1
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 Mar.	241.0	42.1	4.9	1.2	36.0	0.1	11.7	61.7	23.5	26.1	11.6	0.5	13.8
Apr.	243.7	42.2	5.1	1.1	36.0	0.1	11.7	60.7	21.9	26.9	11.4	0.5	13.8
May	255.6	42.8	5.6	1.1	36.0	0.1	11.7	62.0	21.1	29.0	11.4	0.5	13.9
June	254.9	43.0	5.5	4.4	33.1	0.1	11.6	62.8	18.0	33.0	11.3	0.5	13.8
July	258.3	44.0	5.7	4.2	34.0	0.1	11.5	65.7	17.2	36.8	11.2	0.5	13.9
Aug.	272.6	44.0	5.6	4.3	34.0	0.1	11.5	65.7	16.0	38.1	11.1	0.5	14.0
	Changes *												
2020	− 6.9	+ 37.3	− 0.6	+ 5.7	+ 32.2	− 0.0	− 0.3	− 7.0	+ 0.2	− 5.7	− 1.3	− 0.2	+ 1.0
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 Mar.	+ 3.2	− 0.6	+ 0.2	− 0.9	+ 0.0	− 0.0	+ 0.0	+ 1.9	− 2.9	+ 4.8	− 0.0	− 0.0	− 0.0
Apr.	+ 2.7	+ 0.0	+ 0.2	− 0.1	+ 0.0	− 0.0	+ 0.0	− 1.0	− 1.6	+ 0.8	− 0.3	− 0.0	+ 0.0
May	+ 11.5	+ 0.6	+ 0.6	+ 0.0	+ 0.0	− 0.0	− 0.0	+ 1.3	− 0.8	+ 2.0	+ 0.1	− 0.0	+ 0.0
June	− 0.7	+ 0.2	− 0.2	+ 3.3	− 2.9	+ 0.0	− 0.1	+ 0.8	− 3.1	+ 4.0	− 0.1	− 0.0	− 0.0
July	+ 3.5	+ 1.1	+ 0.2	− 0.1	+ 1.0	−	− 0.1	+ 2.8	− 0.8	+ 3.8	− 0.1	− 0.0	+ 0.1
Aug.	+ 14.3	+ 0.0	− 0.1	+ 0.1	+ 0.0	+ 0.0	+ 0.0	+ 0.0	− 1.2	+ 1.4	− 0.2	− 0.0	+ 0.1

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

IV. Banks

Savings deposits [3]								Memo item:			
	by maturity										
		more than 1 year [2]									
			of which:								
Domestic non-profit institutions	up to and including 1 year	Total	up to and including 2 years	more than 2 years	Total	Domestic households	Domestic non-profit institutions	Bank savings bonds [4]	Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities) [5]	Liabilities arising from repos	Period
End of year or month *												
13.3	45.6	216.1	11.2	204.9	565.1	558.1	7.0	18.4	5.4	2.4	–	2019
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
11.9	31.1	217.2	9.3	207.9	551.4	545.5	5.9	12.8	6.0	2.9	–	2022 Mar.
11.7	31.0	216.6	9.1	207.5	550.3	544.4	5.9	12.7	5.9	2.9	–	Apr.
12.0	30.9	216.1	9.0	207.2	549.0	543.1	5.9	12.6	5.7	2.8	–	May
12.2	31.5	215.1	8.7	206.4	547.3	541.4	5.9	12.6	5.7	2.9	–	June
12.3	32.3	214.8	8.8	206.1	545.5	539.7	5.7	12.8	5.6	2.9	–	July
13.2	34.5	214.4	8.8	205.6	543.1	537.4	5.7	13.5	5.6	2.9	–	Aug.
Changes *												
+ 0.2	– 5.5	+ 2.4	+ 0.9	+ 1.6	– 13.0	– 12.3	– 0.7	– 3.3	+ 1.3	+ 0.2	–	2020
– 1.4	– 8.4	– 0.2	– 1.9	+ 1.6	+ 1.4	+ 1.5	– 0.1	– 1.9	– 0.6	+ 0.2	–	2021
– 0.0	– 0.1	– 0.5	– 0.2	– 0.3	– 1.8	– 1.7	– 0.1	– 0.1	+ 0.0	+ 0.0	–	2022 Mar.
– 0.3	– 0.1	– 0.5	– 0.2	– 0.3	– 0.6	– 0.6	– 0.0	– 0.1	– 0.1	+ 0.0	–	Apr.
+ 0.4	– 0.1	– 0.5	– 0.1	– 0.4	– 1.3	– 1.3	– 0.0	– 0.0	– 0.2	– 0.0	–	May
+ 0.2	+ 0.6	– 1.0	– 0.3	– 0.7	– 1.8	– 1.7	– 0.1	– 0.0	– 0.0	+ 0.0	–	June
+ 0.1	+ 0.8	– 0.3	+ 0.0	– 0.4	– 1.8	– 1.7	– 0.1	+ 0.2	– 0.1	+ 0.0	–	July
+ 0.8	+ 2.2	– 0.2	+ 0.1	– 0.3	– 2.3	– 2.3	– 0.1	+ 0.7	– 0.1	+ 0.0	–	Aug.

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)						Social security funds						
		Time deposits [3]						Time deposits				
Total	Sight deposits	for up to and including 1 year	for more than 1 year	Savings deposits and bank savings bonds [2,4]	Memo item: Fiduciary loans	Total	Sight deposits	for up to and including 1 year	for more than 1 year	Savings deposits and bank savings bonds [2]	Memo item: Fiduciary loans	Period
End of year or month *												
65.3	37.4	8.6	14.0	5.4	0.0	106.8	10.8	48.8	46.2	1.1	–	2019
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
67.4	43.3	7.5	12.2	4.4	0.0	69.8	13.6	34.9	20.5	0.8	–	2022 Mar.
67.5	43.1	7.6	12.4	4.4	0.0	73.4	16.1	35.3	21.1	0.9	–	Apr.
72.4	47.9	7.0	13.1	4.4	0.0	78.4	16.8	39.0	21.7	0.9	–	May
70.1	45.2	7.2	13.2	4.4	0.0	78.9	16.0	40.0	22.0	0.9	–	June
67.0	41.2	7.7	13.7	4.4	0.0	81.6	13.9	44.3	22.6	0.7	–	July
76.2	48.9	9.1	13.8	4.4	0.0	86.7	18.6	44.7	22.6	0.7	–	Aug.
Changes *												
+ 3.5	+ 5.9	– 0.6	– 1.3	– 0.5	– 0.0	– 40.8	+ 0.2	– 15.9	– 24.8	– 0.3	–	2020
+ 2.8	+ 5.6	– 2.0	– 0.2	– 0.5	–	– 16.8	– 2.2	– 13.9	– 0.6	+ 0.1	–	2021
– 1.4	– 2.1	+ 0.5	+ 0.2	+ 0.1	–	+ 3.3	– 1.5	+ 4.3	+ 0.5	+ 0.0	–	2022 Mar.
+ 0.1	– 0.2	+ 0.1	+ 0.3	– 0.0	–	+ 3.6	+ 2.6	+ 0.4	+ 0.6	+ 0.0	–	Apr.
+ 6.0	+ 4.8	+ 0.8	+ 0.4	+ 0.0	–	+ 3.6	+ 0.7	+ 2.4	+ 0.5	– 0.0	–	May
– 2.3	– 2.6	+ 0.2	+ 0.1	+ 0.0	–	+ 0.6	– 0.7	+ 1.0	+ 0.3	– 0.0	–	June
– 3.1	– 4.0	+ 0.5	+ 0.5	–	–	+ 2.7	– 2.1	+ 4.3	+ 0.6	– 0.1	–	July
+ 9.1	+ 7.6	+ 1.4	+ 0.1	+ 0.0	–	+ 5.1	+ 4.7	+ 0.4	+ 0.0	+ 0.0	–	Aug.

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

IV. Banks

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

€ billion

Period	Savings deposits [1]								Memo item: Interest credited on savings deposits	Bank savings bonds, [3] sold to			
		of residents					of non-residents				domestic non-banks		
			at 3 months' notice		at more than 3 months' notice								
	Total	Total	Total	of which: Special savings facilities [2]	Total	of which: Special savings facilities [2]	Total	of which: At 3 months' notice		non-banks, total	Total	of which: With maturities of more than 2 years	foreign non-banks
	End of year or month *												
2019	581.8	575.2	540.5	313.2	34.7	24.7	6.6	5.9	2.0	35.9	33.2	25.1	2.6
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 Apr.	563.7	557.9	535.3	262.0	22.7	13.7	5.7	5.3	0.1	23.9	23.8	18.9	0.1
May	562.3	556.6	534.0	262.2	22.5	13.5	5.7	5.2	0.1	24.0	23.8	18.8	0.1
June	560.4	554.8	532.4	259.4	22.4	13.4	5.6	5.2	0.1	24.0	23.8	18.8	0.1
July	558.6	553.0	530.7	259.5	22.2	13.3	5.6	5.2	0.1	24.2	24.1	18.9	0.1
Aug.	556.1	550.6	528.4	257.1	22.2	13.3	5.6	5.1	0.1	25.1	25.0	19.2	0.2
	Changes *												
2020	− 14.8	− 14.5	− 7.2	− 24.6	− 7.3	− 6.7	− 0.3	− 0.2	.	− 5.7	− 4.9	− 3.0	− 0.7
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 Apr.	− 0.7	− 0.6	− 0.4	− 3.1	− 0.2	− 0.2	− 0.0	− 0.0	.	− 0.1	− 0.1	− 0.1	− 0.0
May	− 1.4	− 1.3	− 1.2	+ 0.2	− 0.1	− 0.2	− 0.1	− 0.1	.	+ 0.0	+ 0.0	− 0.0	−
June	− 1.8	− 1.8	− 1.6	− 2.8	− 0.2	− 0.1	− 0.0	− 0.0	.	− 0.0	− 0.0	− 0.0	−
July	− 1.9	− 1.8	− 1.7	+ 0.2	− 0.2	− 0.0	− 0.0	− 0.0	.	+ 0.3	+ 0.3	+ 0.1	−
Aug.	− 2.5	− 2.4	− 2.3	− 2.3	− 0.1	− 0.0	− 0.1	− 0.1	.	+ 0.9	+ 0.9	+ 0.3	+ 0.0

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

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

€ billion

Period	Negotiable bearer debt securities and money market paper										Non-negotiable bearer debt securities and money market paper [6]		Subordinated	
		of which:				with maturities of								
						up to and including 1 year		more than 1 year up to and including 2 years						
	Total	Floating rate bonds [1]	Zero coupon bonds [1,2]	Foreign currency bonds [3,4]	Certificates of deposit	Total	of which: without a nominal guarantee [5]	Total	of which: without a nominal guarantee [5]	more than 2 years	Total	of which: with maturities of more than 2 years	negotiable debt securities	non-negotiable debt securities
	End of year or month *													
2019	1,140.7	123.5	28.6	367.7	96.7	117.7	2.6	23.6	4.2	999.4	0.9	0.7	31.5	0.4
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 Apr.	1,227.1	100.1	14.3	344.7	104.2	113.1	3.0	15.2	4.5	1,098.8	0.5	0.4	36.0	0.1
May	1,226.2	98.3	15.0	339.3	100.2	109.3	2.4	16.2	4.5	1,100.7	0.4	0.4	35.7	0.1
June	1,237.2	99.0	16.2	353.3	113.3	124.4	2.3	16.8	4.1	1,096.1	0.8	0.8	36.4	0.1
July	1,237.8	98.0	16.2	344.8	105.0	115.4	2.1	17.7	4.1	1,104.7	1.0	0.9	36.5	0.1
Aug.	1,239.1	96.8	16.7	336.8	98.9	109.9	2.1	21.6	4.1	1,107.7	0.9	0.8	37.4	0.1
	Changes *													
2020	− 20.5	− 5.2	− 0.8	− 54.1	− 22.3	− 22.2	− 1.1	+ 0.2	− 1.1	+ 1.5	+ 0.3	+ 0.2	+ 2.1	− 0.0
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 Apr.	+ 7.3	− 0.4	+ 0.0	+ 7.7	− 1.5	− 1.6	+ 0.1	− 2.6	+ 0.1	+ 11.4	− 0.1	− 0.1	+ 0.4	−
May	− 1.0	− 1.8	+ 0.4	− 5.4	− 4.1	− 3.8	− 0.6	+ 0.9	+ 0.1	+ 1.9	− 0.0	− 0.0	− 0.3	−
June	+ 11.1	+ 0.6	+ 1.3	+ 14.1	+ 13.2	+ 15.1	− 0.0	+ 0.6	− 0.4	− 4.7	+ 0.4	+ 0.4	+ 0.7	−
July	+ 1.8	+ 0.3	− 0.0	− 8.5	− 8.3	− 9.0	− 0.2	+ 0.9	− 0.0	+ 9.8	+ 0.1	+ 0.1	+ 0.1	−
Aug.	+ 1.3	− 1.2	+ 0.5	− 8.0	− 6.1	− 5.5	+ 0.0	+ 3.8	− 0.1	+ 3.0	− 0.0	− 0.0	+ 0.9	−

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Including 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																
2021	18	253.2	30.0	0.0	15.7	10.1	130.5	36.7	26.5	3.0	30.1	184.4	9.2	4.2	12.4	71.4
2022 June	18	260.3	34.3	0.0	15.1	10.1	133.2	39.0	24.3	3.0	36.7	184.3	9.5	4.5	12.2	8.0
July	18	260.0	33.7	0.0	15.0	10.3	133.6	39.4	24.2	2.9	36.8	184.0	9.5	4.6	12.1	8.7
Aug.	18	258.9	32.3	0.0	15.0	10.4	133.9	39.8	23.6	2.9	36.0	184.0	9.3	4.6	12.1	8.1
Private building and loan associations																
2022 June	10	183.6	19.2	–	6.7	7.4	103.7	33.1	10.5	1.7	33.5	119.6	9.0	4.5	8.3	5.0
July	10	183.5	18.7	–	6.7	7.5	104.0	33.5	10.4	1.7	33.8	119.4	9.0	4.6	8.2	5.6
Aug.	10	182.3	17.4	–	6.7	7.6	104.2	33.8	9.9	1.7	33.0	119.3	8.8	4.6	8.2	5.3
Public building and loan associations																
2022 June	8	76.7	15.1	0.0	8.4	2.7	29.5	5.9	13.8	1.3	3.2	64.7	0.5	–	3.9	3.0
July	8	76.6	15.0	0.0	8.3	2.8	29.6	5.9	13.8	1.3	3.0	64.6	0.5	–	3.9	3.2
Aug.	8	76.6	14.9	0.0	8.3	2.8	29.7	6.0	13.7	1.3	3.0	64.8	0.5	–	3.9	2.8

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]		
							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: Allocated contracts	Total	of which: Repayments during quarter	Memo item: Housing bonuses received [13]
All building and loan associations																
2021	27.7	2.0	9.1	52.3	27.7	47.1	18.3	4.0	4.2	3.4	24.7	18.6	6.3	6.1	4.9	0.1
2022 June	2.2	0.1	0.8	4.7	2.8	4.6	2.0	0.4	0.4	0.3	2.1	19.5	6.7	0.4	0.8	0.0
July	2.2	0.1	0.8	4.0	2.5	4.1	1.7	0.3	0.5	0.4	1.9	18.8	6.6	0.4	.	0.0
Aug.	2.2	0.1	0.7	3.9	2.5	3.9	1.6	0.4	0.5	0.3	1.9	19.0	6.6	0.4	.	0.0
Private building and loan associations																
2022 June	1.4	0.1	0.4	3.6	2.1	3.4	1.5	0.3	0.3	0.2	1.6	14.0	3.6	0.3	0.5	0.0
July	1.4	0.1	0.5	2.8	1.7	3.1	1.2	0.3	0.3	0.3	1.5	13.4	3.5	0.3	.	0.0
Aug.	1.4	0.1	0.4	2.8	1.7	3.0	1.2	0.3	0.3	0.3	1.5	13.6	3.5	0.3	.	0.0
Public building and loan associations																
2022 June	0.8	0.0	0.4	1.1	0.7	1.2	0.5	0.1	0.1	0.1	0.5	5.5	3.1	0.1	0.3	0.0
July	0.8	0.0	0.4	1.2	0.8	1.0	0.5	0.1	0.1	0.1	0.4	5.4	3.0	0.1	.	0.0
Aug.	0.8	0.0	0.3	1.1	0.7	0.9	0.4	0.1	0.1	0.1	0.4	5.4	3.1	0.1	.	0.0

***** Excluding assets and liabilities and/or transactions of foreign branches. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** 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 ***
2019	52	198	1,453.0	407.3	389.2	216.0	173.2	18.1	534.3	436.1	19.7	416.4	98.2	511.5	361.7
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
2021 Oct.	52	207	1,552.0	495.3	481.3	310.3	171.0	13.9	497.7	417.4	13.3	404.1	80.3	559.0	402.4
Nov.	50	204	1,595.0	495.2	481.1	306.5	174.6	14.2	506.4	425.8	13.0	412.7	80.6	593.4	436.9
Dec.	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 Jan.	50	209	1,618.8	563.0	548.5	366.5	181.9	14.6	537.7	460.1	13.1	447.0	77.6	518.1	378.0
Feb.	50	209	1,634.4	566.4	551.9	379.5	172.4	14.5	539.7	464.4	13.2	451.1	75.3	528.3	384.8
Mar.	50	208	1,674.9	564.7	550.5	369.7	180.8	14.2	540.1	461.4	13.5	447.9	78.7	570.1	421.1
Apr.	50	208	1,784.0	556.5	542.2	370.7	171.5	14.3	552.8	474.5	13.3	461.2	78.3	674.7	529.5
May	50	208	1,759.2	551.2	537.3	369.0	168.3	13.9	554.0	477.6	13.1	464.5	76.4	653.9	514.9
June	51	211	1,741.0	516.8	502.8	338.8	164.0	13.9	553.5	480.7	12.1	468.6	72.8	670.7	524.4
July	51	211	1,688.6	503.1	488.6	327.5	161.1	14.5	555.8	484.9	11.0	474.0	70.8	629.7	454.0
															Changes *
2020	− 2	+ 9	+104.2	− 20.3	− 15.5	− 2.8	− 12.7	− 4.8	+ 0.2	− 1.0	− 5.4	+ 4.4	+ 1.2	+ 164.2	+ 179.6
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
2021 Nov.	− 2	− 3	+ 43.0	− 2.3	− 2.5	− 3.7	+ 1.2	+ 0.2	+ 4.4	+ 5.0	− 0.2	+ 5.2	− 0.6	+ 33.0	+ 32.3
Dec.	+ 1	+ 3	− 90.4	− 24.0	− 23.2	− 8.6	− 14.6	− 0.8	− 9.2	− 7.0	− 0.1	− 6.8	− 2.2	− 57.3	− 32.5
2022 Jan.	− 1	+ 2	+113.7	+ 90.4	+ 89.2	+68.7	+ 20.5	+ 1.2	+36.3	+ 37.6	+ 0.2	+ 37.4	− 1.4	− 18.6	− 27.9
Feb.	−	−	+ 15.8	+ 3.8	+ 3.9	+13.0	− 9.0	− 0.1	+ 3.3	+ 5.4	+ 0.1	+ 5.3	− 2.1	+ 10.4	+ 7.1
Mar.	−	− 1	+ 40.1	− 2.0	− 1.7	− 9.9	+ 8.1	− 0.3	− 1.0	− 4.3	+ 0.2	− 4.6	+ 3.3	+ 41.5	+ 35.7
Apr.	−	−	+106.5	− 13.1	− 13.1	+ 1.0	− 14.2	+ 0.1	− 1.3	+ 0.7	− 0.1	+ 0.8	− 2.0	+ 102.0	+ 104.5
May	−	−	− 24.0	− 3.4	− 3.0	− 1.6	− 1.5	− 0.4	+ 6.5	+ 7.8	− 0.3	+ 8.1	− 1.3	− 19.9	− 13.4
June	+ 1	+ 3	− 19.9	− 36.9	− 36.9	−30.2	− 6.6	+ 0.0	− 8.4	− 4.0	− 1.0	− 3.1	− 4.4	+ 15.1	+ 7.4
July	± 0	−	− 53.4	− 15.9	− 16.5	−11.3	− 5.2	+ 0.5	− 4.8	− 2.0	− 1.2	− 0.8	− 2.7	− 42.0	− 71.9
Foreign subsidiaries															**End of year or month ***
2019	15	41	235.2	52.5	46.7	18.3	28.4	5.7	139.0	116.1	14.4	101.7	22.9	43.7	0.0
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
2021 Oct.	12	35	246.1	50.9	45.9	24.3	21.6	5.0	138.5	115.4	12.5	102.9	23.1	56.6	0.0
Nov.	12	35	247.1	52.9	46.7	24.0	22.8	6.2	138.5	115.4	12.6	102.8	23.1	55.7	0.0
Dec.	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 Jan.	12	35	245.1	45.9	40.9	20.1	20.8	5.0	140.6	117.5	12.7	104.8	23.1	58.5	0.0
Feb.	12	35	245.7	46.2	41.4	21.1	20.3	4.8	140.6	117.7	12.7	105.0	22.9	58.9	0.0
Mar.	12	35	249.3	45.9	40.9	20.6	20.3	5.0	143.4	119.7	12.9	106.8	23.7	60.0	0.0
Apr.	12	35	253.6	49.4	44.1	21.5	22.6	5.3	145.3	121.6	12.8	108.8	23.7	58.8	0.0
May	12	35	256.5	48.5	43.6	19.6	24.1	4.9	147.7	123.9	13.2	110.8	23.8	60.2	0.0
June	12	35	258.0	50.3	44.6	21.5	23.1	5.7	148.9	125.1	13.1	112.0	23.8	58.8	0.0
July	11	34	256.6	47.8	42.1	19.7	22.4	5.7	150.6	126.0	13.0	113.0	24.7	58.2	0.0
															Changes *
2020	− 3	− 5	− 0.8	− 5.3	− 5.0	− 1.0	− 4.0	− 0.3	+ 3.3	+ 0.8	− 1.3	+ 2.1	+ 2.4	+ 1.2	± 0.0
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
2021 Nov.	−	−	− 0.2	+ 1.3	+ 0.3	− 0.4	+ 0.6	+ 1.0	− 0.6	− 0.6	+ 0.1	− 0.7	+ 0.0	− 0.9	± 0.0
Dec.	−	−	− 1.4	− 2.3	− 2.4	− 3.2	+ 0.8	+ 0.1	+ 0.9	+ 0.8	+ 0.0	+ 0.7	+ 0.1	− 0.0	± 0.0
2022 Jan.	−	−	− 1.9	− 5.0	− 3.9	− 0.7	− 3.0	− 1.4	+ 0.7	+ 0.8	+ 0.0	+ 0.8	− 0.1	+ 2.6	± 0.0
Feb.	−	−	+ 0.8	+ 0.4	+ 0.6	+ 1.0	− 0.4	− 0.2	+ 0.1	+ 0.3	+ 0.0	+ 0.3	− 0.2	+ 0.3	± 0.0
Mar.	−	−	+ 3.2	− 0.5	− 0.7	− 0.5	− 0.2	+ 0.2	+ 2.6	+ 1.8	+ 0.2	+ 1.6	+ 0.8	+ 1.1	± 0.0
Apr.	−	−	+ 1.4	+ 2.0	+ 2.1	+ 1.0	+ 1.1	− 0.1	+ 0.5	+ 0.6	− 0.1	+ 0.6	− 0.0	− 1.1	± 0.0
May	−	−	+ 4.0	− 0.3	− 0.1	− 1.9	+ 1.9	− 0.3	+ 2.9	+ 2.8	+ 0.3	+ 2.5	+ 0.1	+ 1.4	± 0.0
June	−	−	− 0.3	+ 0.8	+ 0.2	+ 2.0	− 1.8	+ 0.6	+ 0.3	+ 0.3	− 0.0	+ 0.3	+ 0.0	− 1.4	± 0.0
July	− 1	− 1	− 2.8	− 3.2	− 3.1	− 1.9	− 1.2	− 0.1	+ 1.0	+ 0.2	− 0.2	+ 0.3	+ 0.8	− 0.6	± 0.0

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

IV. Banks

Deposits												Other liabilities 6,7		
	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	Money market paper and debt securities outstanding 5	Working capital and own funds	Total	of which: Derivative financial instruments in the trading portfolio	Period
End of year or month *												**Foreign branches**		
894.1	613.6	453.2	160.4	280.5	12.7	10.1	2.7	267.8	94.6	53.4	410.9	361.1	2019
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
982.8	654.6	469.2	185.4	328.2	9.0	7.2	1.8	319.2	83.7	51.7	433.8	401.3	2021 Oct.
988.0	655.8	458.2	197.6	332.2	8.9	7.1	1.8	323.3	82.6	51.9	472.4	435.9	Nov.
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	Dec.
1,066.8	659.1	457.3	201.8	407.7	9.5	7.7	1.8	398.2	86.1	51.8	414.1	377.6	2022 Jan.
1,079.5	664.5	466.8	197.6	415.0	9.8	8.1	1.7	405.2	82.7	51.8	420.4	383.8	Feb.
1,087.0	663.1	462.8	200.3	423.9	10.7	9.0	1.7	413.2	80.7	52.3	454.9	418.8	Mar.
1,075.8	655.6	453.6	202.0	420.1	10.5	8.7	1.8	409.7	88.6	53.3	566.4	526.8	Apr.
1,059.1	633.0	437.3	195.7	426.1	10.5	8.7	1.7	415.6	90.4	52.9	556.8	512.4	May
1,035.8	630.0	447.9	182.1	405.8	10.7	8.9	1.8	395.1	84.1	53.4	567.7	521.9	June
1,045.4	634.6	458.7	175.9	410.8	10.6	8.8	1.8	400.2	81.3	53.9	507.9	452.6	July
Changes *														
− 9.2	− 13.3	− 21.4	+ 8.1	+ 4.1	− 1.0	+ 0.3	− 1.4	+ 5.1	− 28.1	− 3.5	+ 157.6	+ 162.0	2020	
+ 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	
+ 3.4	− 0.4	− 9.6	+ 9.2	+ 3.9	− 0.1	− 0.1	+ 0.0	+ 4.0	− 2.4	+ 0.3	+ 38.6	+ 34.6	2021 Nov.	
− 37.8	− 17.3	+ 3.0	− 20.3	− 20.5	− 0.8	− 0.8	− 0.0	− 19.7	− 17.5	− 0.7	− 34.5	− 32.5	Dec.	
+ 114.7	+ 18.7	− 4.0	+ 22.7	+ 96.0	+ 1.4	+ 1.4	+ 0.0	+ 94.6	+ 20.4	+ 0.6	− 23.8	− 25.8	2022 Jan.	
+ 13.3	+ 6.0	+ 9.6	− 3.6	+ 7.3	+ 0.3	+ 0.4	− 0.1	+ 7.0	− 3.2	+ 0.0	+ 6.3	+ 6.3	Feb.	
+ 7.0	− 1.8	− 4.0	+ 2.2	+ 8.8	+ 0.9	+ 0.9	+ 0.0	+ 7.9	− 2.4	+ 0.5	+ 34.5	+ 35.0	Mar.	
− 15.2	− 11.0	− 9.2	− 1.8	− 4.2	− 0.2	− 0.3	+ 0.1	− 4.0	+ 5.3	+ 0.9	+ 108.8	+ 108.0	Apr.	
− 10.4	− 16.5	− 12.5	− 4.1	+ 6.2	− 0.0	+ 0.0	− 0.0	+ 6.2	+ 2.7	− 0.4	− 13.3	− 14.4	May	
− 26.9	− 6.4	+ 10.6	− 17.0	− 20.5	+ 0.3	+ 0.2	+ 0.1	− 20.7	− 8.0	+ 0.5	+ 10.9	+ 9.5	June	
+ 6.6	+ 1.9	+ 10.8	− 8.9	+ 4.7	− 0.2	− 0.2	− 0.0	+ 4.8	− 3.9	+ 0.5	− 59.8	− 69.3	July	
End of year or month *												**Foreign subsidiaries**		
165.7	68.7	36.6	32.1	97.0	6.6	3.9	2.7	90.4	16.0	22.1	31.4	0.0	2019	
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	
177.6	63.8	32.8	31.0	113.8	6.9	4.5	2.4	106.9	17.9	20.4	30.1	0.0	2021 Oct.	
177.5	62.6	31.1	31.5	114.9	7.0	4.6	2.4	107.9	17.5	20.3	31.7	0.0	Nov.	
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	Dec.	
179.6	64.8	33.2	31.7	114.7	7.2	4.8	2.4	107.5	15.9	19.9	29.8	0.0	2022 Jan.	
180.9	66.3	33.7	32.7	114.5	7.4	5.0	2.4	107.1	15.8	19.8	29.3	0.0	Feb.	
184.0	66.5	34.2	32.3	117.5	7.5	5.1	2.4	110.0	15.7	19.8	29.8	0.0	Mar.	
187.8	70.6	36.1	34.4	117.2	7.2	4.8	2.4	110.0	15.5	19.9	30.3	0.0	Apr.	
190.9	70.3	36.3	34.1	120.5	7.2	4.8	2.4	113.3	15.3	20.1	30.2	0.0	May	
190.7	68.9	35.9	33.0	121.7	7.4	5.1	2.3	114.3	16.0	20.3	31.0	0.0	June	
189.6	66.3	35.0	31.4	123.3	7.7	5.4	2.4	115.5	15.6	20.2	31.2	0.0	July	
Changes *														
+ 1.4	− 7.3	− 2.5	− 4.8	+ 8.7	+ 0.0	+ 0.3	− 0.3	+ 8.7	+ 0.6	− 1.8	− 1.0	± 0.0	2020	
+ 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	
− 1.0	− 1.6	− 1.6	+ 0.1	+ 0.6	+ 0.1	+ 0.1	+ 0.0	+ 0.4	− 0.4	− 0.0	+ 1.2	± 0.0	2021 Nov.	
+ 0.9	+ 1.5	+ 1.9	− 0.3	− 0.6	+ 0.2	+ 0.3	− 0.0	− 0.9	− 1.2	− 0.0	− 1.2	± 0.0	Dec.	
+ 0.4	+ 0.4	+ 0.2	+ 0.2	+ 0.0	− 0.1	− 0.1	+ 0.0	+ 0.1	− 0.5	− 0.5	− 1.2	± 0.0	2022 Jan.	
+ 1.5	+ 1.6	+ 0.5	+ 1.1	− 0.1	+ 0.2	+ 0.2	− 0.0	− 0.4	− 0.1	− 0.1	− 0.5	± 0.0	Feb.	
+ 2.8	+ 0.1	+ 0.5	− 0.5	+ 2.7	+ 0.0	+ 0.1	− 0.0	+ 2.7	− 0.1	+ 0.1	+ 0.4	± 0.0	Mar.	
+ 1.6	+ 3.1	+ 1.9	+ 1.2	− 1.5	− 0.2	− 0.2	− 0.0	− 1.2	− 0.2	+ 0.1	− 0.1	± 0.0	Apr.	
+ 3.8	+ 0.1	+ 0.1	− 0.0	+ 3.7	− 0.0	− 0.0	+ 0.0	+ 3.8	− 0.2	+ 0.2	+ 0.1	± 0.0	May	
− 1.5	− 2.0	− 0.4	− 1.6	+ 0.4	+ 0.2	+ 0.3	− 0.1	+ 0.2	+ 0.7	+ 0.2	+ 0.4	± 0.0	June	
− 2.0	− 3.0	− 1.0	− 2.0	+ 1.0	+ 0.3	+ 0.3	+ 0.0	+ 0.7	− 0.4	− 0.1	− 0.3	± 0.0	July	

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

V. Minimum reserves

1. Reserve maintenance in the euro area

€ billion

Maintenance period beginning in [1]	Reserve base [2]	Required reserves before deduction of lump-sum allowance [3]	Required reserves after deduction of lump-sum allowance [4]	Current accounts [5]	Excess reserves [6]	Deficiencies [7]
2015	11,375.0	113.8	113.3	557.1	443.8	0.0
2016	11,918.5	119.2	118.8	919.0	800.3	0.0
2017	12,415.8	124.2	123.8	1,275.2	1,151.4	0.0
2018	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 July	16,174.7	161.7	161.4	3,936.1	3,774.7	0.0
Aug.	.	.	.	.	.	.
Sep. p	16,469.8	164.7	164.4	...	...	...

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 [6]	Deficiencies [7]
2015	3,137,353	27.6	31,374	31,202	174,361	143,159	0
2016	3,371,095	28.3	33,711	33,546	301,989	268,443	0
2017	3,456,192	27.8	34,562	34,404	424,547	390,143	2
2018	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 July	4,437,392	27.4	44,374	44,236	1,108,794	1,064,559	0
Aug.	.	.	.	.	.	.	.
Sep. p	4,448,025	27.0	44,480	44,344	...	...	...

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
2015	6,105	5,199	2,012	10,432	5,649	226	1,578
2016	6,384	5,390	2,812	10,905	5,960	236	1,859
2017	6,366	5,678	3,110	11,163	6,256	132	1,699
2018	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 July	9,585	7,198	3,033	14,006	8,141	96	2,178
Aug.	.	.	.	.	.	.	.
Sep.	9,453	7,106	2,909	14,152	8,219	109	2,396

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
2015	2,063,317	1,879	375,891	592,110	104,146
2016	2,203,100	1,595	447,524	585,099	133,776
2017	2,338,161	628	415,084	581,416	120,894
2018	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 July	3,203,505	11,824	557,297	558,356	106,523
Aug.	.	.	.	.	.
Sep.	3,245,595	12,012	522,559	554,738	113,122

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]
2005 Dec. 6	1.25	–	2.25	3.25	2011 Apr. 13	0.50	1.25	–	2.00	2002 Jan. 1	2.57	2009 Jan. 1	1.62
					July 13	0.75	1.50	–	2.25	July 1	2.47	July 1	0.12
2006 Mar. 8	1.50	–	2.50	3.50	Nov. 9	0.50	1.25	–	2.00				
June 15	1.75	–	2.75	3.75	Dec. 14	0.25	1.00	–	1.75	2003 Jan. 1	1.97	2011 July 1	0.37
Aug. 9	2.00	–	3.00	4.00						July 1	1.22		
Oct. 11	2.25	–	3.25	4.25	2012 July 11	0.00	0.75	–	1.50			2012 Jan. 1	0.12
Dec. 13	2.50	–	3.50	4.50						2004 Jan. 1	1.14		
					2013 May 8	0.00	0.50	–	1.00	July 1	1.13	2013 Jan. 1	– 0.13
2007 Mar. 14	2.75	–	3.75	4.75	Nov. 13	0.00	0.25	–	0.75			July 1	– 0.38
June 13	3.00	–	4.00	5.00						2005 Jan. 1	1.21		
					2014 June 11	-0.10	0.15	–	0.40	July 1	1.17	2014 Jan. 1	– 0.63
2008 July 9	3.25	–	4.25	5.25	Sep. 10	-0.20	0.05	–	0.30			July 1	– 0.73
Oct. 8	2.75	–	3.75	4.75						2006 Jan. 1	1.37		
Oct. 9	3.25	3.75	–	4.25	2015 Dec. 9	-0.30	0.05	–	0.30	July 1	1.95	2015 Jan. 1	– 0.83
Nov. 12	2.75	3.25	–	3.75									
Dec. 10	2.00	2.50	–	3.00	2016 Mar. 16	-0.40	0.00	–	0.25	2007 Jan. 1	2.70	2016 July 1	– 0.88
										July 1	3.19		
2009 Jan. 21	1.00	2.00	–	3.00	2019 Sep. 18	-0.50	0.00	–	0.25				
Mar. 11	0.50	1.50	–	2.50						2008 Jan. 1	3.32		
Apr. 8	0.25	1.25	–	2.25	2022 Jul. 27	0.00	0.50	–	0.75	July 1	3.19		
May 13	0.25	1.00	–	1.75	Sep. 14	0.75	1.25	–	1.50				

1 Pursuant to Section 247 of the Civil Code.

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							
2022 Sep. 7	3 680	3 680	0,50	-	-	-	7
Sep. 14	3 926	3 926	1,25	-	-	-	7
Sep. 21	3 728	3 728	1,25	-	-	-	7
Sep. 28	4 486	4 486	1,25	-	-	-	7
Oct. 5	3 665	3 665	1,25	-	-	-	7
Oct. 12	3 622	3 622	1,25	-	-	-	7
Long-term refinancing operations							
2022 Sep. 1	725	725	[2] …	-	-	-	91
Sep. 29	722	722	[2] …	-	-	-	84

***** 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]	EONIA [1]	EURIBOR [2]				
			One-week funds	One-month funds	Three-month funds	Six-month funds	Twelve-month funds
2022 Mar.	– 0.579	.	– 0.57	– 0.54	– 0.50	– 0.42	– 0.24
Apr.	– 0.584	.	– 0.57	– 0.54	– 0.45	– 0.31	0.01
May	– 0.585	.	– 0.57	– 0.55	– 0.39	– 0.14	0.29
June	– 0.582	.	– 0.57	– 0.53	– 0.24	0.16	0.85
July	– 0.511	.	– 0.46	– 0.31	0.04	0.47	0.99
Aug.	– 0.085	.	– 0.07	0.02	0.40	0.84	1.25
Sep.	0.355	.	0.42	0.57	1.01	1.60	2.23

***** Averages are Bundesbank calculations. Neither the Deutsche Bundesbank nor anyone else can be held liable for any irregularity or inaccuracy of the EONIA or the EURIBOR. **1** Euro overnight index average: weighted average overnight rate for interbank operations; calculated by the European Central Bank from January 4th 1999 until September 30th 2019 based on real turnover according to the act/360 method. Since October 1st 2019 calculated as Euro Short-Term Rate (€STR) + 8.5 basis points spread. **2** Euro interbank offered rate: unweighted average rate calculated by Reuters since 30 December 1998 according to the act/360 method. Administrator for EONIA and EURIBOR: European Money Markets Institute (EMMI)

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
2021 Aug.	0.22	44,901	0.93	219,708	– 0.26	68,741	0.81	21,058
Sep.	0.23	44,268	0.93	219,587	– 0.28	69,338	0.78	21,227
Oct.	0.23	43,497	0.92	219,456	– 0.29	75,404	0.77	22,443
Nov.	0.22	42,503	0.91	219,058	– 0.30	70,830	0.76	22,793
Dec.	0.18	41,979	0.91	220,289	– 0.37	75,038	0.74	22,966
2022 Jan.	0.18	41,157	0.90	220,225	– 0.31	72,404	0.73	23,078
Feb.	0.18	40,586	0.90	220,056	– 0.30	71,560	0.71	23,680
Mar.	0.17	40,201	0.89	219,655	– 0.28	68,341	0.74	24,011
Apr.	0.18	39,503	0.88	219,264	– 0.27	73,001	0.73	23,471
May	0.19	39,659	0.87	218,855	– 0.20	65,198	0.73	23,335
June	0.19	39,682	0.87	218,128	– 0.10	66,308	0.78	23,397
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

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
2021 Aug.	1.94	4,581	1.52	27,041	1.82	1,418,884	6.60	44,785	3.33	81,447	3.32	325,890
Sep.	1.94	4,521	1.52	27,117	1.80	1,427,271	6.67	45,750	3.32	81,133	3.32	325,265
Oct.	1.97	4,623	1.52	27,324	1.79	1,436,840	6.59	44,700	3.32	80,768	3.30	326,197
Nov.	2.08	3,680	1.52	26,929	1.77	1,446,574	6.53	44,871	3.32	79,066	3.30	328,130
Dec.	2.02	3,547	1.52	26,755	1.75	1,454,553	6.60	44,914	3.32	78,679	3.28	327,421
2022 Jan.	2.02	3,690	1.52	26,583	1.74	1,457,059	6.69	44,473	3.32	78,019	3.27	328,346
Feb.	2.02	3,559	1.52	26,620	1.73	1,464,103	6.61	44,903	3.32	77,521	3.26	328,991
Mar.	2.10	3,620	1.53	26,670	1.71	1,473,852	6.59	46,226	3.33	77,518	3.25	328,996
Apr.	2.08	3,636	1.54	26,766	1.71	1,483,015	6.52	45,715	3.33	77,073	3.25	329,959
May	2.15	3,584	1.55	26,874	1.70	1,492,093	6.51	46,567	3.33	76,658	3.25	330,295
June	2.19	3,573	1.58	26,899	1.70	1,500,141	6.59	47,810	3.36	76,324	3.27	330,379
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	27,274	1.70	1,515,557	6.75	47,403	3.41	76,990	3.29	334,184

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
2021 Aug.	1.94	148,766	1.63	196,065	1.64	811,706
Sep.	1.97	149,784	1.64	194,697	1.63	811,174
Oct.	1.92	158,326	1.63	197,964	1.62	813,714
Nov.	1.91	156,340	1.58	203,103	1.61	819,855
Dec.	1.82	161,611	1.56	202,457	1.59	822,730
2022 Jan.	1.81	166,574	1.57	202,813	1.58	824,650
Feb.	1.80	172,663	1.56	202,563	1.58	830,564
Mar.	1.90	179,074	1.58	204,001	1.57	832,210
Apr.	1.91	180,007	1.58	206,200	1.57	838,405
May	1.87	184,783	1.62	208,824	1.58	842,912
June	1.94	189,986	1.65	213,733	1.64	846,768
July	2.07	194,397	1.69	218,875	1.66	854,793
Aug.	2.24	209,663	1.74	226,351	1.68	861,082

***** 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
2021 Aug.	– 0.01	1,797,331	0.02	2,315	0.25	278	0.34	558	0.08	536,145	0.16	24,993
Sep.	– 0.01	1,791,879	– 0.01	2,254	0.26	241	0.34	513	0.08	535,555	0.15	24,780
Oct.	– 0.01	1,800,411	0.06	1,944	0.25	228	0.39	474	0.08	535,197	0.15	24,558
Nov.	– 0.01	1,808,547	0.09	1,879	0.21	266	0.48	650	0.08	535,140	0.15	24,329
Dec.	– 0.01	1,806,993	– 0.07	2,327	0.20	204	0.51	721	0.08	536,715	0.14	24,116
2022 Jan.	– 0.01	1,806,352	0.11	2,132	0.22	363	0.36	642	0.08	537,038	0.14	23,363
Feb.	– 0.02	1,819,881	0.06	2,167	0.25	226	0.33	564	0.07	537,327	0.13	23,136
Mar.	– 0.02	1,808,690	0.12	2,044	0.28	258	0.38	824	0.07	535,696	0.13	22,897
Apr.	– 0.02	1,826,796	0.14	1,974	0.39	292	0.46	694	0.07	534,800	0.13	22,686
May	– 0.02	1,827,315	0.14	2,052	0.52	574	0.66	1,023	0.07	533,590	0.14	22,562
June	– 0.02	1,831,910	0.17	2,490	0.71	357	0.80	891	0.08	531,943	0.14	22,408
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	1,852,122	0.49	4,742	1.04	925	0.95	1,582	0.08	527,959	0.16	22,201

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
2021 Aug.	– 0.13	589,698	– 0.50	47,074	– 0.17	174	0.07	699
Sep.	– 0.12	590,408	– 0.50	48,685	x .	x .	0.11	333
Oct.	– 0.13	598,979	– 0.51	70,382	– 0.21	214	0.19	1,102
Nov.	– 0.13	604,607	– 0.52	47,155	– 0.16	619	0.25	732
Dec.	– 0.14	585,718	– 0.58	43,578	– 0.07	836	0.19	1,004
2022 Jan.	– 0.14	596,648	– 0.50	38,323	– 0.18	311	0.28	1,033
Feb.	– 0.14	594,874	– 0.48	30,745	0.03	234	0.63	1,123
Mar.	– 0.15	607,552	– 0.50	42,187	0.09	417	1.09	1,069
Apr.	– 0.15	600,726	– 0.49	42,722	0.37	633	1.12	182
May	– 0.15	609,181	– 0.44	41,476	0.44	1,240	1.35	513
June	– 0.15	600,646	– 0.36	43,089	0.91	687	2.27	742
July	– 0.07	604,802	– 0.11	26,039	1.15	678	1.90	1,466
Aug.	– 0.01	636,259	0.05	51,225	0.91	662	.	.

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
2021 Aug.	5.54	5.44	8,696	6.29	1,747	7.54	340	4.30	2,828	5.89	5,528
Sep.	5.54	5.46	8,474	6.28	1,669	7.59	323	4.29	2,783	5.94	5,368
Oct.	5.58	5.50	8,375	6.30	1,660	7.55	345	4.34	2,677	5.95	5,353
Nov.	5.46	5.43	8,076	6.17	1,524	7.24	408	4.34	2,691	5.88	4,976
Dec.	5.35	5.36	6,927	6.04	1,221	6.75	465	4.31	2,445	5.84	4,017
2022 Jan.	5.53	5.54	8,604	6.19	1,862	7.29	383	4.29	2,643	6.01	5,578
Feb.	5.41	5.45	8,372	6.14	1,641	7.31	378	4.28	2,652	5.90	5,343
Mar.	5.34	5.38	10,208	6.24	1,935	7.28	397	4.08	3,481	5.97	6,330
Apr.	5.70	5.64	8,523	6.35	1,682	7.93	316	4.46	2,654	6.08	5,553
May	5.81	5.77	9,788	6.51	1,924	8.04	332	4.56	3,067	6.24	6,390
June	5.99	5.95	9,509	6.79	1,926	8.50	307	4.66	3,054	6.46	6,149
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	8,928	7.25	1,765	8.79	349	4.92	2,931	6.88	5,648

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										
2021 Aug.	1.74	4,101	1.60	806	1.88	1,594	2.17	612	1.48	1,895
Sep.	1.65	4,401	1.46	951	1.72	1,950	1.99	626	1.47	1,825
Oct.	1.69	4,327	1.54	1,068	1.79	1,792	2.23	631	1.42	1,904
Nov.	1.68	4,433	1.39	847	1.65	1,759	2.42	704	1.44	1,970
Dec.	1.64	5,757	1.48	1,144	1.58	2,326	2.45	860	1.44	2,571
2022 Jan.	1.62	4,552	1.48	1,288	1.54	1,914	2.32	622	1.49	2,016
Feb.	1.76	4,173	1.60	859	1.69	1,560	2.55	514	1.62	2,099
Mar.	1.87	5,992	1.61	1,247	1.70	2,149	2.43	724	1.85	3,119
Apr.	2.03	4,980	1.70	1,170	1.82	1,829	2.33	760	2.10	2,391
May	2.32	4,277	2.03	913	1.84	1,387	2.89	628	2.46	2,262
June	2.39	5,035	1.96	1,196	1.81	1,990	3.04	717	2.68	2,328
July	2.62	4,606	1.97	1,195	2.06	1,980	3.24	629	2.97	1,997
Aug.	2.94	4,473	2.34	777	2.24	1,627	3.48	730	3.30	2,116
of which: Loans to sole proprietors										
2021 Aug.	1.89	2,666	.	.	2.05	1,045	2.35	441	1.57	1,180
Sep.	1.72	2,879	.	.	1.76	1,259	2.21	444	1.49	1,176
Oct.	1.75	2,884	.	.	1.84	1,193	2.17	514	1.46	1,177
Nov.	1.83	2,674	.	.	1.83	1,076	2.47	461	1.56	1,137
Dec.	1.73	3,787	.	.	1.76	1,495	2.48	564	1.47	1,728
2022 Jan.	1.71	2,950	.	.	1.64	1,227	2.38	455	1.54	1,268
Feb.	1.88	2,728	.	.	1.92	970	2.68	380	1.64	1,378
Mar.	1.96	3,879	.	.	1.84	1,414	2.58	512	1.88	1,953
Apr.	2.13	3,210	.	.	1.92	1,079	2.42	577	2.16	1,554
May	2.40	2,886	.	.	2.00	928	2.95	493	2.48	1,465
June	2.50	3,461	.	.	2.06	1,239	3.13	538	2.62	1,684
July	2.76	2,994	.	.	2.21	1,252	3.36	474	3.08	1,268
Aug.	2.94	2,572	.	.	2.38	1,063	3.68	435	3.20	1,074

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													
2021 Aug.	1.31	1.27	22,735	1.32	3,095	1.78	2,324	1.37	1,514	1.10	7,975	1.28	10,922
Sep.	1.31	1.26	22,232	1.33	2,986	1.80	2,204	1.33	1,451	1.09	7,631	1.27	10,946
Oct.	1.32	1.28	22,630	1.29	3,683	1.79	2,353	1.33	1,613	1.10	8,013	1.29	10,650
Nov.	1.36	1.32	22,516	1.31	3,079	1.83	2,022	1.43	1,564	1.15	8,171	1.33	10,759
Dec.	1.37	1.32	23,851	1.27	3,446	1.80	2,383	1.39	1,661	1.16	8,614	1.34	11,194
2022 Jan.	1.39	1.35	25,085	1.33	4,969	1.83	2,527	1.35	1,706	1.19	8,661	1.37	12,191
Feb.	1.49	1.45	26,299	1.43	4,706	1.86	2,270	1.45	1,606	1.29	9,322	1.48	13,100
Mar.	1.69	1.65	32,270	1.63	6,216	1.93	2,704	1.65	1,987	1.50	11,809	1.71	15,770
Apr.	1.98	1.94	25,813	1.90	4,946	2.01	2,323	1.88	1,703	1.81	10,024	2.04	11,763
May	2.29	2.25	27,272	2.20	4,758	2.10	2,491	2.10	1,834	2.12	10,907	2.42	12,041
June	2.62	2.57	22,990	2.46	3,897	2.19	2,461	2.45	1,663	2.46	8,659	2.77	10,208
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
of which: Collateralised loans [11]													
2021 Aug.	.	1.21	9,407	.	.	1.67	821	1.21	665	1.03	3,442	1.25	4,479
Sep.	.	1.20	9,471	.	.	1.67	802	1.13	664	1.03	3,299	1.24	4,706
Oct.	.	1.20	9,766	.	.	1.70	874	1.16	746	1.02	3,569	1.25	4,577
Nov.	.	1.23	9,668	.	.	1.72	708	1.22	685	1.08	3,670	1.29	4,605
Dec.	.	1.25	10,265	.	.	1.70	783	1.22	727	1.09	3,784	1.31	4,971
2022 Jan.	.	1.28	11,005	.	.	1.75	942	1.18	861	1.13	4,087	1.33	5,115
Feb.	.	1.37	11,593	.	.	1.74	749	1.28	826	1.24	4,366	1.43	5,652
Mar.	.	1.57	14,566	.	.	1.80	936	1.54	974	1.46	5,637	1.64	7,019
Apr.	.	1.86	11,672	.	.	1.88	804	1.71	831	1.77	4,658	1.96	5,379
May	.	2.20	12,086	.	.	1.96	839	2.08	856	2.11	5,030	2.34	5,361
June	.	2.49	10,285	.	.	2.08	865	2.37	774	2.41	4,073	2.67	4,573
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

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
2021 Aug.	7.12	35,662	6.99	27,343	15.58	4,039	2.79	72,942	2.80	72,622
Sep.	7.19	36,720	7.06	28,404	15.53	4,098	2.79	74,750	2.81	74,389
Oct.	7.10	35,633	6.94	27,535	15.02	4,109	2.81	75,550	2.83	75,182
Nov.	7.01	36,013	6.90	27,565	15.01	4,153	2.77	76,312	2.79	75,909
Dec.	7.11	36,163	6.93	28,124	14.94	4,165	2.73	76,261	2.75	75,914
2022 Jan.	7.20	36,030	6.97	28,433	14.97	4,110	2.61	81,598	2.62	81,290
Feb.	7.08	36,335	6.95	28,225	14.96	4,103	2.62	85,173	2.63	84,843
Mar.	7.14	37,360	7.02	29,314	14.94	4,076	2.71	87,104	2.72	86,709
Apr.	7.00	36,819	6.91	28,444	14.96	4,100	2.65	88,202	2.66	87,834
May	6.96	37,636	6.98	28,730	14.89	4,143	2.63	89,402	2.65	88,972
June	7.01	38,876	7.02	30,004	14.84	4,192	2.66	93,301	2.67	92,870
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

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																
2021 Aug.	1.33	54,047	1.58	14,739	1.79	7,827	2.31	1,094	1.44	1,308	1.25	33,740	1.14	3,001	1.08	7,077
Sep.	1.36	69,341	1.33	23,411	1.83	9,309	2.39	1,198	1.48	1,245	1.28	45,311	1.44	4,339	1.06	7,939
Oct.	1.21	71,404	1.32	20,386	1.76	9,149	2.38	1,247	1.50	1,242	1.08	48,160	1.43	2,573	1.07	9,033
Nov.	1.18	75,363	1.34	18,828	1.85	9,681	2.35	1,402	1.44	1,474	1.03	48,548	0.95	4,444	1.16	9,814
Dec.	1.20	105,525	1.32	29,572	1.94	10,348	2.28	1,529	1.45	1,817	1.05	71,028	1.40	5,515	1.18	15,288
2022 Jan.	1.29	64,813	1.26	21,030	1.80	8,812	2.39	1,280	1.53	1,443	1.14	44,620	1.49	1,821	1.27	6,837
Feb.	1.32	66,898	1.22	18,910	1.78	9,056	2.55	1,205	1.63	1,445	1.13	42,295	1.71	3,088	1.42	9,809
Mar.	1.50	99,725	1.39	29,044	1.78	10,692	2.54	1,571	1.83	1,981	1.38	68,399	1.77	5,314	1.65	11,768
Apr.	1.53	74,483	1.51	19,771	1.82	9,033	2.63	1,388	2.19	1,883	1.31	47,761	1.79	3,673	1.91	10,745
May	1.49	78,588	1.73	18,948	1.82	9,416	2.82	1,358	2.31	1,703	1.17	53,228	2.65	3,419	2.16	9,464
June	2.19	123,645	1.58	28,803	1.88	10,561	2.97	1,465	2.59	1,483	2.16	94,434	2.35	4,558	2.43	11,144
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	87,620	1.54	20,488	2.17	9,308	3.36	1,327	2.96	1,241	1.80	64,992	2.47	2,987	2.56	7,765
of which: Collateralised loans [11]																
2021 Aug.	1.45	7,709	.	.	1.81	328	1.76	85	1.18	308	1.55	4,191	1.69	819	1.09	1,978
Sep.	1.35	11,637	.	.	1.71	405	2.14	61	1.17	284	1.35	7,760	1.92	827	1.06	2,300
Oct.	1.29	10,023	.	.	1.72	371	1.87	78	1.24	298	1.46	5,810	1.90	660	0.73	2,806
Nov.	1.34	8,064	.	.	1.76	359	1.60	96	1.19	382	1.43	4,537	1.36	704	1.08	1,986
Dec.	1.27	18,534	.	.	1.69	438	1.93	113	1.23	430	1.20	11,302	1.73	1,948	1.18	4,303
2022 Jan.	1.25	10,159	.	.	1.66	371	1.54	102	1.35	406	1.19	7,044	1.20	386	1.37	1,850
Feb.	1.60	9,498	.	.	1.66	296	1.98	87	1.37	318	1.63	4,798	1.85	1,166	1.46	2,833
Mar.	1.40	14,380	.	.	1.71	503	2.07	120	1.63	444	1.15	9,349	2.56	1,117	1.63	2,847
Apr.	1.72	9,355	.	.	1.92	325	2.15	113	1.93	481	1.53	5,242	1.68	817	2.07	2,377
May	2.02	9,121	.	.	1.95	385	2.43	114	2.20	461	1.81	5,246	3.02	726	2.14	2,189
June	1.90	13,721	.	.	1.89	490	2.69	127	2.43	458	1.49	8,720	2.72	1,076	2.72	2,850
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.	2.19	8,052	.	.	2.25	501	2.97	91	2.74	319	2.01	5,068	2.99	603	2.30	1,470

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 [4]										
2019 Q4	2,473.9	317.5	448.2	355.6	407.3	778.3	3.6	64.9	39.8	58.8
2020 Q1	2,426.8	318.2	452.0	364.1	383.1	738.2	4.5	68.5	38.6	59.6
Q2	2,517.5	317.0	460.5	371.9	409.4	788.7	4.3	68.5	38.7	58.5
Q3	2,547.1	311.1	472.9	373.8	411.3	809.5	4.4	67.1	39.0	58.0
Q4	2,587.4	301.7	478.9	370.6	425.4	841.0	4.7	68.1	38.2	58.7
2021 Q1	2,575.3	292.4	466.8	361.7	437.8	844.7	3.9	72.0	38.9	57.2
Q2	2,591.4	280.5	466.5	361.3	449.6	864.5	3.4	72.6	39.0	54.1
Q3	2,633.2	271.8	471.3	358.3	464.4	882.1	3.3	87.9	38.4	55.8
Q4	2,649.9	261.4	468.7	355.1	472.9	903.3	3.2	85.1	40.8	59.4
2022 Q1	2,541.0	244.9	441.0	333.9	469.7	860.3	2.7	87.8	41.1	59.6
Q2	2,368.8	217.7	394.5	306.8	464.6	793.1	3.0	86.0	41.4	61.8
Life insurance										
2019 Q4	1,325.2	194.8	227.6	217.6	61.1	570.4	2.4	13.7	21.1	16.5
2020 Q1	1,295.7	191.4	231.0	220.6	62.0	538.1	2.2	13.9	20.3	16.3
Q2	1,347.1	192.3	234.4	223.6	64.4	577.0	2.8	13.7	20.3	18.5
Q3	1,369.2	188.4	241.6	225.7	66.1	592.6	3.0	13.6	20.6	17.6
Q4	1,395.8	183.5	242.7	229.9	70.2	616.5	3.3	14.3	20.8	14.5
2021 Q1	1,361.2	170.4	231.5	219.6	74.3	614.3	2.1	14.2	21.5	13.2
Q2	1,371.7	164.4	231.3	219.4	78.0	627.2	2.0	14.1	21.5	13.8
Q3	1,386.6	159.1	232.2	214.8	87.7	642.8	1.9	13.4	20.8	13.8
Q4	1,400.8	152.4	232.7	211.8	93.5	658.0	1.7	14.6	21.9	14.3
2022 Q1	1,312.9	137.6	211.8	193.6	99.9	619.4	0.9	13.9	22.1	13.8
Q2	1,199.6	121.7	182.3	174.0	104.4	562.5	0.9	13.5	22.2	18.0
Non-life insurance										
2019 Q4	673.5	111.2	130.4	79.6	83.6	193.3	0.4	36.2	12.2	26.7
2020 Q1	669.3	111.1	131.3	79.8	80.0	186.9	0.3	38.7	12.0	29.3
Q2	685.4	111.8	134.4	82.4	81.1	197.0	0.4	39.5	12.1	26.7
Q3	693.0	109.3	137.6	83.3	82.7	203.1	0.4	38.5	12.1	26.3
Q4	703.1	105.9	139.5	84.5	85.1	210.2	0.5	37.6	12.7	27.3
2021 Q1	716.8	108.1	139.5	83.6	88.7	215.1	0.4	40.0	12.8	28.6
Q2	720.3	103.3	140.4	83.5	90.6	221.6	0.4	40.4	12.8	27.3
Q3	727.5	98.8	140.2	83.8	93.9	223.3	0.4	46.6	12.9	27.8
Q4	732.4	94.7	139.9	84.8	97.8	227.8	0.3	44.7	14.0	28.4
2022 Q1	721.4	91.9	134.1	81.0	98.9	224.6	0.2	46.0	14.0	30.7
Q2	683.4	82.7	124.4	75.3	99.4	213.3	0.1	44.5	14.2	29.6
Reinsurance [5]										
2019 Q4	475.2	11.5	90.2	58.3	262.6	14.5	0.8	15.1	6.6	15.6
2020 Q1	461.7	15.7	89.8	63.7	241.0	13.3	1.9	15.9	6.3	14.1
Q2	485.0	12.9	91.7	65.9	264.0	14.6	1.1	15.2	6.3	13.3
Q3	485.0	13.5	93.7	64.9	262.6	13.7	1.0	15.0	6.3	14.2
Q4	488.5	12.3	96.7	56.3	270.2	14.3	1.0	16.3	4.7	16.9
2021 Q1	497.3	13.9	95.8	58.5	274.7	15.4	1.4	17.7	4.7	15.3
Q2	499.4	12.8	94.8	58.4	280.9	15.6	1.0	18.1	4.6	13.1
Q3	519.0	13.9	98.9	59.6	282.7	16.1	1.0	28.0	4.7	14.2
Q4	516.7	14.3	96.1	58.6	281.6	17.5	1.1	25.9	4.9	16.6
2022 Q1	506.6	15.5	95.1	59.3	271.0	16.3	1.6	27.9	5.0	15.0
Q2	485.8	13.2	87.8	57.5	260.8	17.3	1.9	27.9	5.1	14.2
Pension funds [6]										
2019 Q4	735.8	85.2	79.6	31.1	38.7	421.1	–	8.8	48.9	22.3
2020 Q1 [7]	601.0	92.2	56.8	48.9	9.4	362.0	0.1	11.3	17.6	2.7
Q2	626.0	91.8	58.8	49.8	9.8	383.4	0.1	11.3	18.3	2.8
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	86.2	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	11.3	445.1	0.1	12.1	17.8	2.3
Q3	689.8	82.9	60.4	48.8	11.8	453.6	0.1	12.2	17.8	2.2
Q4	709.8	82.1	60.0	48.7	11.3	473.5	0.1	12.4	18.4	3.2
2022 Q1	687.7	76.4	56.9	46.3	12.1	462.6	0.0	12.9	18.4	2.1
Q2	661.3	71.3	53.4	43.3	12.5	447.6	0.0	12.5	17.4	3.3

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 as of 2020 Q1. Until 2019 Q4 these are compiled using Solvency I supervisory data, supplemented by voluntary reports and own calculations. **1** Accounts receivable to monetary financial institutions, including registered bonds, borrowers' note loans and registered Pfandbriefe. For pension funds as of 2020 Q1 fair values, previously book values. **2** Including deposits retained on assumed reinsurance as well as registered bonds, borrowers' note loans and registered Pfandbriefe. For pension funds as of 2020 Q1 fair values, previously book values. **3** Including reinsurance recoverables and claims of pension funds on pension managers. **4** Valuation of listed securities at the corresponding consistent price from the ESCB's securities database. **5** Not including the reinsurance business conducted by primary insurers, which is included there. **6** The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes and occupational pension schemes for the self-employed. Social security funds are not included. **7** Change in data sources.

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 [4]
					Total [2]	Life/ pension entitlements [3]	Non-life			
Insurance corporations										
2019 Q4	2,473.9	31.7	75.8	515.3	1,714.9	1,499.6	215.3	1.9	134.4	–
2020 Q1	2,426.8	31.8	82.4	464.3	1,721.8	1,483.2	238.6	2.4	124.1	–
Q2	2,517.5	33.1	82.2	505.3	1,767.6	1,527.7	239.9	1.9	127.3	–
Q3	2,547.1	34.3	80.0	515.7	1,785.5	1,549.1	236.4	1.7	129.9	–
Q4	2,587.4	36.6	79.7	540.4	1,799.0	1,579.2	219.8	1.6	130.2	–
2021 Q1	2,575.3	34.8	81.4	551.7	1,778.7	1,541.3	237.4	2.5	126.2	–
Q2	2,591.4	33.0	81.3	558.9	1,793.7	1,556.4	237.3	2.2	122.2	–
Q3	2,633.2	35.4	82.8	567.3	1,818.0	1,569.1	248.9	2.5	127.0	–
Q4	2,649.9	36.1	82.0	579.7	1,821.1	1,578.4	242.7	2.5	128.6	–
2022 Q1	2,541.0	34.4	82.2	563.8	1,728.4	1,474.6	253.8	4.0	128.3	–
Q2	2,368.8	33.7	78.9	543.2	1,579.7	1,331.2	248.5	5.9	127.4	–
Life insurance										
2019 Q4	1,325.2	3.6	19.1	127.6	1,129.7	1,129.7	–	0.5	44.7	–
2020 Q1	1,295.7	3.6	19.3	114.2	1,117.8	1,117.8	–	0.6	40.3	–
Q2	1,347.1	3.8	19.2	129.8	1,150.3	1,150.3	–	0.5	43.4	–
Q3	1,369.2	3.9	19.5	136.8	1,164.7	1,164.7	–	0.5	43.7	–
Q4	1,395.8	3.9	20.7	142.8	1,185.6	1,185.6	–	0.5	42.2	–
2021 Q1	1,361.2	3.3	19.9	143.1	1,154.3	1,154.3	–	1.0	39.6	–
Q2	1,371.7	3.3	20.4	144.2	1,164.9	1,164.9	–	1.0	37.9	–
Q3	1,386.6	3.3	19.3	148.1	1,176.4	1,176.4	–	1.1	38.4	–
Q4	1,400.8	3.3	20.7	148.2	1,185.5	1,185.5	–	0.9	42.2	–
2022 Q1	1,312.9	3.2	19.9	142.8	1,103.6	1,103.6	–	1.4	42.1	–
Q2	1,199.6	3.1	19.1	141.5	988.5	988.5	–	2.6	44.9	–
Non-life insurance										
2019 Q4	673.5	1.2	9.3	153.7	457.2	349.4	107.8	0.1	52.0	–
2020 Q1	669.3	1.3	9.8	141.9	468.2	344.4	123.8	0.1	48.0	–
Q2	685.4	1.3	9.5	149.3	478.1	355.6	122.5	0.1	47.1	–
Q3	693.0	1.2	9.6	151.9	482.1	362.3	119.8	0.1	48.1	–
Q4	703.1	1.3	9.7	157.9	482.9	368.7	114.2	0.0	51.2	–
2021 Q1	716.8	1.2	10.6	162.8	491.6	362.6	129.0	0.1	50.5	–
Q2	720.3	1.2	10.5	166.4	493.6	366.3	127.3	0.1	48.4	–
Q3	727.5	1.2	10.5	169.2	499.0	367.9	131.2	0.2	47.5	–
Q4	732.4	1.4	10.8	176.2	493.0	367.6	125.4	0.2	50.9	–
2022 Q1	721.4	1.3	11.8	174.1	483.8	347.2	136.6	0.3	50.1	–
Q2	683.4	1.3	11.2	169.5	453.6	323.2	130.4	0.5	47.4	–
Reinsurance [5]										
2019 Q4	475.2	26.9	47.4	234.0	128.0	20.6	107.5	1.3	37.7	–
2020 Q1	461.7	26.9	53.3	208.1	135.9	21.0	114.9	1.7	35.8	–
Q2	485.0	28.1	53.5	226.2	139.1	21.8	117.4	1.3	36.8	–
Q3	485.0	29.2	50.9	227.0	138.7	22.1	116.6	1.0	38.1	–
Q4	488.5	31.4	49.3	239.6	130.4	24.8	105.6	1.0	36.7	–
2021 Q1	497.3	30.2	50.9	245.8	132.8	24.4	108.4	1.4	36.2	–
Q2	499.4	28.5	50.4	248.3	135.2	25.2	110.0	1.1	35.9	–
Q3	519.0	30.9	53.0	250.1	142.7	24.9	117.8	1.3	41.1	–
Q4	516.7	31.4	50.5	255.3	142.6	25.3	117.3	1.4	35.5	–
2022 Q1	506.6	30.0	50.4	246.8	140.9	23.8	117.2	2.3	36.1	–
Q2	485.8	29.3	48.6	232.2	137.7	19.5	118.2	2.8	35.1	–
Pension funds [6]										
2019 Q4	735.8	–	8.4	8.6	638.0	638.0	–	–	3.7	77.1
2020 Q1 [7]	601.0	–	1.6	22.6	497.5	496.9	–	0.3	8.8	70.3
Q2	626.0	–	1.6	25.6	507.3	506.7	–	0.3	8.9	82.4
Q3	638.5	–	1.6	27.3	511.4	510.8	–	0.3	8.9	88.9
Q4	662.9	–	1.6	28.4	528.5	527.9	–	0.3	9.0	95.1
2021 Q1	664.3	–	1.6	28.8	529.3	528.1	–	0.3	8.6	95.8
Q2	683.2	–	1.8	31.1	536.5	534.8	–	0.2	9.3	104.3
Q3	689.8	–	1.8	31.5	541.1	538.9	–	0.2	9.3	106.0
Q4	709.8	–	1.9	31.8	560.5	557.6	–	0.1	9.2	106.4
2022 Q1	687.7	–	1.4	28.7	555.1	552.3	–	0.1	7.3	95.0
Q2	661.3	–	0.9	23.7	555.6	552.8	–	0.1	5.1	75.9

Sources: The calculations for the insurance sectors are based on supervisory data according to Solvency I and II and for pension funds on IORP supervisory data and own data collections as of 2020 Q1. Until 2019 Q4 these are compiled using Solvency I supervisory data, supplemented by voluntary reports and own calculations. **1** Including deposits retained on ceded business as well as registered bonds, borrowers' 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** Own funds correspond to the sum of "Net worth" and "Shares and other equity". **5** Not including the reinsurance business conducted by primary insurers, which is included there. **6** 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. **7** Change in data sources.

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]
2010	146,620	– 1,212	– 7,621	24,044	– 17,635	147,831	92,682	– 103,271	22,967	172,986	53,938
2011	33,649	13,575	– 46,796	850	59,521	20,075	– 23,876	– 94,793	36,805	34,112	57,525
2012	51,813	– 21,419	– 98,820	– 8,701	86,103	73,231	– 3,767	– 42,017	– 3,573	41,823	55,581
2013	– 15,971	– 101,616	– 117,187	153	15,415	85,645	16,409	– 25,778	– 12,708	54,895	– 32,379
2014	64,775	– 31,962	– 47,404	– 1,330	16,776	96,737	50,408	– 12,124	– 11,951	74,483	14,366
2015	33,024	– 36,010	– 65,778	26,762	3,006	69,034	116,493	– 66,330	121,164	61,659	– 83,471
2016	71,380	27,429	19,177	18,265	– 10,012	43,951	164,148	– 58,012	187,500	34,660	– 92,768
2017	54,840	11,563	1,096	7,112	3,356	43,277	137,907	– 71,454	161,012	48,349	– 83,067
2018	64,682	16,630	33,251	12,433	– 29,055	48,052	93,103	– 24,417	67,328	50,192	– 28,421
2019	136,117	68,536	29,254	32,505	6,778	67,581	59,013	8,059	2,408	48,546	77,104
2020	437,976	374,034	14,462	88,703	270,870	63,941	274,979	18,955	226,887	29,138	162,996
2021	283,684	221,648	31,941	19,754	169,953	62,036	310,838	– 41,852	245,198	107,492	– 27,154
2021 Sep.	27,619	17,160	12,855	8,183	– 3,878	10,460	32,908	6,387	17,663	8,858	– 5,289
Oct.	103	3,176	7,354	– 7,515	3,337	– 3,073	9,377	– 17,904	20,765	6,517	– 9,275
Nov.	39,728	31,488	6,574	8,351	16,563	8,241	34,851	– 529	23,375	12,005	4,877
Dec.	– 39,780	– 23,893	– 17,511	– 8,944	2,561	– 15,886	– 1,271	– 9,420	14,137	– 5,988	– 38,509
2022 Jan.	49,962	25,410	9,976	6,559	8,876	24,552	40,530	– 2,870	14,990	28,409	9,432
Feb.	32,181	27,557	10,598	3,056	13,902	4,624	25,329	8,057	14,793	2,478	6,852
Mar.	62,964	43,608	23,278	7,972	12,358	19,356	46,555	6,811	10,709	29,035	16,409
Apr.	– 17,423	– 2,212	– 3,140	707	222	– 15,211	– 2,285	– 16,927	13,068	1,574	– 15,138
May	23,669	23,911	4,066	4,901	14,944	– 242	25,954	5,485	14,400	6,069	– 2,285
June	23,509	12,731	5,517	– 1,563	8,777	10,778	17,236	8,471	– 2,289	11,054	6,273
July	– 17,762	– 12,924	– 6,955	11,041	– 17,011	– 4,838	– 6,668	10,710	– 13,670	– 3,708	– 11,094
Aug.	17,696	24,985	2,536	2,198	20,251	– 7,289	– 569	– 10,162	– 726	10,318	18,265

€ 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]
2010	37,767	20,049	17,718	36,406	7,340	29,066	1,360
2011	25,833	21,713	4,120	40,804	670	40,134	– 14,971
2012	15,061	5,120	9,941	14,405	10,259	4,146	656
2013	20,187	10,106	10,081	17,336	11,991	5,345	2,851
2014	43,501	18,778	24,723	43,950	17,203	26,747	– 449
2015	44,165	7,668	36,497	34,437	– 5,421	39,858	9,728
2016	30,896	4,409	26,487	31,037	– 5,143	36,180	– 141
2017	51,571	15,570	36,001	49,913	7,031	42,882	1,658
2018	54,883	16,188	38,695	83,107	– 11,184	94,291	– 28,224
2019	46,021	9,076	36,945	33,675	– 1,119	34,794	12,346
2020	83,859	17,771	66,088	115,960	27	115,933	– 32,101
2021	125,541	49,066	76,475	124,105	10,869	113,236	1,436
2021 Sep.	13,516	4,660	8,855	15,099	3,374	11,725	– 1,583
Oct.	10,042	5,498	4,544	15,060	1,401	13,659	– 5,018
Nov.	6,393	2,367	4,026	15,628	2,698	12,930	– 9,235
Dec.	13,692	10,698	2,995	6,987	– 1,848	8,835	6,705
2022 Jan.	6,155	396	5,760	9,711	2,076	7,635	– 3,556
Feb.	– 5,455	628	– 6,084	– 4,539	– 1,599	– 2,940	– 916
Mar.	9,478	359	9,119	14,188	– 1,736	15,924	– 4,710
Apr.	6,207	150	6,056	9,419	477	8,942	– 3,212
May	3,197	1,411	1,786	3,880	1,600	2,280	– 684
June	– 25,843	894	– 26,737	– 24,422	– 3,308	– 21,114	– 1,421
July	– 2,467	1,374	– 3,841	– 704	– 2,145	1,441	– 1,763
Aug.	– 1,768	87	– 1,855	849	169	680	– 2,617

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								
2011	1,337,772	658,781	31,431	24,295	376,876	226,180	86,614	592,375
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
2021 Dec.	83,511	37,389	2,675	1,707	28,987	4,020	5,058	41,064
2022 Jan.	136,055	69,043	11,165	1,510	50,426	5,942	13,257	53,754
Feb.	123,858	67,336	5,174	1,364	54,198	6,600	9,451	47,071
Mar.	168,436	85,551	5,602	875	72,212	6,862	16,473	66,412
Apr.	129,238	68,828	3,091	140	59,957	5,640	8,317	52,093
May	139,081	71,010	3,777	1,809	60,594	4,830	15,238	52,833
June	141,105	74,361	5,924	770	62,377	5,290	12,335	54,408
July	148,625	72,487	5,291	348	59,203	7,645	21,763	54,375
Aug.	130,730	77,533	5,282	110	66,372	5,769	10,735	42,462
of which: Debt securities with maturities of more than four years [4]								
2011	368,039	153,309	13,142	8,500	72,985	58,684	41,299	173,431
2012	421,018	177,086	23,374	6,482	74,386	72,845	44,042	199,888
2013	372,805	151,797	16,482	10,007	60,662	64,646	45,244	175,765
2014	420,006	157,720	17,678	8,904	61,674	69,462	56,249	206,037
2015	414,593	179,150	25,337	9,199	62,237	82,379	68,704	166,742
2016 [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
2021 Dec.	15,792	4,714	1,625	1,150	1,258	680	1,259	9,820
2022 Jan.	50,594	25,812	9,165	1,510	12,587	2,550	3,583	21,200
Feb.	41,368	22,391	3,487	1,364	14,364	3,175	2,101	16,876
Mar.	44,448	17,785	3,236	300	11,718	2,532	6,408	20,255
Apr.	28,734	13,879	1,926	50	10,089	1,814	1,050	13,805
May	33,822	12,448	3,173	1,264	6,238	1,774	4,423	16,950
June	37,845	7,517	2,676	500	2,342	1,999	4,128	26,200
July	47,135	12,838	2,626	250	8,760	1,201	13,373	20,925
Aug.	26,951	13,948	2,158	–	10,235	1,556	1,178	11,825
Net sales [5]								
2011	22,518	– 54,582	– 1,657	– 44,290	– 32,904	– 44,852	– 3,189	80,289
2012	– 85,298	– 100,198	– 4,177	– 41,660	– 3,259	– 51,099	– 6,401	21,298
2013	– 140,017	– 125,932	– 17,364	– 37,778	– 4,027	– 66,760	1,394	– 15,479
2014	– 34,020	– 56,899	– 6,313	– 23,856	– 862	– 25,869	10,497	12,383
2015	– 65,147	– 77,273	9,271	– 9,754	– 2,758	– 74,028	25,300	– 13,174
2016 [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
2021 Dec.	– 27,509	– 13,602	1,753	– 179	– 11,559	– 3,618	– 6,028	– 7,878
2022 Jan.	10,728	12,636	6,459	– 397	5,370	1,203	5,409	– 7,317
Feb.	18,055	10,554	2,870	869	7,435	– 619	924	6,577
Mar.	41,894	23,733	2,097	250	20,258	1,128	7,541	10,620
Apr.	– 16,610	– 4,444	720	– 310	– 4,339	– 515	– 1,343	– 10,823
May	24,352	3,706	685	1,774	1,967	– 721	3,607	17,039
June	8,820	3,351	1,834	150	1,840	– 474	– 411	5,880
July	– 9,336	– 9,581	1,183	– 4,070	– 7,083	390	11,189	– 10,945
Aug.	14,438	1,721	4,546	– 1,290	– 778	– 757	– 119	12,836

***** 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		
2011	3,370,721	1,515,911	149,185	188,663	577,423	600,640	247,585	1,607,226
2012	3,285,422	1 1,414,349	145,007	147,070	574,163	1 548,109	1 220,456	1 1,650,617
2013	3,145,329	1,288,340	127,641	109,290	570,136	481,273	221,851	1,635,138
2014	3,111,308	1,231,445	121,328	85,434	569,409	455,274	232,342	1,647,520
2015	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377
2016 1	3,068,111	1,164,965	132,775	62,701	633,578	335,910	275,789	1,627,358
2017 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
2021 Dec.	3,781,975	1,250,777	202,385	63,496	731,068	253,828	414,791	2,116,406
2022 Jan.	3,794,503	1,267,762	209,367	63,110	739,737	255,548	420,868	2,105,873
Feb.	3,806,369	1,277,560	212,228	63,984	746,531	254,817	416,767	2,112,042
Mar.	3,851,741	1,302,963	213,413	64,234	769,133	256,183	424,622	2,124,156
Apr.	3,852,799	1,311,863	214,466	63,960	776,664	256,773	424,076	2,116,860
May	3,870,240	1,309,630	214,981	65,720	773,798	255,131	427,180	2,133,430
June	3,888,933	1,319,854	216,989	65,910	781,469	255,486	427,460	2,141,620
July	3,884,305	1,318,280	218,402	61,866	781,239	256,772	439,070	2,126,954
Aug.	3,901,978	1,323,146	222,515	60,584	784,706	255,341	439,459	2,139,374
Breakdown by remaining period to maturity 3								**Position at end-July 2022**
bis unter 2	1 226 075	461 574	56 712	22 811	313 933	68 119	80 568	683 932
2 bis unter 4	725 094	314 654	61 924	15 666	177 070	59 993	82 522	327 919
4 bis unter 6	585 376	225 846	45 675	9 280	117 947	52 944	62 991	296 539
6 bis unter 8	387 495	123 650	31 897	5 899	65 947	19 907	40 746	223 099
8 bis unter 10	275 005	89 863	12 640	2 419	53 180	21 625	29 543	155 599
10 bis unter 15	241 367	63 831	9 247	4 060	39 913	10 612	35 771	141 764
15 bis unter 20	120 168	13 744	3 554	360	7 718	2 112	13 315	93 109
20 und darüber	341 399	29 983	866	89	8 998	20 029	94 002	217 414

***** 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 ex-change 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	
2011	177,167	2,570	6,390	552	462	– 552	– 762	– 3,532	924,214
2012	178,617	1,449	3,046	129	570	– 478	594	– 2,411	1,150,188
2013	171,741	– 6,879	2,971	718	476	– 1,432	– 619	– 8,992	1,432,658
2014	177,097	5,356	5,332	1,265	1,714	– 465	– 1,044	– 1,446	1,478,063
2015	177,416	319	4,634	397	599	– 1,394	– 1,385	– 2,535	1,614,442
2016	176,355	– 1,062	3,272	319	337	– 953	– 2,165	– 1,865	1,676,397
2017	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
2021 Dec.	186,580	– 2,595	524	16	–	– 201	– 106	– 2,827	2,301,942
2022 Jan.	186,830	250	341	0	2	– 9	– 23	– 61	2,211,900
Feb.	186,737	– 110	64	9	40	– 11	– 76	– 137	2,060,901
Mar.	186,993	256	260	91	–	– 0	– 25	– 70	2,076,514
Apr.	186,971	25	47	1	–	– 0	– 4	– 19	2,007,353
May	187,056	84	215	42	0	– 0	– 0	– 172	2,004,018
June	187,396	340	138	29	328	–	– 108	– 47	1,744,789
July	186,233	– 1,194	120	39	–	– 1	– 25	– 1,326	1,847,025
Aug.	185,545	– 688	42	–	–	– 0	– 32	– 698	1,769,546

***** 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 and indices on German securities

Period	Yields on debt securities outstanding issued by residents [1]							Price indices [2,3]			
		Public debt securities			Bank debt securities			Debt securities		Shares	
			Listed Federal securities								
	Total	Total	Total	With a residual maturity of 9 to 10 years [4]	Total	With a residual maturity of more than 9 years and up to 10 years	Corporate bonds (non-MFIs)	German bond index (REX)	iBoxx € Germany price index	CDAX share price index	German share index (DAX)
	% per annum							Average daily rate	End-1998 = 100	End-1987 = 100	End-1987 = 1,000
2010	2.5	2.4	2.4	2.7	2.7	3.3	4.0	124.96	102.95	368.72	6,914.19
2011	2.6	2.4	2.4	2.6	2.9	3.5	4.3	131.48	109.53	304.60	5,898.35
2012	1.4	1.3	1.3	1.5	1.6	2.1	3.7	135.11	111.18	380.03	7,612.39
2013	1.4	1.3	1.3	1.6	1.3	2.1	3.4	132.11	105.92	466.53	9,552.16
2014	1.0	1.0	1.0	1.2	0.9	1.7	3.0	139.68	114.37	468.39	9,805.55
2015	0.5	0.4	0.4	0.5	0.5	1.2	2.4	139.52	112.42	508.80	10,743.01
2016	0.1	0.0	0.0	0.1	0.3	1.0	2.1	142.50	112.72	526.55	11,481.06
2017	0.3	0.2	0.2	0.3	0.4	0.9	1.7	140.53	109.03	595.45	12,917.64
2018	0.4	0.3	0.3	0.4	0.6	1.0	2.5	141.84	109.71	474.85	10,558.96
2019	– 0.1	– 0.2	– 0.3	– 0.3	0.1	0.3	2.5	143.72	111.32	575.80	13,249.01
2020	– 0.2	– 0.4	– 0.5	– 0.5	– 0.0	0.1	1.7	146.15	113.14	586.72	13,718.78
2021	– 0.1	– 0.3	– 0.4	– 0.4	– 0.1	0.2	0.9	144.23	108.88	654.20	15,884.86
2022 Apr.	1.1	0.8	0.7	0.7	1.4	1.5	2.5	135.85	99.80	564.54	14,097.88
May	1.3	1.0	0.9	1.0	1.6	1.7	3.0	135.30	97.98	561.04	14,388.35
June	1.9	1.5	1.4	1.4	2.1	2.3	3.8	133.21	96.13	494.98	12,783.77
July	1.5	1.2	1.0	1.1	1.9	2.0	3.7	137.14	100.13	519.98	13,484.05
Aug.	1.5	1.1	1.0	1.0	1.9	1.9	3.3	131.87	94.89	493.47	12,834.96
Sep.	2.3	1.9	1.7	1.8	2.7	2.6	4.3	127.98	91.15	458.93	12,114.36

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** End of year or month. **3** Source: Deutsche Börse AG. **4** Only debt securities eligible as underlying instruments for futures contracts; calculated as unweighted averages.

6. Sales and purchases of mutual fund shares in Germany

€ million

Period	Sales								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	140,233	97,711	3,998	– 473	862	1,000	93,713	42,521	144,075	819	– 1,745	143,256	44,266	– 3,840
2015	181,889	146,136	30,420	318	22,345	3,636	115,716	35,753	174,018	7,362	494	166,656	35,259	7,871
2016	156,985	119,369	21,301	– 342	11,131	7,384	98,068	37,615	163,934	2,877	– 3,172	161,057	40,787	– 6,947
2017	153,756	94,921	29,560	– 235	21,970	4,406	65,361	58,834	156,282	4,938	1,048	151,344	57,786	– 2,526
2018	132,033	103,694	15,279	377	4,166	6,168	88,415	28,339	138,713	2,979	– 2,306	135,734	30,645	– 6,680
2019	176,254	122,546	17,032	– 447	5,097	10,580	105,514	53,708	180,772	2,719	– 812	178,053	54,520	– 4,519
2020	178,613	116,028	19,193	– 42	11,343	8,795	96,835	62,585	176,751	336	– 1,656	176,415	64,241	1,862
2021	261,295	157,861	41,016	482	31,023	7,841	116,845	103,434	264,055	13,154	254	250,901	103,180	– 2,760
2022 Feb.	10,925	12,223	– 910	102	– 1,364	296	13,132	– 1,298	11,212	526	– 107	10,686	– 1,191	– 287
Mar.	5,368	6,548	– 299	188	– 1,082	596	6,847	– 1,180	7,930	– 132	– 244	8,062	– 936	– 2,562
Apr.	11,416	9,302	2,398	– 288	1,900	676	6,904	2,113	10,952	154	393	10,798	1,720	463
May	5,606	5,058	1,045	251	380	381	4,013	548	4,981	– 132	– 434	5,113	982	625
June	3,171	4,539	– 191	– 8	– 428	389	4,730	– 1,368	2,907	– 1,186	– 72	4,093	– 1,296	264
July	3,330	2,810	– 965	76	– 1,427	386	3,775	520	5,076	1,176	74	3,900	446	– 1,746
Aug.	7,358	6,943	– 206	– 103	– 252	116	7,152	415	7,387	– 497	– 76	7,884	491	– 29

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	2019	2020	2021	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2
Acquisition of financial assets									
Currency and deposits	17.93	96.81	40.12	21.81	– 25.36	19.57	24.11	14.83	– 27.36
Debt securities	– 2.37	2.99	3.11	– 1.53	1.90	1.58	1.16	0.64	– 0.10
Short-term debt securities	– 1.29	1.27	2.27	0.12	0.77	0.26	1.12	0.39	– 1.94
Long-term debt securities	– 1.08	1.72	0.85	– 1.65	1.13	1.32	0.05	0.25	1.84
Memo item:									
Debt securities of domestic sectors	– 0.58	1.38	1.34	– 0.64	0.87	1.75	– 0.64	0.34	0.98
Non-financial corporations	0.49	– 0.17	0.74	0.10	0.62	0.59	– 0.57	0.17	– 0.17
Financial corporations	– 0.64	0.12	1.08	– 0.55	0.48	0.58	0.56	0.44	0.73
General government	– 0.43	1.44	– 0.48	– 0.20	– 0.24	0.58	– 0.63	– 0.27	0.43
Debt securities of the rest of the world	– 1.79	1.61	1.78	– 0.88	1.03	– 0.17	1.80	0.31	– 1.08
Loans	– 1.48	– 9.64	50.61	– 0.23	6.50	13.55	30.79	5.36	17.95
Short-term loans	12.60	– 7.30	38.01	– 3.95	7.92	11.48	22.56	– 2.72	13.04
Long-term loans	– 14.08	– 2.34	12.61	3.73	– 1.42	2.07	8.23	8.08	4.90
Memo item:									
Loans to domestic sectors	– 26.03	– 1.13	10.10	– 6.25	0.01	0.18	16.16	7.85	2.51
Non-financial corporations	– 28.14	– 12.27	7.11	– 1.66	– 3.40	– 1.21	13.38	2.44	5.52
Financial corporations	1.86	10.57	2.38	– 4.75	3.26	1.24	2.63	5.41	– 3.01
General government	0.25	0.57	0.61	0.15	0.15	0.15	0.15	0.00	0.00
Loans to the rest of the world	24.55	– 8.51	40.51	6.02	6.49	13.37	14.63	– 2.49	15.44
Equity and investment fund shares	123.65	114.98	162.49	47.81	38.47	29.57	46.64	48.70	37.54
Equity	114.64	102.20	140.71	43.98	31.55	26.84	38.35	46.53	39.39
Listed shares of domestic sectors	6.18	– 77.97	15.33	12.08	4.92	– 18.27	16.59	6.03	7.40
Non-financial corporations	4.62	– 78.06	16.89	12.08	5.32	– 18.80	18.30	5.58	7.12
Financial corporations	1.55	0.09	– 1.56	0.01	– 0.41	0.54	– 1.70	0.46	0.28
Listed shares of the rest of the world	7.40	5.01	5.09	0.64	– 0.87	4.64	0.68	– 0.75	3.22
Other equity [1]	101.07	175.16	120.29	31.25	27.50	40.47	21.08	41.24	28.77
Investment fund shares	9.00	12.77	21.78	3.83	6.92	2.74	8.29	2.17	– 1.85
Money market fund shares	1.78	3.79	0.66	– 0.47	– 0.19	– 0.41	1.73	– 1.22	– 0.42
Non-MMF investment fund shares	7.22	8.99	21.12	4.31	7.11	3.15	6.56	3.39	– 1.43
Insurance technical reserves	1.81	2.76	2.87	0.78	0.80	0.61	0.69	– 0.11	7.74
Financial derivatives	– 0.62	– 27.52	15.55	13.92	2.29	0.44	– 1.09	18.59	27.87
Other accounts receivable	– 67.63	44.68	68.81	9.37	– 13.71	16.60	56.55	1.97	– 27.51
Total	71.28	225.07	343.56	91.93	10.88	81.92	158.84	89.98	36.13
External financing									
Debt securities	20.52	36.89	20.86	2.77	8.92	10.29	– 1.12	10.95	3.77
Short-term securities	4.88	– 4.40	2.51	– 1.19	1.23	3.50	– 1.02	3.85	1.21
Long-term securities	15.64	41.29	18.35	3.96	7.69	6.79	– 0.10	7.10	2.56
Memo item:									
Debt securities of domestic sectors	6.61	18.12	9.16	1.96	3.29	2.14	1.78	5.64	1.64
Non-financial corporations	0.49	– 0.17	0.74	0.10	0.62	0.59	– 0.57	0.17	– 0.17
Financial corporations	5.31	19.86	9.12	1.98	2.76	1.78	2.61	5.34	1.87
General government	0.47	– 0.22	0.09	0.14	0.03	0.02	– 0.10	– 0.01	– 0.08
Households	0.34	– 1.35	– 0.79	– 0.26	– 0.12	– 0.26	– 0.15	0.14	0.01
Debt securities of the rest of the world	13.91	18.77	11.70	0.81	5.63	8.15	– 2.89	5.31	2.13
Loans	90.09	84.73	94.00	28.53	– 10.92	22.98	53.40	33.15	39.43
Short-term loans	33.43	– 7.17	50.98	23.43	– 8.60	14.96	21.18	25.70	15.73
Long-term loans	56.66	91.89	43.02	5.10	– 2.32	8.03	32.22	7.45	23.70
Memo item:									
Loans from domestic sectors	36.84	36.81	67.74	31.86	– 14.35	9.37	40.86	33.16	32.35
Non-financial corporations	– 28.14	– 12.27	7.11	– 1.66	– 3.40	– 1.21	13.38	2.44	5.52
Financial corporations	64.24	13.26	46.49	31.00	– 15.98	7.95	23.53	28.45	22.64
General government	0.75	35.81	14.14	2.52	5.03	2.64	3.95	2.26	4.20
Loans from the rest of the world	53.25	47.92	26.26	– 3.33	3.43	13.61	12.55	– 0.01	7.08
Equity	11.69	60.37	61.44	14.63	8.50	17.93	20.38	3.11	7.71
Listed shares of domestic sectors	– 24.77	– 62.25	26.38	15.28	8.02	– 21.41	24.50	12.93	10.11
Non-financial corporations	4.62	– 78.06	16.89	12.08	5.32	– 18.80	18.30	5.58	7.12
Financial corporations	– 33.41	3.47	– 2.37	0.02	1.52	– 3.23	– 0.68	5.19	– 1.41
General government	– 0.01	0.26	– 0.09	– 0.07	– 0.07	– 0.00	0.04	0.18	0.20
Households	4.03	12.08	11.96	3.25	1.25	0.63	6.84	1.98	4.20
Listed shares of the rest of the world	– 1.16	10.09	18.94	– 4.97	– 1.16	31.69	– 6.62	– 12.77	– 1.54
Other equity [1]	37.61	112.54	16.11	4.32	1.64	7.65	2.50	2.95	– 0.87
Insurance technical reserves	7.55	5.83	4.25	1.06	1.06	1.06	1.06	1.06	1.06
Financial derivatives and employee stock options	– 1.38	0.54	14.32	1.27	8.20	3.93	0.93	0.37	2.32
Other accounts payable	8.87	14.40	147.36	48.66	8.52	29.78	60.40	27.28	28.03
Total	137.34	202.76	342.23	96.92	24.29	85.97	135.06	75.93	82.32

1 Including unlisted shares.

IX. Financial accounts

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

End of year/quarter; € billion

Item	2019	2020	2021	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2
Financial assets									
Currency and deposits	578.6	717.6	721.9	713.7	693.5	706.4	721.9	726.8	692.7
Debt securities	49.6	51.5	54.3	49.9	51.7	53.3	54.3	53.4	51.3
Short-term debt securities	3.7	4.8	7.1	5.0	5.7	6.0	7.1	7.5	5.6
Long-term debt securities	45.9	46.7	47.2	44.9	46.0	47.3	47.2	45.9	45.6
Memo item:									
Debt securities of domestic sectors	21.1	22.1	23.3	21.4	22.3	24.0	23.3	23.0	23.0
Non-financial corporations	5.0	4.7	5.3	4.7	5.3	5.9	5.3	5.2	4.9
Financial corporations	13.6	13.4	14.5	12.9	13.4	14.0	14.5	14.6	14.7
General government	2.6	4.0	3.5	3.8	3.6	4.1	3.5	3.2	3.5
Debt securities of the rest of the world	28.4	29.4	31.0	28.5	29.4	29.3	31.0	30.4	28.2
Loans	731.9	725.0	778.6	726.6	732.8	747.4	778.6	785.5	807.7
Short-term loans	568.5	566.1	605.1	562.7	570.5	582.7	605.1	603.6	619.2
Long-term loans	163.5	158.9	173.5	163.9	162.2	164.7	173.5	181.9	188.5
Memo item:									
Loans to domestic sectors	414.5	413.4	423.5	407.1	407.1	407.3	423.5	431.3	433.8
Non-financial corporations	339.9	327.6	334.7	325.9	322.5	321.3	334.7	337.2	342.7
Financial corporations	67.3	77.8	80.2	73.1	76.3	77.6	80.2	85.6	82.6
General government	7.4	7.9	8.5	8.1	8.2	8.4	8.5	8.5	8.5
Loans to the rest of the world	317.4	311.7	355.2	319.5	325.6	340.1	355.2	354.2	373.8
Equity and investment fund shares	2,448.6	2,559.5	2,912.8	2,726.9	2,813.6	2,871.7	2,912.8	2,838.5	2,765.7
Equity	2,258.6	2,354.8	2,672.6	2,514.5	2,589.5	2,644.2	2,672.6	2,606.2	2,548.2
Listed shares of domestic sectors	342.0	307.0	393.0	359.4	383.5	371.5	393.0	350.1	305.0
Non-financial corporations	332.9	298.9	384.9	350.9	375.0	361.7	384.9	342.4	298.2
Financial corporations	9.0	8.1	8.0	8.5	8.5	9.8	8.0	7.7	6.8
Listed shares of the rest of the world	52.3	66.6	71.5	71.0	69.4	71.0	71.5	66.5	66.3
Other equity [1]	1,864.3	1,981.2	2,208.2	2,084.2	2,136.6	2,201.7	2,208.2	2,189.6	2,176.8
Investment fund shares	190.0	204.7	240.2	212.4	224.1	227.5	240.2	232.3	217.5
Money market fund shares	3.2	7.0	7.6	6.5	6.3	5.9	7.6	6.4	6.0
Non-MMF investment fund shares	186.8	197.7	232.6	205.9	217.8	221.6	232.6	225.9	211.5
Insurance technical reserves	59.2	62.1	64.8	62.8	63.6	64.1	64.8	64.8	72.7
Financial derivatives	31.6	31.1	106.0	30.9	52.0	106.6	106.0	147.9	164.5
Other accounts receivable	1,251.0	1,237.4	1,458.5	1,347.8	1,340.7	1,392.2	1,458.5	1,506.2	1,542.3
Total	5,150.4	5,384.2	6,096.9	5,658.6	5,747.8	5,941.7	6,096.9	6,123.1	6,096.9
Liabilities									
Debt securities	204.7	238.3	252.3	239.5	249.3	256.1	252.3	245.3	229.7
Short-term securities	11.9	7.1	9.6	5.9	7.2	10.6	9.6	13.4	14.7
Long-term securities	192.9	231.2	242.7	233.6	242.1	245.5	242.7	231.8	215.1
Memo item:									
Debt securities of domestic sectors	77.7	96.0	100.6	95.6	99.5	99.7	100.6	98.6	92.6
Non-financial corporations	5.0	4.7	5.3	4.7	5.3	5.9	5.3	5.2	4.9
Financial corporations	57.8	78.1	83.2	78.0	81.2	81.2	83.2	81.8	76.8
General government	0.6	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.3
Households	14.4	12.8	11.8	12.5	12.5	12.1	11.8	11.2	10.6
Debt securities of the rest of the world	127.0	142.3	151.7	143.9	149.8	156.4	151.7	146.6	137.1
Loans	2,200.1	2,278.4	2,382.8	2,315.6	2,301.4	2,327.5	2,382.8	2,422.5	2,469.6
Short-term loans	838.3	825.0	879.6	851.1	842.2	857.6	879.6	907.0	927.9
Long-term loans	1,361.8	1,453.4	1,503.3	1,464.5	1,459.2	1,469.9	1,503.3	1,515.5	1,541.8
Memo item:									
Loans from domestic sectors	1,379.5	1,412.7	1,482.0	1,448.4	1,431.8	1,442.0	1,482.0	1,520.1	1,551.4
Non-financial corporations	339.9	327.6	334.7	325.9	322.5	321.3	334.7	337.2	342.7
Financial corporations	974.0	982.8	1,031.1	1,018.0	999.7	1,008.5	1,031.1	1,064.5	1,086.2
General government	65.7	102.3	116.2	104.5	109.5	112.2	116.2	118.4	122.5
Loans from the rest of the world	820.6	865.7	900.9	867.2	869.6	885.5	900.9	902.4	918.2
Equity	3,096.8	3,260.9	3,689.0	3,522.5	3,640.3	3,645.9	3,689.0	3,391.9	2,994.2
Listed shares of domestic sectors	734.1	739.9	924.8	848.8	896.1	882.4	924.8	840.1	734.0
Non-financial corporations	332.9	298.9	384.9	350.9	375.0	361.7	384.9	342.4	298.2
Financial corporations	158.0	171.9	210.2	193.0	202.9	196.9	210.2	194.3	161.9
General government	51.8	56.3	69.9	67.3	71.8	70.6	69.9	70.0	70.7
Households	191.3	212.8	259.7	237.6	246.3	253.2	259.7	233.3	203.2
Listed shares of the rest of the world	958.6	995.6	1,126.3	1,081.5	1,125.8	1,119.2	1,126.3	984.0	795.2
Other equity [1]	1,404.2	1,525.5	1,637.9	1,592.3	1,618.4	1,644.2	1,637.9	1,567.9	1,465.0
Insurance technical reserves	277.3	283.1	287.4	284.2	285.3	286.3	287.4	288.4	289.5
Financial derivatives and employee stock options	68.8	83.3	161.7	65.1	92.3	152.4	161.7	168.3	162.6
Other accounts payable	1,302.2	1,287.6	1,551.9	1,385.9	1,383.7	1,455.0	1,551.9	1,582.8	1,616.3
Total	7,150.0	7,431.7	8,325.2	7,812.8	7,952.2	8,123.3	8,325.2	8,099.2	7,762.0

1 Including unlisted shares.

IX. Financial accounts

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

€ billion

Item	2019	2020	2021	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2
Acquisition of financial assets									
Currency and deposits	146.74	213.31	145.57	48.31	53.10	12.10	32.06	11.73	31.66
Currency	35.26	61.94	59.84	12.68	16.47	14.98	15.72	13.47	12.35
Deposits	111.49	151.36	85.74	35.64	36.63	– 2.87	16.34	– 1.74	19.31
Transferable deposits	111.01	165.34	90.84	34.10	37.70	2.69	16.35	– 0.99	23.73
Time deposits	5.95	1.29	– 4.97	0.06	– 1.06	– 3.76	– 0.21	1.32	– 0.81
Savings deposits (including savings certificates)	– 5.47	– 15.26	– 0.13	1.48	– 0.01	– 1.81	0.20	– 2.07	– 3.61
Debt securities	– 1.86	– 5.94	– 5.89	– 2.66	– 1.30	– 1.32	– 0.62	2.81	4.85
Short-term debt securities	– 0.53	0.08	0.31	0.16	0.22	– 0.10	0.03	– 0.02	0.05
Long-term debt securities	– 1.33	– 6.02	– 6.20	– 2.82	– 1.52	– 1.22	– 0.64	2.83	4.79
Memo item:									
Debt securities of domestic sectors	– 2.93	– 2.56	– 3.70	– 1.07	– 1.26	– 0.99	– 0.39	2.26	3.77
Non-financial corporations	0.21	– 1.32	– 0.83	– 0.28	– 0.13	– 0.25	– 0.16	0.08	– 0.02
Financial corporations	– 2.23	– 1.26	– 2.57	– 0.67	– 1.02	– 0.66	– 0.23	2.34	3.18
General government	– 0.92	0.02	– 0.30	– 0.12	– 0.11	– 0.08	0.00	– 0.16	0.61
Debt securities of the rest of the world	1.07	– 3.38	– 2.19	– 1.59	– 0.04	– 0.32	– 0.23	0.55	1.08
Equity and investment fund shares	49.20	90.18	136.55	28.10	31.66	34.68	42.10	30.54	22.10
Equity	18.92	48.53	31.76	2.60	7.28	7.57	14.30	7.82	9.85
Listed shares of domestic sectors	6.61	16.05	14.21	3.39	2.20	2.34	6.29	2.70	5.54
Non-financial corporations	3.52	11.92	12.64	3.12	1.58	1.82	6.12	1.97	3.90
Financial corporations	3.09	4.14	1.58	0.27	0.62	0.52	0.17	0.74	1.64
Listed shares of the rest of the world	7.45	23.29	10.87	– 1.71	3.55	3.78	5.26	3.48	2.33
Other equity [1]	4.86	9.19	6.68	0.93	1.54	1.46	2.76	1.64	1.98
Investment fund shares	30.28	41.65	104.79	25.50	24.38	27.11	27.80	22.72	12.25
Money market fund shares	– 0.32	0.09	0.18	0.09	– 0.07	– 0.01	0.18	– 0.02	0.28
Non-MMF investment fund shares	30.60	41.56	104.61	25.41	24.46	27.12	27.62	22.74	11.97
Non-life insurance technical reserves and provision for calls under standardised guarantees	17.95	18.34	20.31	5.40	5.58	3.73	5.60	5.67	5.74
Life insurance and annuity entitlements	37.76	47.65	51.92	16.40	11.14	13.30	11.07	10.16	8.32
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	37.31	33.72	25.16	5.46	3.79	4.48	11.43	11.17	8.21
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]	– 14.28	– 10.44	1.65	21.65	– 2.74	7.97	– 25.23	12.97	– 9.19
Total	272.82	386.82	375.27	122.66	101.23	74.96	76.42	85.04	71.69
External financing									
Loans	82.57	83.92	98.64	16.73	27.53	30.68	23.70	20.35	28.13
Short-term loans	1.02	– 5.61	0.86	0.47	0.79	1.21	– 1.61	0.66	1.09
Long-term loans	81.55	89.52	97.78	16.26	26.74	29.47	25.31	19.68	27.04
Memo item:									
Mortgage loans	68.58	85.69	100.36	18.69	26.54	29.34	25.78	19.21	26.84
Consumer loans	14.42	– 4.29	– 0.89	– 1.14	– 0.09	2.38	– 2.04	0.23	0.91
Entrepreneurial loans	– 0.43	2.51	– 0.82	– 0.82	1.08	– 1.04	– 0.04	0.91	0.38
Memo item:									
Loans from monetary financial institutions	73.41	83.17	94.32	14.85	27.19	28.38	23.91	20.70	27.94
Loans from financial corporations other than MFIs	9.16	0.75	4.32	1.89	0.34	2.30	– 0.21	– 0.36	0.19
Loans from general government and rest of the world	– 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	– 0.01
Financial derivatives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts payable	0.73	0.01	0.90	0.01	0.01	0.25	0.63	– 0.94	1.75
Total	83.30	83.93	99.54	16.74	27.54	30.93	24.33	19.41	29.88

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	2019	2020	2021	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2
Financial assets									
Currency and deposits	2,647.4	2,860.4	3,005.3	2,908.8	2,961.9	2,973.2	3,005.3	3,016.7	3,047.3
Currency	262.6	324.5	384.4	337.2	353.7	368.6	384.4	397.8	410.2
Deposits	2,384.8	2,535.8	2,620.9	2,571.6	2,608.3	2,604.6	2,620.9	2,618.9	2,637.1
Transferable deposits	1,509.1	1,674.1	1,764.4	1,708.3	1,746.0	1,748.1	1,764.4	1,763.5	1,786.7
Time deposits	301.6	302.8	297.7	302.9	301.9	297.9	297.7	298.7	297.9
Savings deposits (including savings certificates)	574.2	558.9	558.8	560.4	560.4	558.6	558.8	556.7	552.6
Debt securities	121.4	113.3	109.6	112.8	111.6	110.1	109.6	109.5	107.8
Short-term debt securities	1.6	1.6	1.8	1.7	1.9	1.8	1.8	1.7	1.7
Long-term debt securities	119.8	111.7	107.8	111.0	109.7	108.3	107.8	107.7	106.1
Memo item:									
Debt securities of domestic sectors	81.5	76.7	75.3	77.3	76.5	75.3	75.3	75.2	74.7
Non-financial corporations	12.4	10.9	9.8	10.5	10.5	10.2	9.8	9.4	8.9
Financial corporations	66.6	63.3	63.2	64.4	63.7	62.9	63.2	63.8	63.3
General government	2.5	2.6	2.2	2.4	2.3	2.2	2.2	2.0	2.5
Debt securities of the rest of the world	40.0	36.6	34.3	35.5	35.1	34.8	34.3	34.3	33.1
Equity and investment fund shares	1,388.2	1,541.0	1,901.6	1,659.4	1,746.3	1,794.3	1,901.6	1,840.4	1,696.6
Equity	708.0	806.5	969.1	868.7	904.8	923.8	969.1	926.8	847.5
Listed shares of domestic sectors	223.9	243.3	296.0	271.7	280.0	287.1	296.0	271.0	236.7
Non-financial corporations	182.3	204.0	250.4	228.2	236.9	244.3	250.4	224.7	195.7
Financial corporations	41.6	39.2	45.6	43.4	43.1	42.7	45.6	46.3	41.1
Listed shares of the rest of the world	136.3	180.6	249.3	199.6	216.5	223.3	249.3	241.1	214.1
Other equity [1]	347.8	382.6	423.8	397.4	408.3	413.4	423.8	414.7	396.7
Investment fund shares	680.3	734.6	932.5	790.7	841.5	870.5	932.5	913.6	849.1
Money market fund shares	2.3	2.3	2.5	2.4	2.3	2.3	2.5	2.5	2.8
Non-MMF investment fund shares	678.0	732.2	930.0	788.3	839.2	868.2	930.0	911.1	846.3
Non-life insurance technical reserves and provision for calls under standardised guarantees	393.8	412.2	432.5	417.6	423.2	426.9	432.5	438.2	443.9
Life insurance and annuity entitlements	1,069.1	1,112.1	1,162.2	1,128.0	1,138.7	1,151.6	1,162.2	1,172.5	1,180.0
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	924.5	956.8	984.0	962.3	966.1	970.5	984.0	991.1	993.3
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]	29.6	27.9	27.5	27.8	28.2	28.5	27.5	25.7	27.3
Total	6,574.2	7,023.7	7,622.6	7,216.7	7,376.0	7,455.1	7,622.6	7,594.1	7,496.3
Liabilities									
Loans	1,837.9	1,924.6	2,023.5	1,939.6	1,969.5	2,000.5	2,023.5	2,041.2	2,069.0
Short-term loans	59.0	53.2	53.0	53.6	54.4	55.6	53.0	53.7	54.8
Long-term loans	1,778.9	1,871.3	1,970.5	1,886.0	1,915.1	1,944.9	1,970.5	1,987.6	2,014.3
Memo item:									
Mortgage loans	1,358.7	1,448.2	1,548.5	1,464.8	1,493.8	1,523.0	1,548.5	1,565.3	1,592.2
Consumer loans	231.4	226.1	224.5	224.6	224.4	226.7	224.5	224.9	225.5
Entrepreneurial loans	247.7	250.2	250.5	250.2	251.2	250.8	250.5	251.1	251.4
Memo item:									
Loans from monetary financial institutions	1,741.6	1,824.6	1,920.3	1,839.8	1,867.3	1,896.1	1,920.3	1,941.0	1,968.8
Loans from financial corporations other than MFIs	96.3	99.9	103.2	99.8	102.2	104.4	103.2	100.2	100.3
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	19.4	19.5	20.3	19.5	19.5	19.7	20.3	19.4	21.1
Total	1,857.2	1,944.0	2,043.9	1,959.1	1,988.9	2,020.2	2,043.9	2,060.6	2,090.2

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]									
2016	+ 36.4	+ 13.7	+ 7.7	+ 6.3	+ 8.7	+ 1.2	+ 0.4	+ 0.2	+ 0.2	+ 0.3
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 p	+ 53.2	+ 21.4	+ 14.0	+ 8.6	+ 9.2	+ 1.5	+ 0.6	+ 0.4	+ 0.2	+ 0.3
2020 p	– 147.6	– 87.4	– 30.9	+ 5.5	– 34.8	– 4.3	– 2.6	– 0.9	+ 0.2	– 1.0
2021 p	– 134.3	– 145.9	+ 2.8	+ 4.6	+ 4.3	– 3.7	– 4.1	+ 0.1	+ 0.1	+ 0.1
2020 H1 p	– 48.6	– 27.3	– 9.4	+ 0.5	– 12.4	– 2.9	– 1.6	– 0.6	+ 0.0	– 0.8
H2 p	– 98.9	– 60.1	– 21.4	+ 5.1	– 22.4	– 5.6	– 3.4	– 1.2	+ 0.3	– 1.3
2021 H1 p	– 75.6	– 60.7	– 4.0	+ 1.5	– 12.4	– 4.3	– 3.5	– 0.2	+ 0.1	– 0.7
H2 p	– 58.6	– 85.2	+ 6.8	+ 3.1	+ 16.7	– 3.1	– 4.6	+ 0.4	+ 0.2	+ 0.9
2022 H1 pe	– 13.0	– 42.8	+ 16.6	+ 5.7	+ 7.4	– 0.7	– 2.3	+ 0.9	+ 0.3	+ 0.4
	Debt level[2]									End of year or quarter
2016	2,161.6	1,365.6	642.3	166.2	1.2	69.0	43.6	20.5	5.3	0.0
2017	2,111.8	1,349.9	614.9	163.1	0.8	64.6	41.3	18.8	5.0	0.0
2018	2,063.6	1,322.9	600.9	155.9	0.7	61.3	39.3	17.9	4.6	0.0
2019 p	2,046.6	1,299.7	610.0	153.6	0.7	58.9	37.4	17.6	4.4	0.0
2020 p	2,315.2	1,512.9	660.9	154.8	7.5	68.0	44.4	19.4	4.5	0.2
2021 p	2,471.6	1,667.2	662.7	156.2	0.4	68.6	46.3	18.4	4.3	0.0
2020 Q1 p	2,091.5	1,327.5	623.7	154.2	0.8	60.0	38.1	17.9	4.4	0.0
Q2 p	2,261.0	1,473.7	645.7	154.4	1.0	66.1	43.1	18.9	4.5	0.0
Q3 p	2,334.6	1,536.6	656.2	155.5	4.6	68.5	45.1	19.3	4.6	0.1
Q4 p	2,315.2	1,512.9	660.9	154.8	7.5	68.0	44.4	19.4	4.5	0.2
2021 Q1 p	2,345.6	1,538.7	665.4	154.7	16.2	69.0	45.2	19.6	4.5	0.5
Q2 p	2,397.7	1,589.1	667.8	155.6	21.2	68.7	45.5	19.1	4.5	0.6
Q3 p	2,430.8	1,617.3	672.4	154.9	24.3	68.6	45.6	19.0	4.4	0.7
Q4 p	2,471.6	1,667.2	662.7	156.2	0.4	68.6	46.3	18.4	4.3	0.0
2022 Q1 p	2,475.7	1,671.9	662.0	155.7	3.1	67.4	45.5	18.0	4.2	0.1
Q2 p	2,515.0	1,711.0	659.8	157.7	3.3	67.2	45.7	17.6	4.2	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												
2016	1,426.7	739.2	524.3	163.3	1,390.4	754.5	240.7	162.5	68.1	37.3	127.2	+ 36.4	1,270.4
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 p	1,615.8	834.3	598.2	183.4	1,562.6	845.6	273.2	187.2	84.4	27.4	144.8	+ 53.2	1,439.6
2020 p	1,569.1	783.1	608.1	177.8	1,716.6	904.8	284.3	209.4	93.2	21.5	203.4	– 147.6	1,398.2
2021 p	1,711.7	887.6	633.7	190.5	1,846.0	940.9	294.4	227.2	93.4	20.8	269.3	– 134.3	1,528.8
	As a percentage of GDP												
2016	45.5	23.6	16.7	5.2	44.4	24.1	7.7	5.2	2.2	1.2	4.1	+ 1.2	40.5
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 p	46.5	24.0	17.2	5.3	45.0	24.3	7.9	5.4	2.4	0.8	4.2	+ 1.5	41.4
2020 p	46.1	23.0	17.9	5.2	50.4	26.6	8.3	6.1	2.7	0.6	6.0	– 4.3	41.1
2021 p	47.5	24.6	17.6	5.3	51.3	26.1	8.2	6.3	2.6	0.6	7.5	– 3.7	42.4
	Percentage growth rates												
2016	+ 4.5	+ 4.8	+ 4.6	+ 2.9	+ 4.1	+ 4.5	+ 3.3	+ 6.2	+ 5.6	– 11.7	+ 4.9	.	+ 4.7
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 p	+ 3.8	+ 3.2	+ 4.5	+ 3.8	+ 4.8	+ 5.0	+ 5.0	+ 6.1	+ 7.5	– 12.2	+ 3.7	.	+ 3.7
2020 p	– 2.9	– 6.1	+ 1.7	– 3.0	+ 9.9	+ 7.0	+ 4.0	+ 11.8	+ 10.4	– 21.5	+ 40.5	.	– 2.9
2021 p	+ 9.1	+ 13.3	+ 4.2	+ 7.1	+ 7.5	+ 4.0	+ 3.6	+ 8.5	+ 0.2	– 3.4	+ 32.4	.	+ 9.3

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
2015 **p**	829.8	673.3	10.4	804.3	244.1	302.7	49.8	46.4	12.5	+ 25.5	575.0	573.1	+ 1.9	1,301.1	1,273.6	+ 27.4
2016 **p**	862.3	705.8	9.0	844.5	251.3	321.6	43.4	49.0	11.8	+ 17.8	601.8	594.8	+ 7.1	1,355.1	1,330.2	+ 24.9
2017 **p**	900.3	734.5	7.9	869.4	261.6	327.9	42.0	52.3	13.8	+ 30.8	631.5	622.0	+ 9.5	1,417.5	1,377.2	+ 40.3
2018 **p**	951.8	776.3	6.2	905.6	272.5	338.0	39.2	55.8	16.1	+ 46.2	656.2	642.5	+ 13.6	1,490.7	1,430.9	+ 59.8
2019 **p**	1,010.3	799.4	11.2	975.5	285.9	349.7	33.6	62.9	16.8	+ 34.8	685.0	676.7	+ 8.3	1,573.8	1,530.8	+ 43.0
2020 **p**	946.9	739.9	13.9	1,108.0	299.5	422.8	25.9	69.2	59.9	– 161.1	719.5	747.8	– 28.3	1,518.8	1,708.1	– 189.3
2021 **p**	1,101.6	833.3	24.9	1,240.4	310.6	530.9	21.0	69.5	26.2	– 138.9	769.2	775.2	– 6.0	1,698.3	1,843.2	– 144.9
2020 Q1 **p**	244.8	197.5	2.5	236.4	72.9	90.5	11.9	12.0	2.6	+ 8.4	168.3	175.7	– 7.4	380.0	379.1	+ 0.9
Q2 **p**	211.9	158.0	2.7	271.8	72.2	119.1	8.6	15.4	3.4	– 59.8	175.9	187.0	– 11.1	354.5	425.4	– 70.9
Q3 **p**	227.8	181.4	4.0	282.3	72.4	102.0	1.4	18.3	34.3	– 54.5	181.1	195.0	– 13.9	370.1	438.5	– 68.4
Q4 **p**	259.3	202.0	4.5	315.4	81.4	109.1	5.9	22.8	19.6	– 56.1	186.0	189.6	– 3.5	410.6	470.2	– 59.6
2021 Q1 **p**	237.1	185.3	4.3	297.0	75.5	130.8	7.3	11.1	14.6	– 59.9	182.4	196.3	– 13.9	381.5	455.3	– 73.8
Q2 **p**	270.6	195.7	7.5	300.8	74.8	126.8	10.7	15.2	10.5	– 30.2	185.9	197.0	– 11.1	417.7	459.0	– 41.2
Q3 **p**	270.9	210.7	7.4	290.2	75.8	117.5	– 0.4	16.5	10.4	– 19.3	183.4	191.9	– 8.6	413.5	441.4	– 27.8
Q4 **p**	328.0	237.8	6.1	342.9	84.1	148.1	3.1	26.4	– 9.4	– 14.9	197.3	190.4	+ 6.9	487.7	495.7	– 8.0
2022 Q1 **p**	277.4	213.9	5.0	278.4	79.6	116.3	5.5	11.9	7.0	– 1.0	193.8	199.8	– 6.0	429.4	436.5	– 7.1

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

4. Central, state and local government: budgetary development (as per 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
2015 **p**	338.3	326.5	+ 11.8	355.1	350.6	+ 4.5	232.7	229.1	+ 3.6
2016 **p**	344.7	338.4	+ 6.2	381.1	372.4	+ 8.8	248.9	243.1	+ 5.8
2017 **p**	357.8	352.8	+ 5.0	397.7	385.8	+ 11.8	260.3	249.1	+ 11.2
2018 **p**	374.4	363.5	+ 10.9	420.5	400.1	+ 20.4	271.8	261.5	+ 10.2
2019 **p**	382.5	369.2	+ 13.3	437.2	419.6	+ 17.6	284.2	278.1	+ 6.1
2020 **p**	341.4	472.1	– 130.7	456.4	489.4	– 33.0	297.0	294.6	+ 2.4
2021 **p**	370.3	585.9	– 215.6	513.1	508.9	+ 4.2	309.9	304.8	+ 5.1
2020 Q1 **p**	92.3	90.4	+ 1.9	105.6	99.7	+ 5.9	57.9	67.7	– 9.8
Q2 **p**	70.8	114.8	– 44.0	108.2	128.0	– 19.8	69.4	69.4	+ 0.1
Q3 **p**	83.7	105.4	– 21.7	112.9	113.7	– 0.8	67.5	72.6	– 5.1
Q4 **p**	94.5	161.5	– 67.0	127.4	146.3	– 18.9	100.3	83.5	+ 16.8
2021 Q1 **p**	75.0	127.5	– 52.5	113.7	120.7	– 7.1	61.1	69.7	– 8.6
Q2 **p**	86.4	123.5	– 37.1	122.8	122.0	+ 0.8	74.6	71.7	+ 2.9
Q3 **p**	93.9	128.7	– 34.7	125.9	120.2	+ 5.7	74.6	74.9	– 0.3
Q4 **p**	115.1	206.3	– 91.2	145.6	144.5	+ 1.2	97.6	87.0	+ 10.6
2022 Q1 **p**	94.7	114.0	– 19.3	134.6	122.7	+ 11.9	68.4	73.8	– 5.4

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

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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]			
2015	673,276	580,485	308,849	240,698	30,938	93,003	– 212	27,241
2016	705,797	606,965	316,854	260,837	29,273	98,648	+ 186	27,836
2017	734,540	629,458	336,730	271,046	21,682	105,158	– 76	27,368
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
2020 Q1	198,375	168,123	83,086	75,420	9,617	18,875	+ 11,377	6,855
Q2	158,161	135,185	68,653	59,557	6,974	25,107	– 2,131	6,997
Q3	182,202	156,397	78,502	72,613	5,282	25,234	+ 571	9,705
Q4	201,173	172,564	83,140	78,475	10,949	38,700	– 10,090	6,709
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	...	190,982	94,153	86,852	9,977	...	...	11,576
2021 July	.	56,166	28,274	25,940	1,952	.	.	3,141
Aug.	.	51,982	24,639	24,213	3,130	.	.	2,341
2022 July	.	56,770	27,314	26,153	3,303	.	.	3,183
Aug.	.	50,717	24,214	23,129	3,375	.	.	2,397

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									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]			Local business tax transfers [8]				
		Total	Wage tax [3]	Assessed income tax [4]	Corporation tax [5]	Investment income tax [6]	Total	Domestic VAT	Import VAT					
2015	620,287	273,258	178,891	48,580	19,583	26,204	209,921	159,015	50,905	7,407	104,204	20,339	5,159	39,802
2016	648,309	291,492	184,826	53,833	27,442	25,391	217,090	165,932	51,157	7,831	104,441	22,342	5,113	41,345
2017	674,598	312,462	195,524	59,428	29,259	28,251	226,355	170,498	55,856	8,580	99,934	22,205	5,063	45,141
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
2020 Q1	181,374	88,009	53,389	18,711	8,495	7,415	60,060	46,038	14,022	244	24,517	7,406	1,139	13,251
Q2	146,360	69,928	50,760	10,633	2,348	6,187	44,262	31,625	12,638	1,170	23,525	6,326	1,149	11,175
Q3	168,308	73,766	47,470	13,492	5,411	7,392	59,819	47,933	11,886	796	25,930	6,784	1,212	11,910
Q4	186,334	89,094	57,667	16,146	8,014	7,268	55,343	43,105	12,238	1,744	31,660	7,259	1,234	13,770
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
2021 July	60,023	24,906	19,450	495	656	4,306	23,919	15,231	8,689	977	7,054	2,747	420	3,858
Aug.	55,676	21,086	17,680	602	453	2,352	23,492	17,478	6,014	211	7,938	2,506	443	3,694
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
Aug.	54,212	20,155	17,981	538	– 119	1,755	23,808	16,540	7,269	258	6,965	2,463	563	3,495

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 2021: 45.1:51.2:3.7. The EU share is deducted from central government's share. **8** Respective percentage share of central and state government for 2021: 41.4:58.6. **9** For the breakdown, see Table X. 7.

X. Public finances in Germany

7. Central, state and local government: individual taxes

€ million

Period	Central government taxes [1]								State government taxes [1]				Local government taxes		
	Energy tax	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
2015	39,594	15,930	14,921	12,419	8,805	6,593	2,070	3,872	11,249	6,290	1,712	1,088	60,396	45,752	13,215
2016	40,091	16,855	14,186	12,763	8,952	6,569	2,070	2,955	12,408	7,006	1,809	1,119	65,319	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
2020 Q1	4,966	4,930	2,413	6,766	2,634	1,708	562	537	4,525	1,981	542	358	17,245	13,391	3,403
Q2	8,117	4,235	3,772	2,606	2,426	1,585	455	328	3,566	2,154	425	181	12,971	8,842	3,895
Q3	9,985	4,365	3,978	2,817	2,366	1,499	506	414	3,730	2,262	509	283	14,690	10,242	4,095
Q4	14,566	5,145	4,487	2,365	2,101	1,768	715	513	4,234	2,203	567	254	16,584	12,997	3,283
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	...	...	...
2021 July	2,870	463	1,247	774	881	517	152	150	1,554	962	142	89	.	.	.
Aug.	3,227	402	1,245	1,395	753	546	181	190	1,467	765	187	87	.	.	.
2022 July	2,831	535	1,183	815	837	500	183	230	1,318	674	205	90	.	.	.
Aug.	2,155	431	1,175	1,433	793	558	185	236	1,427	745	202	89	.	.	.

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 [1,2]			Expenditure [1,2]			Deficit/ surplus	Assets [1,4]					Memo item: Administrative assets
	Total	of which: Contributions [3]	of which: Payments from central government	Total	of which: Pension payments	of which: Pensioners' health insurance		Total	Deposits [5]	Securities	Equity interests, mortgages and other loans [6]	Real estate	
2015	276,129	194,486	80,464	277,717	236,634	16,705	– 1,588	35,556	32,795	2,506	167	88	4,228
2016	286,399	202,249	83,154	288,641	246,118	17,387	– 2,242	34,094	31,524	2,315	203	52	4,147
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
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

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

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9. Federal Employment Agency: budgetary development*

€ million

Period	Revenue				Expenditure							Deficit/ surplus	Deficit-offsetting grant or loan from central government
	Total 1	of which:			Total	of which:							
		Contributions	Insolvency compensation levy	Government funds		Unemployment benefit 2	Short-time working benefits 3	Job promotion 4	Re-integration payment	Insolvency benefit payment	Administrative expenditure 5		
2015	35,159	29,941	1,333	–	31,439	14,846	771	6,295	.	654	5,597	+ 3,720	–
2016	36,352	31,186	1,114	–	30,889	14,435	749	7,035	.	595	5,314	+ 5,463	–
2017	37,819	32,501	882	–	31,867	14,055	769	7,043	.	687	6,444	+ 5,952	–
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
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	–

Source: Federal Employment Agency. * Including transfers to the civil servants' pension fund. **1** Excluding central government deficit-offsetting grant or loan. **2** Unemployment benefit in case of unemployment. **3** Including seasonal short-time working benefits and restructuring short-time working benefits, restructuring measures and refunds of social contributions. **4** Vocational training, measures to encourage job take-up, rehabilitation, compensation top-up payments and promotion of business start-ups. **5** Including collection charges to other social security funds , excluding administrative expenditure within the framework of the basic allowance for job seekers.

10. Statutory health insurance scheme: budgetary development

€ million

Period	Revenue 1			Expenditure 1								Deficit/ surplus
	Total	of which:		Total	of which:							
		Contributions 2	Central government funds 3		Hospital treatment	Pharmaceuticals	Medical treatment	Dental treatment 4	Remedies and therapeutic appliances	Sickness benefits	Administrative expenditure 5	
2015	210,147	195,774	11,500	213,727	67,979	34,576	35,712	13,488	13,674	11,227	10,482	– 3,580
2016	223,692	206,830	14,000	222,936	70,450	35,981	37,300	13,790	14,256	11,677	11,032	+ 757
2017	233,814	216,227	14,500	230,773	72,303	37,389	38,792	14,070	14,776	12,281	10,912	+ 3,041
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	45,075	16,335	20,163	16,612	11,735	– 5,332
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	12,085	4,249	5,335	4,457	2,958	– 158

Source: Federal Ministry of Health. **1** The final annual figures generally differ from the total of the reported provisional quarterly figures as the latter are not revised subsequently. Excluding revenue and expenditure as part of the risk structure compensation scheme. **2** Including contributions from subsidised low-paid part-time employment. **3** Federal grant and liquidity assistance. **4** Including dentures. **5** Net, i.e. after deducting reimbursements for expenses for levying contributions incurred by other social security funds.

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

€ million

Period	Revenue		Expenditure 1						Deficit/ surplus	
				of which:						
	Total	of which: Contributions 2	Total	Non-cash care benefits 3	Inpatient care total 4	Nursing benefit	Contributions to pension insurance scheme 5	Administrative expenditure		
2015	30,825	30,751	29,101	4,626	13,003	6,410	960	1,273	+	1,723
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
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

Source: Federal Ministry of Health. * The final annual figures generally differ from the total of the reported provisional quarterly figures as the latter are not revised subsequently. **1** Including transfers to the long-term care provident fund. **2** Since 2005, including special contributions for childless persons (0.25% of income subject to insurance contributions). **3** Data revision in 2014. **4** From 2014, also including benefits for short-term care and daytime/night-time nursing care, inter alia. **5** For non-professional carers.

12. Central government: borrowing in the market

€ million

Period	Total new borrowing 1		of which: Change in money market loans	Change in money market deposits 3
	Gross 2	Net		
2015	+ 167,655	– 16,386	– 5,884	– 1,916
2016	+ 182,486	– 11,331	– 2,332	– 16,791
2017	+ 171,906	+ 4,531	+ 11,823	+ 2,897
2018	+ 167,231	– 16,248	– 91	– 1,670
2019	+ 185,070	+ 63	– 8,044	– 914
2020	+ 456,828	+ 217,904	+ 24,181	– 3,399
2020 Q1	+ 65,656	+ 31,296	+ 9,236	+ 1,698
Q2	+ 185,560	+ 126,585	+ 31,212	– 7,314
Q3	+ 159,067	+ 80,783	– 6,080	+ 588
Q4	+ 46,545	– 20,760	– 10,187	+ 1,629
2021 Q1	+ 109,953	+ 42,045	– 11,737	– 4,708
Q2	+ 146,852	+ 57,601	+ 3,463	+ 1,576

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

13. General government: debt by creditor*

€ million

Period (end of year or quarter)	Total	Banking system		Domestic non-banks		Foreign creditors pe
		Bundesbank	Domestic MFIs pe	Other domestic financial corporations pe	Other domestic creditors 1	
2015	2,177,231	85,952	607,446	217,604	52,453	1,213,776
2016	2,161,570	205,391	585,456	211,797	48,651	1,110,275
2017	2,111,751	319,159	539,181	180,145	45,121	1,028,146
2018	2,063,571	364,731	496,314	186,399	44,131	971,995
2019	2,046,638	366,562	458,336	183,741	48,740	989,259
2020	2,315,216	522,392	493,679	191,450	40,615	1,067,080
2021 p	2,471,628	716,004	485,156	191,908	40,621	1,037,939
2020 Q1	2,091,520	371,076	469,822	186,030	49,825	1,014,768
Q2	2,261,026	424,141	535,844	186,577	49,948	1,064,516
Q3	2,334,627	468,723	508,090	189,788	51,777	1,116,249
Q4	2,315,216	522,392	493,679	191,450	40,615	1,067,080
2021 Q1 p	2,345,586	561,443	468,094	190,392	51,830	1,073,827
Q2 p	2,397,710	620,472	470,564	190,129	43,264	1,073,280
Q3 p	2,430,788	669,659	472,510	191,836	44,537	1,052,246
Q4 p	2,471,628	716,004	485,156	191,908	40,621	1,037,939
2022 Q1 p	2,475,736	737,978	469,107	194,059	39,384	1,035,207
Q2 p	2,514,988	759,385	472,710	202,494	43,034	1,037,364

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

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14. Maastricht debt by instrument

€ 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
General government								
2015	2,177,231	13,949	65,676	1,499,010	90,350	508,246	.	.
2016	2,161,570	15,491	69,715	1,483,871	96,254	496,239	.	.
2017	2,111,751	14,298	48,789	1,484,462	87,799	476,403	.	.
2018	2,063,571	14,680	52,572	1,456,160	77,410	462,748	.	.
2019	2,046,638	14,449	56,350	1,458,540	62,288	455,011	.	.
2020 Q1	2,091,520	11,410	84,162	1,472,222	72,560	451,167	.	.
Q2	2,261,026	13,120	134,275	1,533,857	131,335	448,438	.	.
Q3	2,334,627	11,886	190,945	1,582,574	101,669	447,553	.	.
Q4	2,315,216	14,486	173,851	1,596,141	82,437	448,301	.	.
2021 Q1 **p**	2,345,586	12,200	190,021	1,637,515	61,278	444,571	.	.
Q2 **p**	2,397,710	12,901	182,659	1,689,922	69,010	443,218	.	.
Q3 **p**	2,430,788	13,319	192,480	1,711,739	69,831	443,420	.	.
Q4 **p**	2,471,628	17,743	195,420	1,729,881	86,437	442,146	.	.
2022 Q1 **p**	2,475,736	15,655	172,881	1,775,452	69,481	442,267	.	.
Q2 **p**	2,514,988	17,750	161,918	1,811,387	76,658	447,274	.	.
Central government								
2015	1,371,933	13,949	49,512	1,138,951	45,256	124,265	1,062	13,667
2016	1,365,579	15,491	55,208	1,123,853	50,004	121,022	556	8,567
2017	1,349,948	14,298	36,297	1,131,896	47,761	119,696	1,131	10,618
2018	1,322,907	14,680	42,246	1,107,140	42,057	116,784	933	9,975
2019	1,299,727	14,449	38,480	1,101,866	28,617	116,315	605	10,301
2020 Q1	1,327,538	11,410	56,680	1,103,934	38,714	116,799	605	8,125
Q2	1,473,699	13,120	109,221	1,139,510	95,489	116,360	585	7,037
Q3	1,536,634	11,886	166,564	1,178,687	62,933	116,564	605	11,731
Q4	1,512,875	14,486	154,498	1,180,683	46,811	116,396	609	14,545
2021 Q1 **p**	1,538,718	12,200	167,484	1,212,495	29,817	116,722	602	22,947
Q2 **p**	1,589,070	12,901	165,373	1,259,206	34,965	116,626	643	29,461
Q3 **p**	1,617,263	13,319	170,961	1,280,586	35,919	116,478	687	31,390
Q4 **p**	1,667,150	17,743	176,428	1,300,416	56,744	115,818	640	8,083
2022 Q1 **p**	1,671,870	15,655	155,119	1,340,340	40,701	120,055	531	10,453
Q2 **p**	1,710,978	17,750	147,674	1,373,617	46,356	125,581	649	10,555
State government								
2015	659,521	–	16,169	362,376	23,349	257,627	15,867	2,348
2016	642,291	–	14,515	361,996	20,482	245,298	11,273	1,694
2017	614,936	–	12,543	354,688	19,628	228,076	14,038	2,046
2018	600,899	–	10,332	351,994	18,977	219,596	14,035	1,891
2019	609,950	–	17,873	360,495	18,767	212,816	14,934	1,826
2020 Q1	623,720	–	27,484	372,021	16,000	208,216	12,297	1,783
Q2	645,700	–	25,056	398,404	16,916	205,324	11,070	2,085
Q3	656,207	–	24,382	408,310	19,836	203,679	11,717	2,090
Q4	660,917	–	19,354	419,862	18,624	203,078	11,946	1,410
2021 Q1 **p**	665,415	–	22,538	429,641	14,933	198,303	10,959	1,998
Q2 **p**	667,802	–	17,287	435,726	17,844	196,945	12,466	2,047
Q3 **p**	672,433	–	21,521	436,506	17,374	197,033	11,421	2,119
Q4 **p**	662,728	–	18,994	434,930	13,851	194,953	12,443	1,766
2022 Q1 **p**	661,971	–	17,765	440,766	13,534	189,906	11,700	1,935
Q2 **p**	659,846	–	14,247	443,413	14,876	187,310	11,451	1,823
Local government								
2015	163,439	–	–	2,047	27,474	133,918	2,143	463
2016	166,205	–	–	2,404	27,002	136,798	1,819	431
2017	163,124	–	–	3,082	24,572	135,471	1,881	466
2018	155,930	–	1	3,046	20,425	132,458	1,884	497
2019	153,634	–	–	2,996	19,079	131,559	1,856	532
2020 Q1	154,200	–	–	3,128	19,739	131,333	1,825	508
Q2	154,368	–	–	3,094	19,728	131,546	2,085	350
Q3	155,532	–	–	2,961	20,610	131,960	2,107	339
Q4	154,834	–	–	3,366	18,033	133,435	1,404	330
2021 Q1 **p**	154,659	–	–	3,121	17,480	134,058	2,010	320
Q2 **p**	155,643	–	–	3,121	18,475	134,048	2,071	313
Q3 **p**	154,910	–	–	3,000	17,649	134,261	2,127	306
Q4 **p**	156,230	–	–	3,241	17,255	135,734	1,768	293
2022 Q1 **p**	155,675	–	–	3,052	16,075	136,548	1,933	315
Q2 **p**	157,705	–	–	2,969	16,186	138,550	1,823	361

For footnotes see end of table.

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14. Maastricht debt by instrument (cont'd)

€ 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
Social security funds								
2015	1,502	–	–	–	537	965	91	2,685
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 **p**	16,220	–	–	–	15,985	235	15,853	4,160
Q2 **p**	21,234	–	–	–	20,995	239	20,860	4,220
Q3 **p**	24,288	–	–	–	24,053	235	23,872	4,292
Q4 **p**	392	–	–	–	131	261	19	4,729
2022 Q1 **p**	3,104	–	–	–	2,863	240	2,720	4,181
Q2 **p**	3,321	–	–	–	3,078	242	2,939	4,124

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.

15. Maastricht debt of central government by instrument and category

€ million

Period (end of year or quarter)	Total [1]	Currency and deposits [2]: Total [1]	Currency and deposits [2]: of which: [3] Federal day bond	Debt securities: Total [1]	Debt securities: of which: [3] Federal bonds (Bunds)	Federal notes (Bobls)	Inflation-linked Federal bonds (Bunds) [4]	Inflation-linked Federal notes (Bobls) [4]	Capital indexation of inflation-linked securities	Federal Treasury notes (Schätze) [5]	Treasury discount paper (Bubills) [6]	Federal savings notes	Loans [1]
2007	987,909	6,675	.	917,584	564,137	173,949	10,019	3,444	506	102,083	37,385	10,287	63,650
2008	1,019,905	12,466	3,174	928,754	571,913	164,514	12,017	7,522	1,336	105,684	40,795	9,649	78,685
2009	1,086,173	9,981	2,495	1,013,072	577,798	166,471	16,982	7,748	1,369	113,637	104,409	9,471	63,121
2010	1,337,160	10,890	1,975	1,084,019	602,624	185,586	25,958	9,948	2,396	126,220	85,867	8,704	242,251
2011	1,346,869	10,429	2,154	1,121,331	615,200	199,284	29,313	14,927	3,961	130,648	58,297	8,208	215,109
2012	1,390,377	9,742	1,725	1,177,168	631,425	217,586	35,350	16,769	5,374	117,719	56,222	6,818	203,467
2013	1,392,735	10,582	1,397	1,192,025	643,200	234,759	41,105	10,613	4,730	110,029	50,004	4,488	190,127
2014	1,398,472	12,146	1,187	1,206,203	653,823	244,633	48,692	14,553	5,368	103,445	27,951	2,375	180,123
2015	1,371,933	13,949	1,070	1,188,463	663,296	232,387	59,942	14,553	5,607	96,389	18,536	1,305	169,521
2016	1,365,579	15,491	1,010	1,179,062	670,245	221,551	51,879	14,585	3,602	95,727	23,609	737	171,026
2017	1,349,948	14,298	966	1,168,193	693,687	203,899	58,365	14,490	4,720	91,013	10,037	289	167,457
2018	1,322,907	14,680	921	1,149,386	710,513	182,847	64,647	–	5,139	86,009	12,949	48	158,841
2019	1,299,727	14,449	–	1,140,346	719,747	174,719	69,805	–	6,021	89,230	13,487	.	144,932
2020	1,512,875	14,486	.	1,335,181	808,300	183,046	58,279	–	3,692	98,543	113,141	.	163,208
2021 **p**	1,667,150	17,743	.	1,476,844	909,276	195,654	65,390	–	6,722	103,936	153,978	.	172,562
2020 Q1	1,327,538	11,410	.	1,160,614	721,343	182,095	71,028	–	5,310	91,084	23,572	.	155,514
Q2	1,473,699	13,120	.	1,248,731	774,587	178,329	56,061	–	3,752	95,622	79,987	.	211,849
Q3	1,536,634	11,886	.	1,345,251	796,338	191,388	57,144	–	3,737	99,276	127,478	.	179,497
Q4	1,512,875	14,486	.	1,335,181	808,300	183,046	58,279	–	3,692	98,543	113,141	.	163,208
2021 Q1 **p**	1,538,718	12,200	.	1,379,979	821,254	194,571	60,687	–	3,857	103,910	134,800	.	146,538
Q2 **p**	1,589,070	12,901	.	1,424,579	873,345	189,048	62,569	–	5,056	104,997	139,451	.	151,591
Q3 **p**	1,617,263	13,319	.	1,451,547	884,358	203,353	63,851	–	5,456	105,398	146,533	.	152,397
Q4 **p**	1,667,150	17,743	.	1,476,844	909,276	195,654	65,390	–	6,722	103,936	153,978	.	172,562
2022 Q1 **p**	1,671,870	15,655	.	1,495,459	930,351	209,424	67,776	–	7,809	108,702	140,427	.	160,756
Q2 **p**	1,710,978	17,750	.	1,521,291	962,484	203,362	70,217	–	11,209	111,343	138,495	.	171,937

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** Excluding inflation-induced indexation of capital. **5** Including medium-term notes issued by the Treuhand agency (expired in 2011). **6** Including Federal Treasury financing papers (expired in 2014).

XI. Economic conditions in Germany

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

Item	2019	2020	2021	2019	2020	2021	2020 4.Vj.	2021 1.Vj.	2021 2.Vj.	2021 3.Vj.	2021 4.Vj.	2022 1.Vj.	2022 2.Vj.
	Index 2015=100			Annual percentage change									
At constant prices, chained													
I. Origin of domestic product													
Production sector (excluding construction)	108.2	100.4	104.9	− 1.1	− 7.2	4.5	0.6	− 0.9	20.2	2.6	− 1.1	0.9	− 0.6
Construction	100.1	102.1	100.7	− 3.6	2.0	− 1.4	7.2	− 5.5	4.1	2.3	− 6.1	3.9	− 3.9
Wholesale/retail trade, transport and storage, hotel and restaurant services	109.3	101.0	103.9	3.4	− 7.5	2.8	− 5.5	− 6.8	11.5	3.2	4.1	9.3	5.9
Information and communication	120.7	120.8	125.2	3.9	0.1	3.6	1.2	0.9	7.0	3.9	2.9	3.5	4.0
Financial and insurance activities	95.4	98.9	99.1	1.7	3.6	0.3	1.9	0.8	− 0.2	− 0.1	0.6	4.9	4.8
Real estate activities	101.7	102.2	103.1	0.3	0.4	0.9	0.4	− 0.2	3.1	0.2	0.7	1.8	1.0
Business services [1]	110.7	105.1	109.8	0.1	− 5.0	4.4	− 4.1	− 4.7	13.0	6.5	4.4	5.9	3.8
Public services, education and health	106.6	105.4	107.6	1.5	− 1.1	2.0	− 2.0	− 1.1	8.6	− 0.2	1.6	2.4	1.5
Other services	103.1	91.2	91.5	1.8	−11.6	0.4	−17.2	−11.0	9.0	1.5	4.3	7.6	7.3
Gross value added	107.0	102.8	105.6	0.8	− 3.9	2.7	− 1.6	− 2.7	10.7	2.2	1.2	3.6	2.0
Gross domestic product [2]	107.1	103.2	105.9	1.1	− 3.7	2.6	− 1.2	− 2.3	10.6	1.8	1.2	3.9	1.8
II. Use of domestic product													
Private consumption [3]	107.2	101.1	101.5	1.6	− 5.7	0.4	− 5.7	− 8.7	6.5	1.4	3.1	8.8	7.2
Government consumption	109.4	113.8	118.1	2.6	4.0	3.8	5.8	3.4	8.5	2.1	1.4	4.4	1.9
Machinery and equipment	113.2	100.8	104.3	1.0	−11.0	3.5	− 2.5	1.1	20.8	− 2.1	− 2.6	0.6	0.6
Premises	108.6	112.9	112.9	1.0	3.9	0.0	6.7	− 2.0	4.4	0.6	− 3.2	3.0	− 3.9
Other investment [4]	120.3	116.3	117.6	6.1	− 3.3	1.0	− 3.2	− 2.0	4.1	1.6	0.7	1.7	1.8
Changes in inventories [5,6]	.	.	.	− 0.1	− 0.3	0.5	− 0.9	0.5	− 0.4	1.0	0.9	− 0.3	0.3
Domestic demand	109.4	106.1	108.1	1.7	− 3.0	1.9	− 2.5	− 3.6	7.1	2.3	2.4	5.7	4.1
Net exports [6]	.	.	.	− 0.6	− 0.8	0.8	1.2	1.1	3.8	− 0.3	− 1.0	− 1.5	− 2.1
Exports	111.3	101.0	110.8	1.3	− 9.3	9.7	− 2.6	− 0.2	28.2	7.4	7.2	3.4	1.9
Imports	117.6	107.6	117.3	2.9	− 8.5	9.0	− 5.7	− 2.9	20.6	9.3	11.1	7.5	7.2
Gross domestic product [2]	107.1	103.2	105.9	1.1	− 3.7	2.6	− 1.2	− 2.3	10.6	1.8	1.2	3.9	1.8
At current prices (€ billion)													
III. Use of domestic product													
Private consumption [3]	1,805.5	1,713.5	1,773.8	3.0	− 5.1	3.5	− 5.7	− 7.0	8.3	5.3	7.9	14.2	14.3
Government consumption	703.2	748.0	797.5	5.1	6.4	6.6	7.6	6.3	7.9	6.2	6.1	9.4	7.0
Machinery and equipment	241.2	217.5	229.4	2.4	− 9.8	5.5	− 1.5	2.5	22.6	− 0.3	0.2	6.0	7.2
Premises	363.5	384.8	416.7	5.2	5.9	8.3	7.3	− 0.1	9.5	12.8	10.3	18.2	14.2
Other investment [4]	137.7	133.8	137.7	7.6	− 2.8	2.9	− 2.6	− 0.6	5.8	3.4	2.9	5.6	5.0
Changes in inventories [5]	25.9	16.1	55.1	.	.	.	.	.	.	.	.	.	.
Domestic use	3,276.9	3,213.8	3,410.2	3.7	− 1.9	6.1	− 1.8	− 1.9	9.3	7.8	9.4	13.0	12.8
Net exports	196.3	191.7	191.6	.	.	.	.	.	.	.	.	.	.
Exports	1,621.0	1,464.8	1,693.9	1.8	− 9.6	15.6	− 3.2	0.8	33.3	15.1	17.1	15.1	15.8
Imports	1,424.6	1,273.1	1,502.4	2.7	−10.6	18.0	− 7.3	− 2.1	30.0	20.3	26.7	26.6	28.4
Gross domestic product [2]	3,473.3	3,405.4	3,601.8	3.2	− 2.0	5.8	− 0.2	− 0.6	11.5	6.3	6.3	8.6	7.8
IV. Prices (2015=100)													
Private consumption	105.1	105.7	109.0	1.3	0.6	3.1	− 0.0	1.8	1.7	3.8	4.7	4.9	6.6
Gross domestic product	107.1	109.1	112.4	2.1	1.8	3.1	1.0	1.7	0.9	4.4	5.0	4.6	5.9
Terms of trade	100.8	102.8	100.1	0.7	2.0	− 2.6	1.1	0.2	− 3.5	− 2.7	− 4.2	− 5.4	− 5.2
V. Distribution of national income													
Compensation of employees	1,856.2	1,853.9	1,918.0	4.6	− 0.1	3.5	0.5	− 0.7	5.1	4.7	4.6	6.6	5.6
Entrepreneurial and property income	752.1	717.7	825.4	− 1.7	− 4.6	15.0	5.6	7.3	39.9	9.7	10.5	2.5	− 3.0
National income	2,608.2	2,571.6	2,743.4	2.7	− 1.4	6.7	1.8	1.8	13.4	6.2	6.1	5.3	3.1
Memo item: Gross national income	3,590.1	3,505.7	3,729.5	3.2	− 2.4	6.4	− 0.3	− 0.1	11.9	7.3	6.9	8.9	7.2

Source: Federal Statistical Office; figures computed in August 2022. **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	of which: by main industrial grouping: Intermediate goods	Capital goods	Durable goods	Non-durable goods	of which: by economic sector: Manufacture of basic metals and fabricated metal products	Manufacture of computers, electronic and optical products and electrical equipment	Macinery and equipment	Motor vehicels, trailers and semi-trailers
2015 = 100												
% of total **1**	100	14,04	6,37	79,59	29,45	36,98	2.27	10,89	10,31	9,95	12,73	14,16
Period												
2018	105.3	109.0	97.4	105.3	105.5	104.6	106.2	106.9	107.4	109.0	106.5	99.9
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	116.1	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	87.1	96.6	102.7	90.5	103.6	99.1	98.9	108.7	95.9	73.9
2021 Q2	99.0	118.1	81.8	97.0	105.3	90.2	103.0	96.5	101.6	108.7	95.4	74.8
Q3	96.9	119.4	80.6	94.2	102.3	85.1	101.9	101.6	97.9	109.0	94.7	61.7
Q4	101.5	124.8	93.5	97.9	98.9	95.1	108.7	102.8	95.9	109.5	102.2	74.3
2022 Q1	96.0	98.7	95.2	95.6	103.2	87.4	104.0	100.9	98.7	109.9	90.5	73.2
Q2 **r**	97.5	114.9	82.5	95.6	102.0	89.5	106.0	97.1	98.1	111.3	94.2	74.5
2021 Aug. **2**	90.1	112.7	80.2	86.9	97.8	74.5	91.5	98.3	91.2	104.6	86.5	46.0
Sep.	100.1	121.8	83.7	97.6	103.6	89.7	111.8	105.5	101.2	112.8	99.6	65.6
Oct.	102.1	123.8	92.1	99.0	104.5	91.7	112.9	106.2	101.5	110.5	96.3	73.4
Nov.	105.8	127.4	93.1	103.0	104.5	99.7	114.5	107.8	103.4	113.1	101.8	83.9
Dec.	96.5	123.2	95.2	91.8	87.8	93.9	98.8	94.3	82.7	104.9	108.4	65.5
2022 Jan.	90.1	82.4	98.5	90.7	100.0	81.4	96.5	95.8	94.1	103.2	81.9	70.4
Feb.	94.9	97.1	94.5	94.5	101.2	87.9	105.0	96.7	97.5	107.8	89.0	78.5
Mar.	103.0	116.7	92.6	101.5	108.4	92.9	110.6	110.2	104.4	118.6	100.7	70.6
Apr. **r**	96.1	112.3	89.2	93.7	101.7	85.8	106.4	95.9	97.5	108.4	89.5	70.7
May **r**	96.1	113.9	80.8	94.2	101.3	87.4	103.8	95.9	97.5	109.4	91.5	73.1
June **r**	100.4	118.6	77.4	99.0	102.9	95.3	107.7	99.5	99.4	116.0	101.5	79.6
July **2,x**	99.6	123.8	81.9	96.8	102.5	91.7	102.6	97.3	97.8	116.4	95.7	75.5
Aug. **2,x,p**	92.0	113.1	76.4	89.5	95.6	82.0	98.8	96.4	90.3	112.9	88.6	62.3
Annual percentage change												
2018	+ 0.9	+ 0.3	− 1.5	+ 1.2	+ 0.6	+ 1.0	− 0.7	+ 3.8	+ 1.1	+ 1.9	+ 2.3	− 1.6
2019	− 2.3	+ 3.4	− 7.2	− 2.9	− 3.5	− 1.9	± 0.0	− 5.5	− 4.3	− 2.3	− 2.9	− 5.0
2020	− 7.7	+ 3.0	− 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	+ 3.2	+ 4.8	+ 8.2	+ 2.6	+ 6.1	+ 2.0	+ 9.2	+ 10.4	+ 7.2	− 2.6
2021 Q2	+ 16.9	+ 1.9	+ 12.4	+ 21.0	+ 23.0	+ 25.0	+ 22.1	+ 4.9	+ 28.9	+ 23.1	+ 17.3	+ 57.9
Q3	+ 2.3	+ 0.8	+ 2.2	+ 2.6	+ 8.4	− 2.9	+ 4.0	+ 3.7	+ 9.2	+ 12.3	+ 9.3	− 21.9
Q4	− 1.8	− 4.6	+ 1.9	− 1.5	+ 0.7	− 4.9	+ 2.1	+ 3.8	+ 0.4	+ 4.0	+ 3.7	− 19.4
2022 Q1	− 0.4	+ 4.2	+ 3.1	− 1.5	− 0.8	− 4.6	+ 3.2	+ 5.5	− 1.5	+ 2.4	− 0.8	− 13.7
Q2 **r**	− 1.5	− 2.7	+ 0.8	− 1.4	− 3.2	− 0.8	+ 2.9	+ 0.6	− 3.4	+ 2.3	− 1.3	− 0.4
2021 Aug. **2**	+ 1.8	− 0.9	− 0.5	+ 2.6	+ 7.4	− 2.7	− 0.1	+ 4.9	+ 6.4	+ 11.6	+ 9.8	− 24.0
Sep.	− 0.6	± 0.0	+ 4.6	− 1.1	+ 4.9	− 7.2	+ 2.1	+ 2.7	+ 4.4	+ 9.3	+ 5.3	− 28.4
Oct.	− 1.1	− 0.6	+ 0.8	− 1.4	+ 1.8	− 5.8	+ 3.9	+ 3.3	+ 2.5	+ 5.7	+ 6.6	− 23.6
Nov.	− 1.9	− 2.3	+ 1.4	− 2.1	+ 0.3	− 6.3	+ 0.1	+ 6.1	+ 0.3	+ 1.8	+ 3.0	− 20.5
Dec.	− 2.4	− 10.3	+ 3.4	− 0.9	− 0.1	− 2.4	+ 2.4	+ 1.8	− 1.9	+ 4.7	+ 1.7	− 12.3
2022 Jan.	+ 1.2	+ 9.4	+ 0.8	± 0.0	− 0.3	− 1.3	+ 1.2	+ 4.6	− 0.4	+ 2.8	+ 1.2	− 8.0
Feb.	+ 2.7	+ 9.7	+ 8.9	+ 1.1	+ 1.8	− 2.0	+ 6.3	+ 8.4	+ 0.9	+ 3.3	+ 0.7	− 6.9
Mar.	− 4.5	− 3.1	+ 0.1	− 5.1	− 3.6	− 9.5	+ 2.3	+ 3.9	− 4.5	+ 1.2	− 3.5	− 24.4
Apr. **r**	− 2.7	− 3.3	+ 2.6	− 3.1	− 2.7	− 6.5	+ 4.5	+ 5.0	− 3.6	+ 1.1	− 5.2	− 13.1
May **r**	− 1.7	− 2.8	− 0.7	− 1.6	− 3.8	± 0.0	+ 3.5	− 0.8	− 2.9	+ 2.1	− 1.4	+ 2.4
June **r**	− 0.1	− 2.0	+ 0.3	+ 0.3	− 3.0	+ 4.3	+ 0.8	− 2.0	− 3.9	+ 3.7	+ 2.6	+ 11.2
July **2,x**	− 0.8	+ 0.1	+ 5.3	− 1.3	− 2.9	+ 0.8	+ 0.3	− 3.7	− 3.5	+ 6.1	− 2.2	+ 2.6
Aug. **2,x,p**	+ 2.1	+ 0.4	− 4.7	+ 3.0	− 2.2	+ 10.1	+ 8.0	− 1.9	− 1.0	+ 7.9	+ 2.4	+ 35.4

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												
2018	110.5	+ 1.7	111.5	+ 1.9	110.0	+ 1.4	110.1	+ 4.2	118.9	+ 2.1	107.1	+ 4.8
2019	104.9	− 5.1	103.5	− 7.2	105.4	− 4.2	107.0	− 2.8	123.3	+ 3.7	101.7	− 5.0
2020	97.2	− 7.3	97.9	− 5.4	95.6	− 9.3	105.8	− 1.1	124.4	+ 0.9	99.6	− 2.1
2021	119.3	+ 22.7	124.6	+ 27.3	116.3	+ 21.7	117.5	+ 11.1	146.5	+ 17.8	107.9	+ 8.3
2021 Aug.	106.4	+ 16.5	115.6	+ 28.7	100.1	+ 10.6	111.2	+ 6.5	135.4	+ 9.1	103.3	+ 5.5
Sep.	122.6	+ 17.7	124.2	+ 22.1	122.6	+ 17.0	114.0	+ 2.2	139.1	− 5.0	105.7	+ 5.7
Oct.	117.2	+ 7.4	124.9	+ 15.3	112.2	+ 2.7	119.8	+ 7.5	141.9	− 2.1	112.4	+ 12.1
Nov.	125.3	+ 10.2	132.9	+ 16.6	120.8	+ 6.1	124.5	+ 13.0	149.6	+ 8.2	116.2	+ 15.0
Dec.	123.7	+ 13.9	120.2	+ 18.2	126.9	+ 11.7	114.5	+ 11.6	148.9	+ 13.4	103.2	+ 10.7
2022 Jan.	131.2	+ 19.7	143.7	+ 19.2	124.1	+ 20.8	127.5	+ 16.1	152.9	+ 8.1	119.2	+ 19.9
Feb.	128.3	+ 15.4	136.7	+ 16.3	122.6	+ 14.0	132.6	+ 21.1	149.8	+ 14.3	126.9	+ 23.8
Mar.	140.1	+ 8.2	152.7	+ 13.3	131.4	+ 3.4	146.5	+ 19.4	182.6	+ 23.3	134.7	+ 17.8
Apr.	125.1	+ 6.5	143.5	+ 13.5	111.9	− 0.9	139.0	+ 26.2	185.7	+ 14.2	123.6	+ 33.2
May	123.9	+ 8.8	139.3	+ 13.2	113.5	+ 4.7	131.0	+ 15.0	178.2	+ 13.4	115.5	+ 16.0
June	129.5	+ 2.3	143.2	+ 12.2	120.1	− 4.2	137.6	+ 4.2	171.3	+ 13.2	126.5	+ 0.6
July	127.6	− 0.4	144.2	+ 12.7	118.2	− 8.0	121.6	− 4.5	150.3	− 0.5	112.0	− 6.3
Aug. p	114.1	+ 7.2	127.3	+ 10.1	105.2	+ 5.1	120.7	+ 8.5	158.5	+ 17.1	108.3	+ 4.8
From the domestic market												
2018	107.2	+ 0.2	108.6	+ 1.4	106.6	− 1.1	103.0	+ 1.4	114.7	+ 5.5	98.9	− 0.4
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	94.1	− 5.0	95.2	− 7.6	98.0	− 3.2	105.5	− 9.2	95.4	− 0.8
2021	115.5	+ 21.7	119.6	+ 27.1	113.1	+ 18.8	108.0	+ 10.2	114.8	+ 8.8	105.6	+ 10.7
2021 Aug.	104.5	+ 18.1	111.5	+ 26.4	98.4	+ 13.1	106.0	+ 6.0	110.9	− 0.4	104.4	+ 8.5
Sep.	110.0	+ 10.6	117.9	+ 23.6	104.3	+ 1.6	103.0	+ 1.3	106.1	− 15.3	102.0	+ 8.9
Oct.	115.6	+ 10.6	123.1	+ 15.3	110.0	+ 7.2	110.4	+ 5.6	106.7	− 10.8	111.7	+ 12.4
Nov.	119.4	+ 9.3	126.7	+ 11.8	113.8	+ 7.1	115.4	+ 10.3	117.6	− 5.4	114.6	+ 17.1
Dec.	119.1	+ 21.3	111.4	+ 17.3	127.7	+ 25.1	105.5	+ 16.1	101.9	− 2.0	106.7	+ 23.4
2022 Jan.	122.2	+ 18.4	137.7	+ 21.0	109.9	+ 15.7	116.5	+ 20.1	106.0	− 4.5	120.1	+ 30.1
Feb.	123.4	+ 14.4	132.1	+ 17.2	116.0	+ 10.6	122.9	+ 22.5	115.6	+ 5.2	125.4	+ 29.1
Mar.	137.4	+ 8.6	148.2	+ 13.7	128.9	+ 2.5	132.0	+ 20.7	135.9	+ 3.6	130.7	+ 28.1
Apr.	124.8	+ 12.6	139.8	+ 19.3	110.5	+ 3.7	135.2	+ 32.2	134.0	+ 4.5	135.6	+ 45.0
May	123.2	+ 9.7	136.5	+ 15.0	112.6	+ 3.7	118.5	+ 17.6	141.8	+ 16.7	110.6	+ 17.9
June	126.8	− 0.7	138.1	+ 10.4	117.1	− 10.3	127.3	+ 2.7	135.2	+ 15.5	124.6	− 1.3
July	124.5	− 3.3	144.5	+ 14.6	109.6	− 17.0	110.6	− 8.8	123.7	+ 6.6	106.1	− 13.8
Aug. p	108.9	+ 4.2	123.1	+ 10.4	97.2	− 1.2	106.4	+ 0.4	121.3	+ 9.4	101.4	− 2.9
From abroad												
2018	113.0	+ 2.9	114.6	+ 2.4	112.0	+ 2.8	115.5	+ 6.1	122.2	− 0.5	113.4	+ 8.5
2019	107.6	− 4.8	108.3	− 5.5	106.9	− 4.6	111.5	− 3.5	129.1	+ 5.6	105.9	− 6.6
2020	98.9	− 8.1	102.0	− 5.8	95.9	− 10.3	111.8	+ 0.3	139.5	+ 8.1	102.8	− 2.9
2021	122.2	+ 23.6	130.1	+ 27.5	118.1	+ 23.1	124.8	+ 11.6	171.9	+ 23.2	109.6	+ 6.6
2021 Aug.	107.9	+ 15.5	120.1	+ 31.3	101.1	+ 9.2	115.2	+ 6.9	155.2	+ 15.5	102.4	+ 3.2
Sep.	132.1	+ 22.5	131.1	+ 20.7	133.7	+ 26.0	122.5	+ 2.9	165.7	+ 1.5	108.6	+ 3.5
Oct.	118.5	+ 5.2	126.8	+ 15.3	113.5	+ 0.1	127.0	+ 8.8	170.2	+ 2.9	113.0	+ 11.9
Nov.	129.8	+ 10.8	139.5	+ 21.5	125.0	+ 5.5	131.5	+ 14.8	175.4	+ 17.4	117.4	+ 13.6
Dec.	127.1	+ 9.2	129.7	+ 19.1	126.4	+ 4.8	121.5	+ 8.8	186.8	+ 21.9	100.5	+ 2.1
2022 Jan.	138.1	+ 20.7	150.1	+ 17.4	132.6	+ 23.6	136.1	+ 13.6	190.6	+ 14.9	118.5	+ 13.0
Feb.	132.0	+ 16.1	141.6	+ 15.4	126.5	+ 15.9	140.1	+ 20.2	177.4	+ 19.8	128.0	+ 20.1
Mar.	142.1	+ 7.8	157.6	+ 13.0	132.9	+ 3.9	157.8	+ 18.6	220.2	+ 36.2	137.7	+ 11.2
Apr.	125.3	+ 2.3	147.5	+ 8.1	112.8	− 3.3	142.0	+ 22.2	227.3	+ 19.5	114.5	+ 24.1
May	124.4	+ 8.0	142.4	+ 11.3	114.0	+ 5.4	140.7	+ 13.5	207.5	+ 11.6	119.2	+ 14.6
June	131.6	+ 4.6	148.7	+ 14.2	121.9	− 0.4	145.6	+ 5.3	200.3	+ 12.0	127.9	+ 2.2
July	130.0	+ 1.8	143.9	+ 10.8	123.4	− 2.3	130.1	− 1.4	171.7	− 4.1	116.6	− 0.1
Aug. p	118.1	+ 9.5	131.8	+ 9.7	110.1	+ 8.9	131.7	+ 14.3	188.4	+ 21.4	113.5	+ 10.8

Source of the unadjusted figures: Federal Statistical Office. * At current prices; for explanatory notes, see Statistical Series - Seasonally adjusted business statistics, Tables III.2.a to III.2.c. **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
2018	135.0	+ 10.3	131.7	+ 7.0	137.1	+ 11.4	128.7	+ 4.2	125.2	+ 2.7	138.9	+ 14.2	136.1	+ 13.6	132.6	+ 6.1
2019	146.2	+ 8.3	145.3	+ 10.3	150.4	+ 9.7	142.5	+ 10.7	138.8	+ 10.9	147.2	+ 6.0	148.1	+ 8.8	141.3	+ 6.6
2020	145.6	− 0.4	144.2	− 0.8	160.8	+ 6.9	130.3	− 8.6	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	+ 20.2	158.7	+ 12.2	153.0	+ 3.9	161.6	+ 15.8	146.7	+ 2.4
2021 July	160.0	+ 7.2	168.4	+ 10.6	179.1	+ 12.9	163.7	+ 19.2	150.5	− 19.2	150.2	+ 2.9	158.6	+ 15.9	149.9	− 5.0
Aug.	158.9	+ 16.4	162.5	+ 20.5	167.1	+ 5.4	163.3	+ 43.4	144.0	+ 6.4	154.8	+ 11.9	158.5	+ 21.9	154.4	+ 18.3
Sep.	181.0	+ 19.3	189.0	+ 20.2	191.5	+ 10.0	193.2	+ 36.9	165.4	+ 1.9	171.7	+ 18.3	192.9	+ 31.9	161.1	+ 11.5
Oct.	158.7	+ 11.4	168.8	+ 11.7	169.1	− 7.2	171.7	+ 35.1	157.2	+ 13.9	146.9	+ 10.8	171.6	+ 21.3	137.5	+ 15.0
Nov.	145.3	+ 4.1	143.0	− 2.7	159.5	− 5.0	132.6	+ 0.3	127.3	− 4.6	148.0	+ 13.0	159.5	+ 10.9	120.4	+ 2.4
Dec.	185.3	+ 24.3	205.7	+ 41.1	196.2	+ 3.5	173.7	+ 50.3	356.7	+ 213.4	161.5	+ 5.6	186.9	+ 38.2	176.7	+ 25.9
2022 Jan.	142.8	+ 6.9	145.4	+ 4.1	165.7	+ 13.7	134.0	− 8.1	121.0	+ 24.2	139.9	+ 10.6	149.1	− 1.0	121.7	+ 14.1
Feb.	155.7	+ 8.7	161.0	+ 8.1	176.0	+ 9.1	158.3	+ 7.5	121.8	+ 6.7	149.5	+ 9.4	165.3	+ 15.3	132.4	+ 0.2
Mar.	209.5	+ 32.7	208.8	+ 32.9	219.4	+ 25.1	201.7	+ 42.4	200.5	+ 29.6	210.3	+ 32.3	217.4	+ 44.0	194.5	+ 25.2
Apr.	164.2	+ 2.5	157.6	− 0.4	178.1	− 3.8	142.5	+ 2.2	146.2	+ 4.5	171.9	+ 5.9	153.9	+ 3.9	167.6	+ 5.5
May	175.9	+ 10.6	172.4	+ 5.8	182.1	− 1.1	163.4	+ 11.4	173.9	+ 12.8	180.0	+ 16.7	170.8	+ 13.3	178.0	+ 16.3
June	175.2	+ 6.4	166.3	+ 0.7	177.9	+ 0.2	153.3	− 4.4	176.5	+ 23.8	185.6	+ 13.2	177.5	+ 6.5	171.0	+ 10.8
July	180.6	+ 12.9	179.1	+ 6.4	171.1	− 4.5	177.7	+ 8.6	211.0	+ 40.2	182.3	+ 21.4	190.1	+ 19.9	175.5	+ 17.1

Source of the unadjusted figures: Federal Statistical Office. * At current prices; excluding value added tax; for explanatory notes, see Statistical Series – Seasonally adjusted business statistics, Table III.2.f. **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											
					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		Retail sale via mail order houses or via internet as well as other retail sale **2**	
	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
2018	110.7	+ 3.0	107.5	+ 1.6	109.6	+ 3.6	105.6	− 2.3	107.1	+ 0.8	103.0	± 0.0	112.4	+ 4.4	127.7	+ 6.0
2019	115.0	+ 3.9	111.0	+ 3.3	112.2	+ 2.4	106.7	+ 1.0	108.9	+ 1.7	107.1	+ 4.0	118.8	+ 5.7	138.4	+ 8.4
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	+ 22.1
2021 **3**	124.9	+ 2.9	116.9	+ 0.9	121.8	+ 0.3	78.1	− 4.6	95.4	− 10.8	110.4	− 5.7	135.3	+ 7.9	191.1	+ 13.1
2021 Aug.	122.9	+ 2.0	115.3	+ 0.2	114.7	− 5.1	100.3	+ 9.5	100.9	− 3.3	118.6	+ 1.2	134.0	+ 11.7	167.2	+ 7.6
Sep.	120.7	+ 1.0	112.4	− 1.2	112.1	− 1.3	100.1	− 0.8	102.3	− 2.1	113.4	− 3.9	131.1	+ 6.2	172.2	+ 6.9
Oct.	130.5	+ 0.9	120.8	− 1.7	119.7	− 2.4	114.8	+ 5.0	109.1	− 10.0	125.9	− 3.2	141.2	+ 8.4	191.4	+ 4.8
Nov.	140.4	+ 2.6	130.0	− 0.5	121.5	− 1.6	106.1	+ 17.2	135.1	− 12.9	129.6	− 7.9	147.2	+ 9.4	236.3	+ 3.4
Dec.	145.7	+ 4.8	134.6	+ 1.6	137.6	− 3.0	97.3	+ 39.8	147.9	+ 9.3	122.0	+ 1.6	155.8	+ 9.5	220.7	+ 0.5
2022 Jan.	122.2	+ 18.9	112.3	+ 14.8	116.7	+ 1.1	73.4	+ 267.0	111.9	+ 84.7	112.5	+ 94.0	140.6	+ 13.5	184.0	− 0.9
Feb.	120.0	+ 15.3	109.2	+ 11.1	115.5	+ 0.9	73.5	+ 225.2	97.9	+ 56.6	114.0	+ 68.9	132.5	+ 6.4	173.6	− 2.6
Mar.	138.6	+ 6.8	123.3	+ 0.7	132.2	+ 0.1	94.3	+ 62.3	101.5	+ 20.1	137.6	+ 12.3	147.7	+ 8.8	194.4	− 5.4
Apr.	133.3	+ 10.4	117.2	+ 3.4	127.2	+ 2.4	102.3	+ 159.0	95.5	+ 35.3	132.7	+ 24.7	141.0	+ 7.1	184.1	− 4.3
May	134.3	+ 7.1	116.3	− 0.9	127.7	+ 0.7	109.4	+ 75.9	89.4	+ 21.8	129.6	+ 14.7	141.6	+ 9.1	183.2	− 7.8
June	131.0	+ 0.6	112.8	− 7.6	127.0	+ 4.2	105.2	− 7.1	93.4	− 3.0	119.2	− 5.4	143.2	+ 8.3	175.5	− 4.8
July	135.8	+ 8.0	116.3	− 1.3	131.1	+ 8.6	105.4	+ 2.6	101.0	− 0.1	121.7	− 0.1	150.3	+ 10.2	182.2	+ 13.4
Aug.	129.9	+ 5.7	110.4	− 4.2	126.0	+ 9.9	97.4	− 2.9	99.6	− 1.3	114.2	− 3.7	143.9	+ 7.4	172.5	+ 3.2

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 2021 figures are provisional, partially revised, and particularly uncertain in recent months due to estimates for missing reports. New reporting sample including new entities; statistical breaks in the reporting sample eliminated by chain-linking.

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									
2017	44,251	+ 1.4	32,234	+ 2.3	9,146	21,980	868	4,742	114	24	2,533	[7] 855	5.7	731
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	[8] 2,267	827	[8] 5.0	774
2020	44,914	− 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	44,980	+ 0.1	33,897	+ 0.9	9,344	23,602	702	4,101	1,852	1,744	2,613	999	5.7	706
2019 Q3	45,386	+ 0.8	33,548	+ 1.5	9,491	23,049	753	4,598	66	58	2,276	827	5.0	794
Q4	45,565	+ 0.7	33,924	+ 1.4	9,551	23,388	738	4,522	161	105	2,204	811	4.8	729
2020 Q1	45,133	+ 0.5	33,642	+ 1.3	9,439	23,284	686	4,458	1,219	949	2,385	960	5.2	683
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	44,993	− 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	44,514	− 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	44,812	+ 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	45,157	+ 0.8	33,929	+ 1.5	9,347	23,606	719	4,161	935	915	2,545	920	5.5	774
Q4	45,437	+ 1.0	34,374	+ 1.6	9,415	23,982	727	4,125	835	762	2,341	802	5.1	804
2022 Q1	45,173	+ 1.5	34,242	+ 2.0	9,348	23,943	715	4,061	1,033	792	2,417	874	5.3	818
Q2	[9] 45,476	[9] + 1.5	[10] 34,398	[10] + 2.0	[10] 9,372	[10] 24,054	[10] 717	[10] 4,111	...	[10] 337	2,311	777	[11] 5.0	864
Q3	...	...	...	...	...	...	...	...	...	...	2,501	804	5.5	880
2019 May	45,268	+ 1.0	33,433	+ 1.8	9,462	22,968	749	4,627	53	45	[8] 2,236	772	[8] 4.9	792
June	45,306	+ 0.9	33,407	+ 1.6	9,455	22,948	750	4,646	51	43	2,216	766	4.9	798
July	45,320	+ 0.9	33,360	+ 1.6	9,450	22,901	757	4,644	55	47	2,275	825	5.0	799
Aug.	45,314	+ 0.7	33,610	+ 1.4	9,505	23,101	750	4,568	60	51	2,319	848	5.1	795
Sep.	45,523	+ 0.8	33,938	+ 1.5	9,583	23,341	754	4,517	84	75	2,234	808	4.9	787
Oct.	45,598	+ 0.8	33,966	+ 1.4	9,567	23,398	748	4,510	111	102	2,204	795	4.8	764
Nov.	45,627	+ 0.7	33,968	+ 1.4	9,559	23,423	742	4,532	124	115	2,180	800	4.8	736
Dec.	45,469	+ 0.6	33,740	+ 1.4	9,474	23,344	694	4,531	247	97	2,227	838	4.9	687
2020 Jan.	45,154	+ 0.6	33,608	+ 1.4	9,432	23,255	689	4,471	382	133	2,426	985	5.3	668
Feb.	45,169	+ 0.6	33,624	+ 1.3	9,427	23,278	683	4,461	439	134	2,396	971	5.3	690
Mar.	45,077	+ 0.2	33,648	+ 1.1	9,440	23,290	675	4,350	2,834	2,580	2,335	925	5.1	691
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.	44,990	− 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.	45,030	− 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.	44,873	− 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.	44,489	− 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.	44,486	− 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.	44,567	− 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.	44,676	− 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	44,796	+ 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	44,963	+ 0.6	33,802	+ 1.4	9,324	23,504	716	4,151	1,568	1,548	2,614	961	5.7	693
July	45,027	+ 0.7	33,731	+ 1.5	9,304	23,458	715	4,194	1,088	1,068	2,590	956	5.6	744
Aug.	45,096	+ 0.8	33,994	+ 1.5	9,358	23,658	722	4,153	857	838	2,578	940	5.6	779
Sep.	45,347	+ 0.8	34,323	+ 1.6	9,432	23,903	726	4,123	859	839	2,465	864	5.4	799
Oct.	45,434	+ 0.8	34,369	+ 1.5	9,425	23,965	724	4,123	780	762	2,377	814	5.2	809
Nov.	45,490	+ 1.0	34,449	+ 1.6	9,423	24,039	739	4,133	767	750	2,317	789	5.1	808
Dec.	45,386	+ 1.1	34,284	+ 1.7	9,364	23,980	708	4,112	957	772	2,330	803	5.1	794
2022 Jan.	45,111	+ 1.4	34,176	+ 2.0	9,332	23,900	711	4,048	1,123	847	2,462	903	5.4	792
Feb.	45,157	+ 1.5	34,243	+ 2.2	9,346	23,939	719	4,049	1,087	803	2,428	884	5.3	822
Mar.	45,250	+ 1.5	34,334	+ 2.1	9,369	23,999	719	4,061	888	727	2,362	835	5.1	839
Apr.	45,370	+ 1.6	[10] 34,368	[10] + 2.0	[10] 9,367	[10] 24,037	[10] 713	[10] 4,092	...	[10] 439	2,309	800	5.0	852
May	45,485	+ 1.5	[10] 34,438	[10] + 2.0	[10] 9,376	[10] 24,085	[10] 718	[10] 4,129	...	[10] 318	2,260	771	[11] 4.9	865
June	[9] 45,573	[9] + 1.4	[10] 34,441	[10] + 1.9	[10] 9,376	[10] 24,082	[10] 723	[10] 4,163	...	[10] 254	2,363	761	5.2	877
July	[9] 45,598	[9] + 1.3	[10] 34,329	[10] + 1.8	[10] 9,363	[10] 23,994	[10] 719	[10] 4,176	...	[10] 99	2,470	801	5.4	881
Aug.	[9] 45,597	[9] + 1.1	...	...	...	...	...	...	...	...	2,547	827	5.6	887
Sep.	...	...	...	...	...	...	...	...	...	...	2,486	782	5.4	873

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** From January 2017 persons receiving additional income assistance (unemployment benefit and unemployment benefit II at the same time) shall be assigned to the legal category of the Third Book of the Social Security Code (SGB III). **8** Statistical break due to late recording of unemployed persons in the legal category of the Second Book of the Social Security Code (SGB II). **9** Initial preliminary estimate by the Federal Statistical Office. **10** Unadjusted figures estimated by the Federal Employment Agency. In 2020 and 2021, 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 0.9% for persons solely in jobs exempt from social contributions, and by a maximum of 28,1% for cyclically induced short-time work. **11** From May 2022, 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	
Index level														
2018	104.0	106.7	103.0	102.3	104.2	104.6	103.8	110.2	103.7	109.0	101.9	102.7	174.1	99.9
2019	105.5	108.4	104.2	103.7	105.7	106.1	105.3	115.3	104.8	111.5	102.4	101.7	150.2	98.7
2020	[7] 105.8	[7] 110.9	[7] 104.1	[7] 99.0	[7] 106.9	107.6	[7] 105.8	[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] 109.1	[7] 127.0	114.7	[8] 117.5	107.4	110.4	220.7	137.6
2020 Nov.	[7] 104.7	[7] 110.3	[7] 104.0	[7] 96.0	[7] 105.5	108.1	[7] 105.0	[7] 116.0	103.9	103.9	101.8	97.6	109.5	107.1
Dec.	[7] 105.3	[7] 109.9	[7] 103.4	[7] 97.4	[7] 106.9	108.2	[7] 105.5		104.7	104.2	101.9	98.2	121.8	112.3
2021 Jan.	106.8	112.3	105.1	102.6	106.9	108.4	106.3		106.2	106.8	102.8	100.1	141.6	120.6
Feb.	107.4	113.0	105.5	104.1	107.3	108.5	107.0	121.2	106.9	108.9	103.3	101.8	146.0	124.7
Mar.	107.9	113.1	105.7	106.2	107.6	108.6	107.5		107.9	114.0	104.1	103.6	150.3	130.4
Apr.	108.4	114.5	105.8	106.1	108.3	108.7	108.2		108.8	115.9	104.9	105.0	154.1	134.3
May	108.7	114.2	106.3	106.7	108.7	108.9	108.7	125.1	110.4	118.5	105.6	106.8	168.3	144.9
June	109.1	114.1	106.5	107.6	109.1	108.9	109.1		111.8	117.7	106.4	108.5	183.0	142.3
July	[7] 109.7	[7] 114.4	[7] 106.4	[7] 109.0	[7] 110.2	109.1	[7] 110.1		113.9	117.2	107.7	110.9	204.8	141.9
Aug.	[7] 109.8	[7] 114.4	[7] 106.5	[7] 109.4	[7] 110.3	109.2	[7] 110.1	[7] 129.4	115.6	118.7	108.5	112.4	217.6	138.9
Sep.	[7] 110.1	[7] 114.4	[7] 107.6	[7] 110.1	[7] 109.9	109.3	[7] 110.1		118.3	[8] 117.4	109.5	113.9	256.1	136.3
Oct.	[7] 110.7	[7] 114.5	[7] 108.0	[7] 114.6	[7] 110.0	109.5	[7] 110.7		122.8	120.7	111.0	118.2	352.7	143.0
Nov.	[7] 111.0	[7] 114.9	[7] 108.4	[7] 116.7	[7] 109.5	109.5	[7] 110.5	[7] 132.2	123.8	125.6	111.9	121.7	304.4	143.0
Dec.	[7] 111.3	[7] 115.7	[7] 108.6	[7] 115.0	[7] 110.3	109.6	[7] 111.1		130.0	127.2	113.0	121.8	352.9	148.3
2022 Jan.	112.3	117.2	108.4	123.7	109.8	109.9	111.5		132.8	129.2	115.0	127.0	327.8	157.0
Feb.	113.3	118.2	109.1	127.4	110.2	110.0	112.5	138.1	134.6	133.4	116.1	128.6	336.0	166.5
Mar.	116.1	119.1	110.4	146.1	110.6	110.2	115.3		141.2	153.6	120.7	135.9	504.2	185.4
Apr.	116.9	122.2	111.3	142.7	111.7	110.4	116.2		145.2	162.3	121.7	138.3	407.8	184.8
May	118.2	124.2	112.3	146.7	112.0	110.6	117.3	147.9	147.5	160.7	122.4	139.5	366.8	178.9
June	118.1	125.4	112.5	147.8	111.0	110.8	117.4		148.4	157.6	123.5	140.9	389.3	169.6
July	119.0	127.6	112.6	147.8	112.1	110.9	118.4		156.3	156.4	126.0	142.9	449.8	158.0
Aug.	119.5	129.1	113.0	148.6	112.2	111.1	118.8	151.7	168.6	159.7	128.7	149.1	534.2	159.4
Sep.	122.1	130.9	114.5	158.8	113.9	111.2	121.1		...	...	...	...	528.5	157.4
Annual percentage change														
2018	+ 1.9	+ 2.6	+ 0.8	+ 4.9	+ 1.6	+ 1.6	+ 1.8	+ 4.7	+ 2.6	+ 0.4	+ 1.2	+ 2.6	+ 25.4	+ 0.3
2019	+ 1.4	+ 1.6	+ 1.1	+ 1.4	+ 1.5	+ 1.5	+ 1.4	+ 4.7	+ 1.1	+ 2.3	+ 0.5	− 1.0	− 13.7	− 1.2
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] + 8.8	+ 5.6	+ 13.5	+ 120.7	+ 37.6
2020 Nov.	[7] − 0.7	[7] + 1.2	[7] − 1.1	[7] − 7.4	[7] + 0.6	+ 1.3	[7] − 0.3	[7] − 0.3	− 0.5	− 7.2	− 0.6	− 3.8	− 28.0	+ 8.4
Dec.	[7] − 0.7	[7] + 0.6	[7] − 1.6	[7] − 6.0	[7] + 0.8	+ 1.3	[7] − 0.3		+ 0.2	− 8.9	− 0.6	− 3.4	− 20.8	+ 11.1
2021 Jan.	+ 1.6	+ 2.0	+ 1.1	− 2.2	+ 2.5	+ 1.3	+ 1.0		+ 0.9	− 5.7	+ 0.1	− 1.2	− 2.2	+ 17.7
Feb.	+ 1.6	+ 1.6	+ 1.2	+ 0.2	+ 2.0	+ 1.3	+ 1.3	+ 2.9	+ 1.9	− 4.6	+ 0.7	+ 1.4	+ 15.9	+ 24.6
Mar.	+ 2.0	+ 1.9	+ 0.5	+ 4.5	+ 2.0	+ 1.2	+ 1.7		+ 3.7	+ 0.3	+ 2.2	+ 6.9	+ 79.1	+ 36.1
Apr.	+ 2.1	+ 2.0	+ 0.4	+ 7.6	+ 1.5	+ 1.2	+ 2.0		+ 5.2	+ 2.8	+ 3.3	+ 10.3	+ 128.3	+ 45.0
May	+ 2.4	+ 1.5	+ 0.9	+ 9.5	+ 1.9	+ 1.3	+ 2.5	+ 5.7	+ 7.2	+ 8.6	+ 4.2	+ 11.8	+ 127.4	+ 56.0
June	+ 2.1	+ 1.2	+ 1.6	+ 9.0	+ 0.9	+ 1.2	+ 2.3		+ 8.5	+ 7.0	+ 5.0	+ 12.9	+ 113.0	+ 51.2
July	[7] + 3.1	[7] + 3.8	[7] + 3.8	[7] +11.2	[7] + 0.7	+ 1.3	[7] + 3.8		+ 10.4	+ 9.0	+ 6.3	+ 15.0	+ 126.0	+ 48.1
Aug.	[7] + 3.4	[7] + 3.9	[7] + 3.8	[7] +12.1	[7] + 1.2	+ 1.3	[7] + 3.9	[7] + 11.8	+ 12.0	+ 13.3	+ 7.2	+ 16.5	+ 127.1	+ 41.2
Sep.	[7] + 4.1	[7] + 4.1	[7] + 3.9	[7] +13.6	[7] + 1.8	+ 1.4	[7] + 4.1		+ 14.2	[8] + 13.4	+ 8.1	+ 17.7	+ 163.7	+ 31.7
Oct.	[7] + 4.6	[7] + 3.9	[7] + 3.9	[7] +18.1	[7] + 2.2	+ 1.4	[7] + 4.5		+ 18.4	+ 16.3	+ 9.5	+ 21.7	+ 241.4	+ 36.3
Nov.	[7] + 6.0	[7] + 4.2	[7] + 4.2	[7] +21.6	[7] + 3.8	+ 1.3	[7] + 5.2	[7] + 14.0	+ 19.2	+ 20.9	+ 9.9	+ 24.7	+ 178.0	+ 33.5
Dec.	[7] + 5.7	[7] + 5.3	[7] + 5.0	[7] +18.1	[7] + 3.2	+ 1.3	[7] + 5.3		+ 24.2	+ 22.1	+ 10.9	+ 24.0	+ 189.7	+ 32.1
2022 Jan.	+ 5.1	+ 4.4	+ 3.1	+20.6	+ 2.7	+ 1.4	+ 4.9		+ 25.0	+ 21.0	+ 11.9	+ 26.9	+ 131.5	+ 30.2
Feb.	+ 5.5	+ 4.6	+ 3.4	+22.4	+ 2.7	+ 1.4	+ 5.1	+ 13.9	+ 25.9	+ 22.5	+ 12.4	+ 26.3	+ 130.1	+ 33.5
Mar.	+ 7.6	+ 5.3	+ 4.4	+37.6	+ 2.8	+ 1.5	+ 7.3		+ 30.9	+ 34.7	+ 15.9	+ 31.2	+ 235.5	+ 42.2
Apr.	+ 7.8	+ 6.7	+ 5.2	+34.5	+ 3.1	+ 1.6	+ 7.4		+ 33.5	+ 40.0	+ 16.0	+ 31.7	+ 164.6	+ 37.6
May	+ 8.7	+ 8.8	+ 5.6	+37.5	+ 3.0	+ 1.6	+ 7.9	+ 18.2	+ 33.6	+ 35.6	+ 15.9	+ 30.6	+ 117.9	+ 23.5
June	+ 8.2	+ 9.9	+ 5.6	+37.4	+ 1.7	+ 1.7	+ 7.6		+ 32.7	+ 33.9	+ 16.1	+ 29.9	+ 112.7	+ 19.2
July	+ 8.5	+11.5	+ 5.8	+35.6	+ 1.7	+ 1.6	+ 7.5		+ 37.2	+ 33.4	+ 17.0	+ 28.9	+ 119.6	+ 11.3
Aug.	+ 8.8	+12.8	+ 6.1	+35.8	+ 1.7	+ 1.7	+ 7.9	+ 17.2	+ 45.8	+ 34.5	+ 18.6	+ 32.7	+ 145.5	+ 14.8
Sep.	+ 10.9	+14.4	+ 6.4	+44.2	+ 3.6	+ 1.7	+ 10.0		...	...	...	...	+ 106.4	+ 15.5

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 2021 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
2014	1,234.2	4.0	830.5	3.9	394.0	2.6	1,224.5	3.5	1,734.5	2.6	170.6	8.6	9.8
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	1,524.4	4.2	1,022.0	4.7	476.7	4.7	1,498.7	4.7	2,023.6	2.4	218.2	– 2.3	10.8
2020	1,514.9	– 0.6	1,020.0	– 0.2	524.6	10.0	1,544.6	3.1	2,050.1	1.3	336.6	54.3	16.4
2021	1,570.6	3.7	1,062.6	4.2	532.8	1.6	1,595.4	3.3	2,089.9	1.9	316.0	– 6.1	15.1
2021 Q1	362.0	– 1.2	244.5	– 0.7	137.8	8.8	382.3	2.5	522.1	– 0.2	115.7	34.9	22.2
Q2	377.1	5.8	250.7	6.8	134.9	2.2	385.6	5.2	514.9	3.5	84.8	– 15.3	16.5
Q3	393.0	5.1	271.6	5.5	131.2	– 1.8	402.8	3.0	520.4	1.7	54.4	– 21.2	10.4
Q4	438.5	4.9	295.8	5.0	129.0	– 2.6	424.8	2.6	532.5	2.7	61.2	– 25.0	11.5
2022 Q1	388.6	7.3	261.4	6.9	134.3	– 2.5	395.8	3.5	541.2	3.7	77.2	– 33.3	14.3
Q2	400.2	6.1	265.4	5.9	129.7	– 3.9	395.1	2.5	546.9	6.2	55.4	– 34.6	10.1

Source: Federal Statistical Office; figures computed in August 2022. * 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
2014	97.7	3.1	97.8	2.9	97.7	2.8	97.6	2.8	97.2	2.9
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	2.2	104.5	2.2	104.5	2.3	104.7	2.4	105.1	2.6
2018	107.6	3.0	107.5	3.0	107.5	2.8	107.6	2.8	108.4	3.2
2019	110.7	2.9	110.6	2.8	110.1	2.5	110.2	2.4	111.7	3.0
2020	112.9	2.0	112.9	2.1	112.2	1.9	112.3	1.9	111.6	– 0.1
2021	114.7	1.6	114.6	1.6	114.1	1.7	114.1	1.6	115.3	3.3
2021 Q1	106.0	1.4	106.0	1.4	106.1	1.5	113.4	1.5	107.4	– 0.0
Q2	107.7	2.3	107.6	2.3	106.8	1.4	113.9	1.5	111.2	5.4
Q3	117.8	1.0	117.7	1.0	116.4	1.4	114.2	1.5	115.1	4.0
Q4	127.3	1.6	127.2	1.6	127.2	2.4	114.7	1.8	127.2	3.7
2022 Q1	110.7	4.4	110.6	4.4	107.7	1.6	115.2	1.6	113.3	5.5
Q2	109.8	2.0	109.7	1.9	109.0	2.1	116.3	2.1	116.0	4.3
2022 Feb.	110.4	4.2	110.3	4.1	107.8	1.6	115.2	1.6	.	.
Mar.	113.4	6.9	113.3	6.9	107.8	1.6	115.3	1.6	.	.
Apr.	109.4	2.1	109.3	2.0	109.1	2.0	116.1	2.0	.	.
May	111.2	4.2	111.1	4.2	109.1	2.2	116.4	2.2	.	.
June	108.9	– 0.3	108.7	– 0.4	108.9	2.2	116.5	2.2	.	.
July	144.0	3.5	143.9	3.4	139.8	3.3	116.6	2.2	.	.
Aug.	109.3	1.9	109.2	1.9	109.1	2.2	116.7	2.2	.	.

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 2022.

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)															
2018 3	2,589.0	1,536.7	540.8	610.8	288.5	1,052.3	249.5	234.7	172.6	789.8	1,799.2	925.7	558.7	873.4	257.5	205.0
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	607.5	733.1	335.1	1,052.7	243.6	225.9	240.5	811.5	2,038.5	1,181.5	746.3	857.0	304.4	196.1
2021 p	3,292.0	1,971.6	680.1	773.9	368.6	1,320.4	272.1	338.2	269.6	994.4	2,297.6	1,206.9	772.1	1,090.7	310.4	238.0
2020 H1	2,891.4	1,800.9	625.0	734.0	319.7	1,090.5	257.6	216.4	220.7	793.7	2,097.7	1,183.8	754.2	913.9	335.5	179.7
H2	2,850.0	1,797.3	607.5	733.1	335.1	1,052.7	243.6	225.9	240.5	811.5	2,038.5	1,181.5	746.3	857.0	304.4	196.1
2021 H1	3,017.6	1,877.0	649.3	745.0	343.7	1,140.6	256.2	273.2	240.8	906.9	2,110.7	1,178.6	751.9	932.1	297.4	206.9
H2 p	3,292.0	1,971.6	680.1	773.9	368.6	1,320.4	272.1	338.2	269.6	994.4	2,297.6	1,206.9	772.1	1,090.7	310.4	238.0
	As a percentage of total assets															
2018 3	100.0	59.4	20.9	23.6	11.1	40.6	9.6	9.1	6.7	30.5	69.5	35.8	21.6	33.7	10.0	7.9
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 p	100.0	59.9	20.7	23.5	11.2	40.1	8.3	10.3	8.2	30.2	69.8	36.7	23.5	33.1	9.4	7.2
2020 H1	100.0	62.3	21.6	25.4	11.1	37.7	8.9	7.5	7.6	27.5	72.6	40.9	26.1	31.6	11.6	6.2
H2	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 H1	100.0	62.2	21.5	24.7	11.4	37.8	8.5	9.1	8.0	30.1	70.0	39.1	24.9	30.9	9.9	6.9
H2 p	100.0	59.9	20.7	23.5	11.2	40.1	8.3	10.3	8.2	30.2	69.8	36.7	23.5	33.1	9.4	7.2
	Groups with a focus on the production sector (€ billion) 2															
2018 3	2,149.3	1,215.4	388.1	472.9	277.5	933.9	234.5	188.6	139.2	636.7	1,512.6	760.2	442.4	752.3	236.2	152.5
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	399.0	543.5	320.0	910.1	228.7	179.5	187.9	636.2	1,628.7	904.7	536.9	724.0	267.3	149.8
2021 p	2,626.3	1,479.3	441.7	573.9	347.4	1,147.0	254.4	281.7	212.3	764.7	1,861.6	918.5	548.5	943.1	274.9	184.0
2020 H1	2,304.8	1,351.9	406.4	547.1	303.3	952.9	243.9	171.5	171.3	614.6	1,690.2	912.1	548.4	778.0	294.6	137.0
H2	2,265.0	1,354.9	399.0	543.5	320.0	910.1	228.7	179.5	187.9	636.2	1,628.7	904.7	536.9	724.0	267.3	149.8
2021 H1	2,392.8	1,398.3	416.6	551.0	322.5	994.6	240.6	221.9	192.4	703.5	1,689.4	892.3	532.0	797.1	261.3	162.1
H2 p	2,626.3	1,479.3	441.7	573.9	347.4	1,147.0	254.4	281.7	212.3	764.7	1,861.6	918.5	548.5	943.1	274.9	184.0
	As a percentage of total assets															
2018 3	100.0	56.6	18.1	22.0	12.9	43.5	10.9	8.8	6.5	29.6	70.4	35.4	20.6	35.0	11.0	7.1
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 p	100.0	56.3	16.8	21.9	13.2	43.7	9.7	10.7	8.1	29.1	70.9	35.0	20.9	35.9	10.5	7.0
2020 H1	100.0	58.7	17.6	23.7	13.2	41.3	10.6	7.4	7.4	26.7	73.3	39.6	23.8	33.8	12.8	6.0
H2	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 H1	100.0	58.4	17.4	23.0	13.5	41.6	10.1	9.3	8.0	29.4	70.6	37.3	22.2	33.3	10.9	6.8
H2 p	100.0	56.3	16.8	21.9	13.2	43.7	9.7	10.7	8.1	29.1	70.9	35.0	20.9	35.9	10.5	7.0
	Groups with a focus on the services sector (€ billion)															
2018 3	439.7	321.3	152.7	137.9	11.0	118.3	14.9	46.1	33.3	153.1	286.6	165.5	116.3	121.1	21.3	52.5
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 p	665.7	492.2	238.5	200.0	21.3	173.5	17.7	56.5	57.3	229.7	436.0	288.4	223.6	147.6	35.5	53.9
2020 H1	586.6	449.0	218.7	186.8	16.3	137.6	13.7	44.9	49.4	179.1	407.6	271.7	205.7	135.9	40.9	42.6
H2	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 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 p	665.7	492.2	238.5	200.0	21.3	173.5	17.7	56.5	57.3	229.7	436.0	288.4	223.6	147.6	35.5	53.9
	As a percentage of total assets															
2018 3	100.0	73.1	34.7	31.4	2.5	26.9	3.4	10.5	7.6	34.8	65.2	37.6	26.5	27.6	4.8	11.9
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 p	100.0	73.9	35.8	30.0	3.2	26.1	2.7	8.5	8.6	34.5	65.5	43.3	33.6	22.2	5.3	8.1
2020 H1	100.0	76.5	37.3	31.9	2.8	23.5	2.3	7.7	8.4	30.5	69.5	46.3	35.1	23.2	7.0	7.3
H2	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 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 p	100.0	73.9	35.8	30.0	3.2	26.1	2.7	8.5	8.6	34.5	65.5	43.3	33.6	22.2	5.3	8.1

***** 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. **3** From H1 2018 or 2018 onwards: significant changes in IFRS standards, impairing comparability with previous periods.

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																
2014	1,564.3	1.0	198.7	5.0	12.7	0.5	5.9	10.3	17.4	109.3	8.6	7.0	0.5	1.9	6.2	11.1
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 p	1,994.7	20.4	297.9	37.8	14.9	1.9	7.8	13.4	19.9	161.7	212.8	8.1	5.0	2.9	8.2	12.2
2017 H1	843.9	6.7	125.7	14.6	14.9	1.0	5.7	10.1	17.1	78.4	29.6	9.3	1.6	1.8	5.8	11.6
H2	878.5	3.5	117.4	14.6	13.4	1.3	6.9	12.0	19.2	63.0	38.2	7.2	1.8	3.2	7.4	12.4
2018 H1 6	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	8.7	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 p	1,075.6	20.4	146.6	8.2	13.6	– 1.5	8.4	13.2	20.8	77.2	73.3	7.2	2.2	2.9	7.8	13.4
Groups with a focus on the production sector 5																
2014	1,220.0	1.0	152.2	5.9	12.5	0.6	5.8	10.1	15.5	85.2	9.8	7.0	0.6	1.7	6.0	10.6
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 p	1,585.8	22.4	209.0	46.0	13.2	2.1	7.9	12.8	17.9	118.8	326.0	7.5	5.4	2.8	7.8	11.1
2017 H1	695.1	7.3	101.5	18.7	14.6	1.4	6.0	10.1	16.1	66.3	37.3	9.5	2.1	2.3	5.8	10.8
H2	701.4	3.7	86.0	14.2	12.3	1.1	7.0	11.7	16.9	46.2	45.5	6.6	1.9	3.6	7.2	10.8
2018 H1 6	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	19.7	4.1	1.1	0.3	6.0	10.5
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 p	854.2	21.1	97.9	3.9	11.5	– 1.9	7.8	12.4	17.5	52.1	81.1	6.1	2.1	2.7	7.0	11.5
Groups with a focus on the services sector																
2014	344.2	0.8	46.5	1.8	13.5	0.1	6.0	12.3	22.6	24.1	4.3	7.0	0.2	2.6	6.3	13.7
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 p	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
2017 H1	148.8	4.6	24.2	0.4	16.2	– 0.6	5.2	9.8	21.0	12.1	0.3	8.2	– 0.3	1.2	5.6	14.5
H2	177.1	2.5	31.5	15.6	17.8	2.0	6.6	12.5	24.6	16.8	21.6	9.5	1.5	2.9	7.8	17.9
2018 H1 6	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 p	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

***** Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. Excluding groups engaged in real estate activities. **1** Earnings before interest, taxes, depreciation and amortisation. **2** Quantile data are based on the groups' unweighted return on sales. **3** Annual figures do not always match the sum of the two half-year figures. See Quality report on consolidated financial statement statistics, p. 3. **4** Adjusted for substantial changes in the basis of consolidation of large groups and in the reporting sample. See the explanatory notes in Statistical Series Seasonally adjusted business statistics. **5** Including groups in agriculture and forestry. **6** From H1 2018 or 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	2019	2020	2021	2021 Q4	2022 Q1	2022 Q2	2022 May r	2022 June r	2022 July p
I. Current Account	+ 274,072	+ 188,715	+ 288,711	+ 42,237	− 3,710	− 52,224	− 32,011	− 5,117	− 10,098
1. Goods									
Receipts	2,391,225	2,186,895	2,508,365	673,090	678,995	725,057	248,551	251,588	240,453
Expenditure	2,082,442	1,844,858	2,218,075	635,266	680,486	750,564	254,914	258,461	253,171
Balance	+ 308,783	+ 342,038	+ 290,289	+ 37,824	− 1,491	− 25,507	− 6,363	− 6,873	− 12,718
2. Services									
Receipts	1,017,051	874,787	1,011,875	295,313	271,618	301,600	99,249	107,318	108,319
Expenditure	983,596	890,415	920,099	276,999	243,470	257,553	85,467	90,452	90,932
Balance	+ 33,456	− 15,628	+ 91,776	+ 18,314	+ 28,147	+ 44,047	+ 13,782	+ 16,866	+ 17,387
3. Primary income									
Receipts	878,662	719,224	825,878	220,840	204,034	227,187	72,100	80,775	66,822
Expenditure	799,268	699,098	760,042	194,549	191,333	262,878	101,142	82,921	68,226
Balance	+ 79,392	+ 20,127	+ 65,840	+ 26,292	+ 12,701	− 35,691	− 29,042	− 2,145	− 1,404
4. Secondary income									
Receipts	123,566	127,112	150,864	42,134	35,700	42,889	15,335	14,073	11,016
Expenditure	271,125	284,932	310,055	82,325	78,767	77,961	25,722	27,037	24,380
Balance	− 147,560	− 157,820	− 159,191	− 40,191	− 43,067	− 35,073	− 10,387	− 12,965	− 13,363
II. Capital account	− 26,436	+ 3,415	+ 45,816	+ 13,390	+ 7,217	+ 98,520	+ 91,967	+ 4,430	+ 2,356
III. Financial account 1	+ 199,890	+ 190,636	+ 315,776	+ 29,668	− 5,321	+ 18,933	+ 45,593	+ 21,904	+ 29,098
1. Direct investment	+ 64,432	− 182,486	+ 294,689	+ 59,042	+ 22,452	+ 91,239	+ 94,095	− 2,252	+ 1,942
By resident units abroad the euro area	+ 43,613	− 109,106	+ 162,013	− 7,474	+ 55,242	+ 53,996	+ 82,265	− 42,772	+ 13,978
By non-resident units of the euro area	− 20,818	+ 73,383	− 132,674	− 66,515	+ 32,791	− 37,242	− 11,830	− 40,519	+ 12,036
2. Portfolio investment	− 138,253	+ 530,060	+ 317,164	+ 82,613	− 50,928	− 7,867	+ 28,067	− 59,532	+ 26,892
By resident units abroad the euro area	+ 435,232	+ 686,301	+ 790,249	+ 155,932	− 16,062	− 109,688	− 51,648	− 24,974	− 23,563
Equity and investment fund shares	+ 63,391	+ 319,816	+ 369,550	+ 36,292	− 16,676	− 60,110	− 43,835	− 20,661	− 11,391
Short-term debt securities	+ 6,403	+ 120,830	+ 119,474	+ 83,475	− 59,984	− 69,478	− 4,960	− 15,758	+ 1,049
Long-term debt securities	+ 365,436	+ 245,652	+ 301,229	+ 36,167	+ 60,597	+ 19,899	− 2,853	+ 11,445	− 13,221
By non-resident units of the euro area	+ 573,487	+ 156,239	+ 473,083	+ 73,319	+ 34,865	− 101,821	− 79,715	+ 34,558	− 50,454
Equity and investment fund shares	+ 330,676	+ 166,846	+ 667,112	+ 211,763	− 44,670	− 32,472	− 58,366	+ 5,610	− 3,111
Short-term debt securities	− 27,515	+ 114,567	+ 32,997	− 86,792	+ 82,400	− 77,926	− 36,782	− 4,721	− 30,931
Long-term debt securities	+ 270,324	− 125,176	− 227,022	− 51,651	− 2,865	+ 8,576	+ 15,433	+ 33,669	− 16,412
3. Financial derivatives and employee stock options	+ 7,219	+ 18,890	+ 68,591	+ 40,187	− 2,086	+ 23,948	+ 1,081	− 10,044	− 196
4. Other investment	+ 260,495	− 189,019	− 494,729	− 155,062	+ 26,128	− 90,707	− 78,863	+ 91,987	− 1,178
Eurosystem	+ 144,209	− 203,797	− 442,764	− 357,070	+ 184,740	− 4,101	− 33,703	− 28,083	+ 35,229
General government	+ 4,818	− 15,761	− 71,715	+ 4,362	− 413	− 28,609	− 2,019	− 2,262	− 12,159
MFIs 2	+ 189,827	+ 19,340	− 126,788	+ 183,570	− 234,488	− 91,744	− 28,053	+ 82,317	− 39,437
Enterprises and households	− 78,362	+ 11,193	+ 146,536	+ 14,077	+ 76,291	+ 33,746	− 15,087	+ 40,013	+ 15,190
5. Reserve assets	+ 5,999	+ 13,193	+ 130,061	+ 2,888	− 888	+ 2,319	+ 1,213	+ 1,745	+ 1,639
IV. Net errors and omissions	− 47,749	− 1,492	− 18,751	− 25,960	− 8,829	− 27,364	− 14,364	+ 22,591	+ 36,840

***** 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]							
2007	+ 171,493	+ 201,728	− 1,183	− 32,465	+ 35,620	− 33,390	− 1,597	+ 183,169	+ 953	+ 13,273
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	+ 210,906	+ 219,629	− 14,296	− 25,303	+ 57,752	− 41,172	+ 2,936	+ 240,258	− 2,564	+ 26,416
2015	+ 260,286	+ 248,394	− 15,405	− 18,516	+ 69,262	− 38,854	− 48	+ 234,392	− 2,213	− 25,845
2016	+ 266,689	+ 252,409	− 19,921	− 20,987	+ 76,199	− 40,931	+ 2,142	+ 261,123	+ 1,686	− 7,708
2017	+ 255,814	+ 255,077	− 13,613	− 23,994	+ 76,404	− 51,673	− 2,936	+ 276,697	− 1,269	+ 23,819
2018	+ 267,729	+ 221,983	− 22,985	− 15,806	+ 111,890	− 50,338	+ 580	+ 246,928	+ 392	− 21,381
2019	+ 262,903	+ 215,456	− 30,887	− 18,100	+ 115,359	− 49,811	− 887	+ 186,317	− 544	− 75,700
2020	+ 238,741	+ 189,963	− 7,246	+ 2,725	+ 98,780	− 52,727	− 5,829	+ 216,515	− 51	− 16,397
2021	+ 264,981	+ 192,150	+ 3,091	+ 314	+ 126,606	− 54,090	− 1,376	+ 314,750	+ 31,892	+ 51,145
2019 Q3	+ 64,013	+ 57,726	− 7,447	− 11,912	+ 30,937	− 12,738	+ 235	+ 19,657	− 349	− 44,590
Q4	+ 68,030	+ 49,432	− 11,400	− 3,126	+ 35,102	− 13,378	− 1,412	+ 83,477	− 576	+ 16,860
2020 Q1	+ 62,570	+ 52,090	− 2,656	− 2,238	+ 27,396	− 14,679	− 608	+ 33,152	+ 133	− 28,810
Q2	+ 37,621	+ 28,076	− 1,806	+ 5,190	+ 13,563	− 9,209	+ 55	+ 25,747	+ 243	− 11,929
Q3	+ 62,788	+ 55,716	− 695	− 5,827	+ 23,501	− 10,601	− 1,493	+ 65,414	− 1,276	+ 4,118
Q4	+ 75,762	+ 54,082	− 2,089	+ 5,599	+ 34,320	− 18,238	− 3,783	+ 92,203	+ 848	+ 20,223
2021 Q1	+ 75,009	+ 57,190	+ 1,200	+ 3,281	+ 31,814	− 17,276	− 331	+ 106,919	+ 385	+ 32,241
Q2	+ 63,932	+ 47,133	− 194	+ 6,401	+ 18,624	− 8,225	− 1,788	+ 84,594	+ 58	+ 22,450
Q3	+ 61,165	+ 49,076	− 34	− 8,160	+ 34,277	− 14,029	+ 1,745	+ 36,922	+ 31,199	− 25,987
Q4	+ 64,875	+ 38,751	+ 2,119	− 1,208	+ 41,892	− 14,560	− 1,002	+ 86,314	+ 250	+ 22,441
2022 Q1	+ 52,344	+ 34,305	+ 3,802	− 2,468	+ 36,895	− 16,388	− 1,865	+ 94,003	+ 2,200	+ 43,524
Q2	+ 22,934	+ 24,817	+ 8,139	− 7,257	+ 16,717	− 11,343	− 3,775	+ 55,875	+ 597	+ 36,715
2020 Mar.	+ 25,331	+ 18,185	+ 133	− 62	+ 10,080	− 2,872	− 706	+ 13,542	− 1,514	− 11,083
Apr.	+ 10,787	+ 4,530	− 102	+ 1,675	+ 9,003	− 4,421	+ 110	+ 11,487	+ 950	+ 589
May	+ 6,134	+ 8,575	+ 87	+ 1,110	+ 23	− 3,573	− 9	+ 2,095	+ 33	− 4,029
June	+ 20,700	+ 14,971	− 1,791	+ 2,406	+ 4,538	− 1,214	− 47	+ 12,165	− 740	− 8,489
July	+ 20,883	+ 20,319	− 330	− 2,709	+ 7,024	− 3,751	− 1,005	+ 14,644	− 611	− 5,234
Aug.	+ 16,852	+ 13,976	+ 38	− 2,543	+ 8,850	− 3,432	+ 412	+ 30,512	− 611	+ 13,248
Sep.	+ 25,053	+ 21,421	− 404	− 575	+ 7,627	− 3,419	− 900	+ 20,258	− 53	− 3,895
Oct.	+ 24,773	+ 20,389	− 415	+ 782	+ 8,128	− 4,527	− 1,386	+ 25,983	+ 140	+ 2,596
Nov.	+ 22,799	+ 18,384	+ 164	+ 2,120	+ 9,835	− 7,541	− 2,266	+ 23,695	+ 89	+ 3,162
Dec.	+ 28,191	+ 15,308	− 1,838	+ 2,697	+ 16,356	− 6,171	− 132	+ 42,524	+ 618	+ 14,466
2021 Jan.	+ 20,394	+ 14,733	+ 301	+ 896	+ 11,006	− 6,241	− 458	+ 22,458	+ 743	+ 2,522
Feb.	+ 20,814	+ 18,248	+ 44	+ 1,159	+ 9,016	− 7,609	− 1,461	+ 52,644	+ 102	+ 33,291
Mar.	+ 33,801	+ 24,208	+ 855	+ 1,227	+ 11,792	− 3,427	+ 1,588	+ 31,817	− 460	− 3,572
Apr.	+ 23,029	+ 15,866	+ 83	+ 3,051	+ 7,812	− 3,701	− 700	+ 35,418	− 251	+ 13,090
May	+ 15,757	+ 14,492	− 160	+ 2,344	+ 644	− 1,724	− 375	+ 14,146	+ 211	− 1,235
June	+ 25,147	+ 16,775	− 117	+ 1,005	+ 10,167	− 2,800	− 713	+ 35,029	+ 98	+ 10,595
July	+ 20,669	+ 18,645	− 451	− 2,511	+ 9,907	− 5,372	− 626	+ 5,325	+ 102	− 14,718
Aug.	+ 16,987	+ 12,859	+ 645	− 3,543	+ 11,922	− 4,251	+ 493	+ 20,653	+ 31,254	+ 3,173
Sep.	+ 23,509	+ 17,573	− 229	− 2,105	+ 12,447	− 4,406	+ 1,877	+ 10,944	− 158	− 14,442
Oct.	+ 19,141	+ 15,259	+ 1,117	− 2,802	+ 11,783	− 5,099	+ 416	+ 21,714	+ 261	+ 2,157
Nov.	+ 21,329	+ 14,820	+ 893	+ 71	+ 12,021	− 5,582	− 1,153	+ 48,411	+ 963	+ 28,235
Dec.	+ 24,405	+ 8,672	+ 109	+ 1,523	+ 18,088	− 3,878	− 265	+ 16,190	− 974	− 7,951
2022 Jan.	+ 12,519	+ 5,831	+ 1,230	− 338	+ 13,100	− 6,074	− 104	+ 55,703	+ 309	+ 43,288
Feb.	+ 21,057	+ 15,649	+ 2,346	+ 414	+ 10,415	− 5,421	− 1,297	+ 28,963	+ 1,161	+ 9,203
Mar.	+ 18,768	+ 12,824	+ 225	− 2,543	+ 13,380	− 4,893	− 464	+ 9,337	+ 730	− 8,967
Apr.	+ 8,985	+ 4,343	+ 2,759	− 1,170	+ 10,496	− 4,684	− 1,272	+ 6,877	+ 83	− 836
May	− 375	+ 9,094	+ 4,324	− 2,569	− 5,854	− 1,046	− 2,772	+ 1,400	+ 161	+ 4,547
June	+ 14,324	+ 11,380	+ 1,056	− 3,519	+ 12,075	− 5,612	+ 269	+ 47,597	+ 353	+ 33,005
July	+ 5,404	+ 8,572	+ 323	− 7,195	+ 10,615	− 6,587	− 2,149	− 11,943	− 484	− 15,198
Aug. p	+ 616	+ 3,542	+ 126	− 8,842	+ 11,563	− 5,647	− 780	+ 30,311	+ 81	+ 30,475

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		2019	2020	2021	2022 Mar.	Apr.	May	June	July	Aug.
All countries [1]	Exports	1,328,152	1,206,928	1,375,658	139,108	123,262	134,310	136,082	127,599	128,692
	Imports	1,104,141	1,026,502	1,203,174	130,529	121,905	131,076	128,543	122,741	128,392
	Balance	+ 224,010	+ 180,427	+ 172,484	+ 8,579	+ 1,357	+ 3,234	+ 7,539	+ 4,858	+ 300
I. European countries	Exports	902,831	824,921	945,989	94,419	84,942	91,309	92,242	86,841	86,034
	Imports	747,692	682,477	803,848	85,963	79,009	83,704	83,017	80,925	82,823
	Balance	+ 155,140	+ 142,444	+ 142,141	+ 8,455	+ 5,933	+ 7,605	+ 9,225	+ 5,915	+ 3,211
1. EU Member States (27)	Exports	698,257	635,741	747,249	76,015	68,541	73,763	74,563	70,060	68,705
	Imports	593,251	546,655	638,563	64,757	59,302	64,837	64,515	60,671	60,657
	Balance	+ 105,006	+ 89,087	+ 108,686	+ 11,258	+ 9,238	+ 8,926	+ 10,048	+ 9,389	+ 8,048
Euro area (19) countries	Exports	492,308	441,853	518,917	52,573	48,009	52,083	51,773	49,340	46,807
	Imports	409,863	371,211	438,606	44,825	41,183	44,538	44,534	41,694	41,238
	Balance	+ 82,445	+ 70,643	+ 80,311	+ 7,748	+ 6,826	+ 7,544	+ 7,239	+ 7,646	+ 5,569
of which:										
Austria	Exports	66,076	60,118	71,910	7,726	7,317	7,192	7,727	7,606	7,835
	Imports	44,059	40,454	47,543	4,910	4,785	5,161	4,891	5,285	5,026
	Balance	+ 22,017	+ 19,663	+ 24,367	+ 2,816	+ 2,532	+ 2,031	+ 2,837	+ 2,321	+ 2,809
Belgium and Luxembourg	Exports	52,006	48,824	57,418	6,125	5,309	5,925	5,784	5,894	5,875
	Imports	46,322	39,584	55,336	5,587	4,974	5,904	5,754	5,719	5,237
	Balance	+ 5,683	+ 9,240	+ 2,082	+ 539	+ 335	+ 21	+ 30	+ 175	+ 637
France	Exports	106,564	90,910	102,125	10,247	9,133	9,691	10,088	9,504	8,942
	Imports	66,199	56,364	62,049	6,298	5,573	5,867	6,479	5,577	5,353
	Balance	+ 40,364	+ 34,546	+ 40,076	+ 3,949	+ 3,561	+ 3,824	+ 3,609	+ 3,927	+ 3,589
Italy	Exports	67,887	60,634	75,308	7,915	7,378	8,667	7,375	7,119	5,762
	Imports	57,100	53,906	65,373	6,553	5,935	6,530	6,472	6,161	5,404
	Balance	+ 10,786	+ 6,728	+ 9,935	+ 1,362	+ 1,442	+ 2,137	+ 903	+ 958	+ 357
Netherlands	Exports	91,528	84,579	100,451	9,410	8,903	9,132	9,382	9,183	8,798
	Imports	97,816	87,024	105,489	10,631	10,095	10,542	10,779	10,314	11,018
	Balance	− 6,288	− 2,445	− 5,039	− 1,221	− 1,191	− 1,410	− 1,398	− 1,130	− 2,220
Spain	Exports	44,218	37,618	43,692	4,240	3,873	4,323	4,008	3,945	3,545
	Imports	33,126	31,281	34,257	3,386	2,970	3,362	3,143	2,894	2,429
	Balance	+ 11,092	+ 6,337	+ 9,434	+ 854	+ 903	+ 961	+ 865	+ 1,051	+ 1,116
Other EU Member States	Exports	205,949	193,888	228,332	23,442	20,532	21,680	22,790	20,720	21,898
	Imports	183,387	175,444	199,957	19,932	18,119	20,298	19,981	18,977	19,419
	Balance	+ 22,561	+ 18,444	+ 28,375	+ 3,510	+ 2,413	+ 1,382	+ 2,809	+ 1,743	+ 2,479
2. Other European countries	Exports	204,575	189,180	198,740	18,404	16,401	17,546	17,679	16,780	17,330
	Imports	154,441	135,822	165,284	21,207	19,707	18,867	18,502	20,255	22,166
	Balance	+ 50,134	+ 53,358	+ 33,455	− 2,803	− 3,305	− 1,321	− 823	− 3,474	− 4,837
of which:										
Switzerland	Exports	56,345	56,265	60,617	6,468	5,369	6,060	5,941	5,765	5,825
	Imports	45,824	45,556	48,885	5,216	4,795	4,718	4,551	4,535	4,235
	Balance	+ 10,521	+ 10,708	+ 11,732	+ 1,253	+ 573	+ 1,342	+ 1,390	+ 1,230	+ 1,590
United Kingdom	Exports	79,166	67,086	65,348	6,562	6,127	5,962	6,102	5,809	5,849
	Imports	38,397	35,018	32,177	3,654	3,489	3,368	2,845	3,045	3,101
	Balance	+ 40,770	+ 32,068	+ 33,171	+ 2,909	+ 2,638	+ 2,594	+ 3,257	+ 2,764	+ 2,748
II. Non-European countries	Exports	421,728	380,292	427,496	44,344	37,907	42,531	43,339	40,252	42,122
	Imports	355,390	343,270	398,448	44,480	42,789	47,239	45,390	41,653	45,405
	Balance	+ 66,338	+ 37,022	+ 29,048	− 136	− 4,881	− 4,708	− 2,051	− 1,401	− 3,283
1. Africa	Exports	23,627	20,086	23,111	2,292	1,907	2,227	2,307	2,113	2,280
	Imports	24,475	18,758	26,037	3,188	2,927	2,951	3,150	2,852	2,672
	Balance	− 848	+ 1,328	− 2,926	− 896	− 1,020	− 724	− 843	− 739	− 392
2. America	Exports	165,602	141,375	167,737	18,321	16,370	18,255	18,991	17,220	18,052
	Imports	100,007	94,005	101,274	10,920	9,740	11,003	12,014	10,534	12,088
	Balance	+ 65,595	+ 47,370	+ 66,463	+ 7,402	+ 6,630	+ 7,252	+ 6,976	+ 6,686	+ 5,964
of which:										
United States	Exports	118,680	103,476	122,038	13,816	11,912	13,439	14,342	12,422	13,341
	Imports	71,334	67,694	72,131	7,550	6,736	7,852	8,493	7,575	8,393
	Balance	+ 47,346	+ 35,782	+ 49,907	+ 6,266	+ 5,176	+ 5,587	+ 5,849	+ 4,846	+ 4,948
3. Asia	Exports	221,278	208,146	224,993	22,434	18,446	20,798	21,014	19,775	20,707
	Imports	227,036	226,646	266,954	29,664	29,504	32,525	29,418	27,493	30,147
	Balance	− 5,759	− 18,500	− 41,961	− 7,230	− 11,058	− 11,728	− 8,405	− 7,718	− 9,440
of which:										
Middle East	Exports	28,663	25,882	26,112	2,516	1,980	2,213	2,454	2,347	2,720
	Imports	7,460	6,721	7,506	747	960	1,040	1,057	1,091	889
	Balance	+ 21,202	+ 19,161	+ 18,606	+ 1,770	+ 1,020	+ 1,173	+ 1,397	+ 1,256	+ 1,831
Japan	Exports	20,662	17,396	18,238	1,916	1,613	1,680	1,646	1,580	1,687
	Imports	23,904	21,427	23,485	2,106	2,079	2,220	2,072	1,943	2,162
	Balance	− 3,243	− 4,032	− 5,247	− 190	− 466	− 540	− 426	− 363	− 475
People's Republic of China [2]	Exports	95,984	95,840	103,690	10,445	8,255	9,199	9,095	8,893	8,918
	Imports	110,054	117,373	142,388	16,709	16,764	17,206	16,248	14,568	15,931
	Balance	− 14,070	− 21,533	− 38,698	− 6,265	− 8,509	− 8,007	− 7,153	− 5,675	− 7,013
New industrial countries and emerging markets of Asia [3]	Exports	54,164	50,590	55,241	5,429	4,783	5,431	5,599	5,074	5,356
	Imports	51,748	48,222	55,399	5,538	5,340	7,283	5,709	5,303	5,746
	Balance	+ 2,416	+ 2,368	− 158	− 109	− 556	− 1,852	− 110	− 229	− 390
4. Oceania and polar regions	Exports	11,221	10,685	11,655	1,297	1,184	1,251	1,028	1,143	1,083
	Imports	3,872	3,861	4,183	709	617	759	807	774	498
	Balance	+ 7,349	+ 6,824	+ 7,472	+ 588	+ 567	+ 492	+ 220	+ 369	+ 585

***** 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. EU excl. UK. **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		
	Total	of which: 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]
2017	− 23,994	− 3,679	− 43,558	+ 9,613	+ 14,903	− 8,188	− 1,065	+ 2,177		+ 1,139	+ 76,669	− 1,403
2018	− 15,806	− 2,044	− 44,543	+ 10,060	+ 17,219	− 7,060	+ 723	+ 3,322		+ 671	+ 112,223	− 1,004
2019	− 18,100	− 72	− 45,947	+ 10,999	+ 18,299	− 9,697	− 2,984	+ 3,489		+ 846	+ 115,462	− 949
2020	+ 2,725	− 9,392	− 14,678	+ 10,239	+ 17,546	− 7,107	− 4,382	+ 3,363		+ 3,234	+ 97,017	− 1,471
2021	+ 314	− 12,067	− 21,924	+ 8,737	+ 31,878	− 7,515	− 8,523	+ 3,513		+ 2,605	+ 126,146	− 2,145
2020 Q4	+ 5,599	− 2,902	− 98	+ 2,713	+ 4,880	− 928	− 1,007	+ 668		+ 1,067	+ 29,998	+ 3,255
2021 Q1	+ 3,281	− 3,183	− 13	+ 2,251	+ 5,756	− 2,478	− 1,436	+ 884		+ 1,324	+ 31,487	− 997
Q2	+ 6,401	− 2,075	− 2,151	+ 2,589	+ 8,007	− 1,329	− 1,164	+ 914		+ 494	+ 21,077	− 2,947
Q3	− 8,160	− 2,259	− 14,130	+ 1,221	+ 9,080	− 2,169	− 2,331	+ 946		− 77	+ 35,585	− 1,232
Q4	− 1,208	− 4,551	− 5,629	+ 2,676	+ 9,035	− 1,539	− 3,592	+ 769		+ 864	+ 37,996	+ 3,031
2022 Q1	− 2,468	− 5,551	− 4,636	+ 2,301	+ 7,619	− 3,220	− 1,746	+ 949		+ 1,233	+ 36,924	− 1,262
Q2	− 7,257	− 1,607	− 12,055	+ 2,874	+ 6,058	− 1,919	− 2,799	+ 1,012		+ 320	+ 20,189	− 3,791
2021 Oct.	− 2,802	− 1,157	− 3,543	+ 1,115	+ 2,593	− 637	− 1,813	+ 285		+ 248	+ 12,006	− 472
Nov.	+ 71	− 1,122	− 1,354	+ 646	+ 3,318	− 830	− 1,478	+ 182		+ 252	+ 12,184	− 415
Dec.	+ 1,523	− 2,272	− 733	+ 915	+ 3,125	− 72	− 301	+ 302		+ 364	+ 13,807	+ 3,918
2022 Jan.	− 338	− 1,741	− 1,141	+ 894	+ 2,714	− 1,340	− 458	+ 311		+ 437	+ 13,068	− 405
Feb.	+ 414	− 1,844	− 1,249	+ 714	+ 2,773	− 875	− 232	+ 322		+ 434	+ 10,396	− 415
Mar.	− 2,543	− 1,966	− 2,246	+ 694	+ 2,132	− 1,005	− 1,056	+ 317		+ 361	+ 13,460	− 441
Apr.	− 1,170	− 805	− 2,247	+ 912	+ 2,189	− 1,203	− 726	+ 307		+ 68	+ 11,054	− 625
May	− 2,569	− 576	− 3,777	+ 847	+ 1,854	− 718	− 1,049	+ 325		+ 102	− 3,546	− 2,410
June	− 3,519	− 226	− 6,032	+ 1,115	+ 2,015	+ 1	− 1,024	+ 381		+ 150	+ 12,681	− 756
July	− 7,195	− 1,092	− 5,781	+ 532	+ 1,414	− 1,354	− 1,335	+ 323		− 79	+ 11,188	− 493
Aug. p	− 8,842	− 2,609	− 7,049	+ 718	+ 1,381	− 667	− 1,241	+ 313		− 42	+ 12,145	− 540

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
2017	− 51,673	− 23,191	− 9,851	+ 9,665	− 28,482	.	+ 4,613		− 2,936	+ 926	− 3,863
2018	− 50,338	− 28,710	− 10,186	+ 10,230	− 21,627	.	+ 5,142		+ 580	+ 3,349	− 2,769
2019	− 49,811	− 28,986	− 10,728	+ 11,742	− 20,825	.	+ 5,431		− 887	+ 3,028	− 3,915
2020	− 52,727	− 34,127	− 12,239	+ 10,929	− 18,600	.	+ 5,908		− 5,829	+ 380	− 6,209
2021	− 54,090	− 32,567	− 7,039	+ 11,982	− 21,523	.	+ 6,170		− 1,376	+ 3,191	− 4,567
2020 Q4	− 18,238	− 13,375	− 4,391	+ 1,752	− 4,863	+ 1,482	+ 1,477		− 3,783	+ 295	− 4,078
2021 Q1	− 17,276	− 11,088	+ 327	+ 2,297	− 6,188	.	+ 1,543		− 331	+ 123	− 454
Q2	− 8,225	− 3,644	− 1,113	+ 5,341	− 4,582	.	+ 1,543		− 1,788	− 1,578	− 211
Q3	− 14,029	− 8,787	− 2,834	+ 2,199	− 5,242	.	+ 1,543		+ 1,745	+ 2,918	− 1,173
Q4	− 14,560	− 9,048	− 3,420	+ 2,144	− 5,511	+ 1,548	+ 1,543		− 1,002	+ 1,728	− 2,730
2022 Q1	− 16,388	− 10,040	− 2,369	+ 2,410	− 6,348	.	+ 1,598		− 1,865	− 1,885	+ 20
Q2	− 11,343	− 5,179	− 2,495	+ 7,315	− 6,164	+ 1,603	+ 1,598		− 3,775	− 3,027	− 748
2021 Oct.	− 5,099	− 3,257	− 122	+ 472	− 1,843	+ 516	+ 514		+ 416	+ 786	− 370
Nov.	− 5,582	− 3,691	− 743	+ 347	− 1,892	+ 516	+ 514		− 1,153	− 513	− 640
Dec.	− 3,878	− 2,101	− 2,555	+ 1,325	− 1,777	+ 516	+ 514		− 265	+ 1,455	− 1,720
2022 Jan.	− 6,074	− 4,295	− 1,394	+ 454	− 1,779	.	+ 533		− 104	− 291	+ 187
Feb.	− 5,421	− 3,893	− 829	+ 940	− 1,527	+ 534	+ 533		− 1,297	− 1,257	− 40
Mar.	− 4,893	− 1,852	− 145	+ 1,016	− 3,041	+ 537	+ 533		− 464	− 337	− 127
Apr.	− 4,684	− 2,757	− 420	+ 1,117	− 1,928	+ 534	+ 533		− 1,272	− 790	− 482
May	− 1,046	+ 1,349	− 488	+ 4,973	− 2,396	+ 534	+ 533		− 2,772	− 2,363	− 409
June	− 5,612	− 3,772	− 1,587	+ 1,225	− 1,840	+ 535	+ 533		+ 269	+ 126	+ 142
July	− 6,587	− 4,578	− 1,697	+ 432	− 2,008	+ 535	+ 533		− 2,149	− 1,653	− 496
Aug. p	− 5,647	− 4,012	− 1,116	+ 420	− 1,636	+ 533	+ 533		− 780	− 549	− 231

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	2019	2020	2021	2021	2022				
				Q4	Q1	Q2	June	July	August p
I. Net domestic investment abroad (increase: +)	+ 251,072	+ 739,081	+ 844,810	+ 276,086	+ 204,882	+ 114,464	+ 69,220	− 39,396	+ 172,714
1. Direct investment	+ 139,279	+ 119,458	+ 163,651	+ 38,791	+ 44,793	+ 53,963	+ 15,446	+ 1,120	+ 52,467
Equity	+ 116,157	+ 90,170	+ 113,012	+ 11,956	+ 29,186	+ 24,419	+ 5,560	+ 5,570	+ 8,777
of which:									
Reinvestment of earnings [1]	+ 40,785	+ 21,039	+ 55,475	+ 7,203	+ 20,797	+ 13,306	+ 4,227	+ 2,145	+ 7,129
Debt instruments	+ 23,122	+ 29,288	+ 50,638	+ 26,835	+ 15,607	+ 29,545	+ 9,885	− 4,450	+ 43,690
2. Portfolio investment	+ 134,961	+ 191,740	+ 221,477	+ 42,049	+ 59,730	+ 1,603	+ 7,027	− 9,207	− 9,301
Shares [2]	+ 13,672	+ 65,214	+ 56,007	+ 12,910	+ 7,228	+ 4,986	− 2,383	− 4,889	− 2,427
Investment fund shares [3]	+ 53,708	+ 62,585	+ 103,434	+ 39,858	+ 3,970	+ 1,293	− 1,368	+ 520	+ 415
Short-term [4]									
debt securities	+ 7,424	+ 3,852	− 6,256	− 10,366	+ 1,329	− 2,152	+ 463	− 2,140	− 244
Long-term [5]									
debt securities	+ 60,157	+ 60,089	+ 68,292	− 353	+ 47,202	− 2,523	+ 10,315	− 2,698	− 7,045
3. Financial derivatives and employee stock options [6]	+ 24,544	+ 96,276	+ 60,977	+ 18,916	+ 10,566	+ 10,694	+ 4,187	+ 3,989	+ 1,400
4. Other investment [7]	− 47,168	+ 331,659	+ 366,813	+ 176,081	+ 87,593	+ 47,606	+ 42,207	− 34,814	+ 128,066
MFIs [8]	+ 9,256	− 4,522	+ 112,866	− 15,065	+ 139,954	− 19,411	− 15,282	+ 5,980	+ 20,675
Short-term	− 8,901	+ 3,526	+ 99,548	− 26,717	+ 131,275	− 7,349	− 11,918	− 4,349	+ 12,137
Long-term	+ 18,157	− 8,048	+ 13,318	+ 11,652	+ 8,679	− 12,061	− 3,364	+ 10,323	+ 8,536
Enterprises and households [9]	+ 14,348	+ 90,994	+ 138,858	+ 44,797	+ 45,131	+ 30,105	+ 4,030	+ 8,850	+ 32,330
Short-term	+ 793	+ 45,448	+ 124,088	+ 46,917	+ 43,566	+ 24,008	+ 1,814	+ 6,098	+ 30,414
Long-term	+ 13,555	+ 45,545	+ 14,770	− 2,119	+ 1,565	+ 6,097	+ 2,216	− 520	− 26
General government	+ 144	+ 2,076	− 8,305	+ 756	− 5,842	− 10,764	− 5,340	+ 3,101	− 3,696
Short-term	+ 3,357	+ 3,461	− 7,502	+ 1,061	− 5,362	− 10,180	− 4,884	+ 3,061	− 3,683
Long-term	− 3,213	− 1,385	− 803	− 305	− 480	− 584	− 456	− 438	− 77
Bundesbank	− 70,915	+ 243,112	+ 123,394	+ 145,592	− 91,650	+ 47,675	+ 58,799	− 52,744	+ 78,756
5. Reserve assets	− 544	− 51	+ 31,892	+ 250	+ 2,200	+ 597	+ 353	− 484	+ 81
II. Net foreign investment in the reporting country (increase: +)	+ 64,756	+ 522,566	+ 530,060	+ 189,772	+ 110,879	+ 58,590	+ 21,623	− 27,453	+ 142,402
1. Direct investment	+ 63,683	+ 122,929	+ 61,833	+ 5,884	+ 40,074	+ 13,168	+ 4,198	− 12,943	+ 39,787
Equity	+ 23,492	+ 43,862	+ 36,972	+ 9,840	+ 4,684	+ 5,410	+ 1,390	− 2,121	+ 193
of which:									
Reinvestment of earnings [1]	− 492	+ 1,880	+ 4,787	+ 1,952	+ 3,284	+ 1,347	+ 986	− 2,631	− 658
Debt instruments	+ 40,192	+ 79,068	+ 24,861	− 3,956	+ 35,390	+ 7,758	+ 2,808	− 10,822	+ 39,595
2. Portfolio investment	+ 65,309	+ 148,877	− 33,617	− 53,336	+ 21,283	− 15,738	+ 5,003	− 14,604	+ 15,618
Shares [2]	− 7,275	− 15,982	− 3,703	− 7,583	− 9,199	− 5,940	− 1,534	− 1,764	− 2,618
Investment fund shares [3]	− 4,519	+ 1,862	− 2,760	− 2,847	− 2,211	+ 1,352	+ 264	− 1,746	− 29
Short-term [4]									
debt securities	+ 14,400	+ 83,707	+ 25,027	− 6,073	− 5,244	− 7,004	+ 7,527	− 5,866	− 4,616
Long-term [5]									
debt securities	+ 62,704	+ 79,290	− 52,181	− 36,833	+ 37,937	− 4,145	− 1,253	− 5,227	+ 22,878
3. Other investment [7]	− 64,237	+ 250,760	+ 501,843	+ 237,225	+ 49,522	+ 61,159	+ 12,422	+ 93	+ 86,997
MFIs [8]	− 10,214	+ 108,323	+ 159,384	− 114,455	+ 266,244	+ 6,112	− 17,408	− 547	+ 18,718
Short-term	− 20,978	+ 74,805	+ 115,401	− 127,741	+ 290,964	+ 2,551	− 17,283	− 2,232	+ 9,042
Long-term	+ 10,764	+ 33,517	+ 43,984	+ 13,286	− 24,720	+ 3,561	− 125	+ 1,685	+ 9,676
Enterprises and households [9]	+ 43,978	+ 39,313	+ 120,200	+ 89,278	− 14,909	+ 39,341	+ 10,027	+ 14,553	+ 38,238
Short-term	+ 11,681	+ 18,361	+ 115,536	+ 80,436	− 17,519	+ 37,724	+ 10,058	+ 15,663	+ 37,314
Long-term	+ 32,297	+ 20,952	+ 4,663	+ 8,842	+ 2,610	+ 1,618	− 31	− 1,312	+ 562
General government	+ 1,620	− 7,817	− 4,537	− 246	− 641	− 641	− 611	+ 2,248	− 1,525
Short-term	+ 1,424	− 7,664	− 2,186	− 661	+ 2,078	− 760	− 617	+ 2,256	− 1,532
Long-term	+ 196	− 153	− 2,351	+ 416	− 2,719	+ 119	+ 6	.	.
Bundesbank	− 99,621	+ 110,941	+ 226,796	+ 262,648	− 201,172	+ 16,347	+ 20,414	− 16,161	+ 31,566
III. Net financial account (net lending: +/net borrowing: -)	+ 186,317	+ 216,515	+ 314,750	+ 86,314	+ 94,003	+ 55,875	+ 47,597	− 11,943	+ 30,311

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 3ä, 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
2002	103,948	85,002	36,208	1,888	6,384	40,522	18,780	4,995	166	66,278	37,670
2003	95,394	76,680	36,533	1,540	6,069	32,538	18,259	4,474	454	83,329	12,065
2004	93,110	71,335	35,495	1,512	5,036	29,292	21,110	7,851	665	95,014	– 1,904
2005	130,268	86,181	47,924	1,601	2,948	33,708	43,184	29,886	902	115,377	14,891
2006	104,389	84,765	53,114	1,525	1,486	28,640	18,696	5,399	928	134,697	– 30,308
2007	179,492	92,545	62,433	1,469	949	27,694	84,420	71,046	2,527	176,569	2,923
2008	230,775	99,185	68,194	1,576	1,709	27,705	129,020	115,650	2,570	237,893	– 7,118
2009	323,286	125,541	83,939	13,263	2,705	25,634	190,288	177,935	7,458	247,645	75,641
2010	524,695	162,100	115,403	14,104	4,636	27,957	337,921	325,553	24,674	273,241	251,454
2011	714,662	184,603	132,874	14,118	8,178	29,433	475,994	463,311	54,065	333,730	380,932
2012	921,002	188,630	137,513	13,583	8,760	28,774	668,672	655,670	63,700	424,999	496,003
2013	721,741	143,753	94,876	12,837	7,961	28,080	523,153	510,201	54,834	401,524	320,217
2014	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	396,314	282,490
2015	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	481,787	318,921
2016	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	592,723	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
2020 Apr.	1,214,851	226,903	170,359	14,935	6,857	34,753	934,333	918,814	53,615	616,319	598,532
May	1,209,328	223,125	167,780	14,650	6,787	33,908	931,521	916,145	54,682	612,403	596,925
June	1,294,167	226,135	170,728	14,603	6,955	33,849	1,012,982	995,083	55,050	618,825	675,342
July	1,323,691	233,547	180,400	14,179	7,465	31,503	1,034,282	1,019,214	55,862	599,189	724,503
Aug.	1,358,137	230,309	177,973	14,129	7,423	30,784	1,071,521	1,056,231	56,307	600,390	757,747
Sep.	1,414,933	227,150	173,979	14,293	7,632	31,246	1,131,686	1,115,189	56,097	649,781	765,151
Oct.	1,346,367	227,767	174,433	14,346	7,656	31,332	1,061,498	1,047,327	57,102	619,445	726,922
Nov.	1,347,202	212,286	159,737	14,193	7,535	30,820	1,078,270	1,060,263	56,647	625,921	721,282
Dec.	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 Jan.	1,348,921	219,860	166,494	14,115	8,061	31,190	1,072,140	1,054,994	56,921	638,042	710,879
Feb.	1,328,303	210,619	157,313	14,119	8,047	31,140	1,060,378	1,043,746	57,306	616,473	711,830
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

***** 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														
2018	933,849	234,970	698,880	466,225	232,654	217,969	14,686	1,232,594	146,575	1,086,019	879,752	206,267	135,214	71,053
2019	963,967	227,688	736,279	502,594	233,685	217,370	16,314	1,305,705	167,656	1,138,048	927,650	210,399	134,768	75,630
2020	1,021,200	248,779	772,421	544,059	228,362	211,891	16,471	1,394,364	171,998	1,222,366	1,012,503	209,863	129,098	80,766
2021	1,152,509	260,321	892,188	604,424	287,764	270,847	16,917	1,548,984	218,886	1,330,098	1,066,016	264,082	175,351	88,730
2022 Mar.	1,215,926	280,049	935,878	614,010	321,868	293,304	28,564	1,575,472	200,446	1,375,026	1,081,713	293,313	193,098	100,215
Apr.	1,266,969	290,472	976,498	651,264	325,234	296,190	29,044	1,629,738	212,997	1,416,741	1,123,694	293,047	189,904	103,142
May	1,258,386	278,294	980,092	649,343	330,749	301,007	29,741	1,619,688	207,553	1,412,135	1,114,726	297,409	193,823	103,586
June	1,271,963	256,426	1,015,537	669,832	345,705	315,398	30,307	1,641,340	192,674	1,448,666	1,134,510	314,156	210,108	104,048
July	1,278,059	263,838	1,014,221	670,948	343,273	313,123	30,151	1,651,392	211,988	1,439,404	1,126,247	313,157	207,607	105,549
Aug. p	1,352,809	272,333	1,080,476	735,367	345,109	315,001	30,108	1,731,478	232,753	1,498,725	1,179,953	318,772	212,622	106,150
EU Member States (27 excl. GB)														
2018	544,009	177,064	366,944	274,402	92,542	84,191	8,351	801,772	88,161	713,611	631,814	81,798	61,161	20,637
2019	572,324	176,847	395,476	304,605	90,871	82,120	8,752	836,863	91,122	745,740	660,385	85,355	62,692	22,664
2020	609,449	187,703	421,746	332,983	88,763	79,780	8,983	884,904	95,716	789,188	702,991	86,197	61,357	24,841
2021	660,768	198,911	461,857	350,591	111,266	102,689	8,578	978,060	153,424	824,636	713,878	110,758	84,237	26,521
2022 Mar.	699,393	215,782	483,611	355,742	127,869	115,140	12,729	981,025	136,454	844,571	725,830	118,742	88,163	30,579
Apr.	728,052	231,393	496,659	365,832	130,827	118,000	12,827	996,555	136,904	859,651	740,339	119,311	87,983	31,328
May	722,157	220,735	501,423	366,255	135,167	122,235	12,933	999,363	134,322	865,041	740,291	124,749	93,032	31,717
June	721,354	201,319	520,035	377,912	142,123	128,838	13,285	1,008,127	131,237	876,890	742,665	134,224	102,643	31,581
July	731,384	212,349	519,035	376,509	142,526	129,216	13,310	1,022,914	147,814	875,100	741,511	133,588	101,399	32,190
Aug. p	745,824	212,740	533,085	389,917	143,168	129,691	13,477	1,064,712	174,018	890,695	755,433	135,262	102,758	32,504
Extra-EU Member States (27 incl. GB)														
2018	389,841	57,905	331,935	191,823	140,112	133,777	6,335	430,822	58,415	372,408	247,939	124,469	74,053	50,416
2019	391,643	50,841	340,803	197,989	142,814	135,251	7,563	468,842	76,534	392,308	267,265	125,043	72,077	52,967
2020	411,751	61,076	350,675	211,076	139,599	132,112	7,487	509,460	76,282	433,178	309,512	123,666	67,741	55,925
2021	491,741	61,410	430,331	253,833	176,498	168,158	8,340	570,924	65,462	505,463	352,138	153,324	91,115	62,210
2022 Mar.	516,534	64,267	452,267	258,268	193,999	178,164	15,835	594,446	63,991	530,455	355,883	174,572	104,935	69,636
Apr.	538,918	59,079	479,839	285,432	194,407	178,190	16,217	633,183	76,093	557,090	383,355	173,735	101,921	71,814
May	536,228	57,559	478,669	283,088	195,581	178,773	16,809	620,325	73,231	547,095	374,435	172,660	100,791	71,868
June	550,609	55,106	495,502	291,920	203,582	186,560	17,022	633,213	61,437	571,776	391,845	179,931	107,465	72,466
July	546,675	51,488	495,186	294,439	200,748	183,907	16,841	628,478	64,174	564,304	384,736	179,568	106,208	73,360
Aug. p	606,985	59,593	547,392	345,451	201,941	185,310	16,631	666,766	58,735	608,031	424,520	183,510	109,864	73,646
Euro area (19)														
2018	467,428	156,887	310,542	238,963	71,579	64,295	7,283	735,094	68,959	666,136	601,205	64,931	49,138	15,792
2019	493,062	158,102	334,960	264,834	70,127	62,531	7,595	761,144	70,561	690,584	624,607	65,977	48,775	17,202
2020	522,933	166,846	356,087	287,662	68,425	60,750	7,674	799,046	74,101	724,945	658,931	66,014	47,100	18,914
2021	553,838	176,279	377,560	289,330	88,230	80,844	7,386	896,256	131,735	764,521	675,868	88,653	68,232	20,421
2022 Mar.	596,153	195,325	400,828	299,564	101,264	89,818	11,446	897,685	116,893	780,793	686,158	94,635	70,651	23,984
Apr.	628,773	213,684	415,090	310,796	104,294	92,824	11,470	914,122	116,900	797,222	701,576	95,646	71,124	24,522
May	622,482	203,996	418,485	310,720	107,765	96,127	11,638	914,240	112,775	801,465	701,507	99,958	75,219	24,740
June	616,656	185,782	430,873	315,885	114,988	103,025	11,963	923,861	111,967	811,894	702,692	109,202	84,715	24,487
July	620,871	194,739	426,132	310,274	115,858	103,880	11,978	938,353	128,484	809,869	700,797	109,072	84,082	24,990
Aug. p	631,069	197,584	433,485	316,562	116,923	104,771	12,152	979,000	154,352	824,649	714,006	110,643	85,470	25,173
Extra-Euro area (19)														
2018	466,421	78,083	388,338	227,262	161,076	153,673	7,403	497,500	77,617	419,883	278,548	141,336	86,075	55,260
2019	470,905	69,586	401,319	237,761	163,558	154,839	8,719	544,560	97,096	447,465	303,043	144,422	85,993	58,428
2020	498,267	81,933	416,334	256,397	159,937	151,141	8,796	595,318	97,897	497,421	353,572	143,849	81,997	61,852
2021	598,671	84,042	514,629	315,094	199,535	190,003	9,532	652,728	87,151	565,577	390,148	175,429	107,119	68,309
2022 Mar.	619,773	84,723	535,050	314,445	220,604	203,486	17,118	677,787	83,553	594,234	395,555	198,679	122,447	76,231
Apr.	638,196	76,788	561,408	340,468	220,940	203,366	17,574	715,616	96,097	619,519	422,118	197,400	118,780	78,620
May	635,904	74,297	561,607	338,623	222,984	204,881	18,103	705,448	94,778	610,670	413,220	197,451	118,605	78,846
June	655,307	70,643	584,664	353,947	230,717	212,373	18,344	717,479	80,707	636,772	431,818	204,954	125,393	79,561
July	657,188	69,098	588,090	360,674	227,415	209,243	18,173	713,039	83,504	629,535	425,450	204,085	123,525	80,560
Aug. p	721,741	74,749	646,991	418,805	228,186	210,230	17,956	752,478	78,401	674,077	465,947	208,130	127,152	80,977

* 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
2010	1.4423	1.3651	8.9712	7.4473	116.24	8.0043	9.5373	1.3803	0.85784	1.3257
2011	1.3484	1.3761	8.9960	7.4506	110.96	7.7934	9.0298	1.2326	0.86788	1.3920
2012	1.2407	1.2842	8.1052	7.4437	102.49	7.4751	8.7041	1.2053	0.81087	1.2848
2013	1.3777	1.3684	8.1646	7.4579	129.66	7.8067	8.6515	1.2311	0.84926	1.3281
2014	1.4719	1.4661	8.1857	7.4548	140.31	8.3544	9.0985	1.2146	0.80612	1.3285
2015	1.4777	1.4186	6.9733	7.4587	134.31	8.9496	9.3535	1.0679	0.72584	1.1095
2016	1.4883	1.4659	7.3522	7.4452	120.20	9.2906	9.4689	1.0902	0.81948	1.1069
2017	1.4732	1.4647	7.6290	7.4386	126.71	9.3270	9.6351	1.1117	0.87667	1.1297
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
2021 May	1.5653	1.4732	7.8109	7.4362	132.57	10.0931	10.1471	1.0968	0.86258	1.2146
June	1.5761	1.4713	7.7391	7.4364	132.63	10.1444	10.1172	1.0940	0.85872	1.2047
July	1.5926	1.4806	7.6536	7.4373	130.35	10.3767	10.1979	1.0856	0.85613	1.1822
Aug.	1.6118	1.4827	7.6237	7.4369	129.28	10.4195	10.2157	1.0762	0.85287	1.1772
Sep.	1.6087	1.4910	7.6007	7.4361	129.66	10.1861	10.1710	1.0857	0.85683	1.1770
Oct.	1.5669	1.4436	7.4500	7.4398	131.21	9.8143	10.0557	1.0708	0.84694	1.1601
Nov.	1.5615	1.4339	7.2927	7.4373	130.12	9.9661	10.0459	1.0522	0.84786	1.1414
Dec.	1.5781	1.4463	7.1993	7.4362	128.80	10.1308	10.2726	1.0408	0.84875	1.1304
2022 Jan.	1.5770	1.4282	7.1922	7.4411	130.01	10.0070	10.3579	1.0401	0.83503	1.1314
Feb.	1.5825	1.4422	7.1957	7.4408	130.66	10.0544	10.5342	1.0461	0.83787	1.1342
Mar.	1.4946	1.3950	6.9916	7.4404	130.71	9.7367	10.5463	1.0245	0.83638	1.1019
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

* 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

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 group						Indicators of the German economy's price competitiveness						
	EER-19 [1]				EER-42 [2]		Based on the deflators of total sales [3] vis-à-vis				Based on consumer price indices vis-à-vis		
							26 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]	26 selected industrial countries [4]	37 countries [5]	60 countries [6]
1999	96.2	96.2	96.1	96.2	96.6	96.0	97.9	99.6	95.9	97.7	98.3	98.1	97.8
2000	87.1	86.9	86.2	85.7	88.1	86.1	92.0	97.5	85.5	91.2	93.1	92.3	91.2
2001	87.6	87.2	86.7	84.5	90.2	86.9	91.7	96.6	86.1	90.5	93.0	91.7	91.0
2002	89.8	90.2	89.8	88.0	94.5	90.5	92.4	95.7	88.5	91.1	93.5	92.2	91.9
2003	100.4	101.4	100.9	99.0	106.4	101.5	95.9	94.8	97.6	95.3	97.0	96.7	96.8
2004	104.2	105.2	103.8	102.3	110.9	105.3	96.2	93.6	100.0	95.6	98.5	98.2	98.4
2005	102.8	103.9	101.8	100.5	109.0	102.9	94.8	92.0	98.8	93.3	98.4	97.1	96.7
2006	102.8	103.9	101.2	99.3	109.1	102.2	93.6	90.4	98.2	91.6	98.6	96.7	96.0
2007	106.3	106.9	103.3	101.0	112.7	104.5	94.5	89.6	102.0	92.0	100.9	98.3	97.3
2008	110.1	109.7	105.5	104.9	117.4	106.9	94.9	88.4	105.1	91.3	102.4	98.4	97.5
2009	111.6	110.6	106.7	108.5	120.5	108.0	95.2	89.2	104.7	92.0	101.9	98.6	97.9
2010	104.4	102.9	98.5	100.9	111.9	99.0	92.5	88.7	98.2	88.2	98.8	94.3	92.5
2011	104.2	101.9	96.7	99.3	112.7	98.5	92.1	88.5	97.6	87.4	98.2	93.5	91.9
2012	98.5	96.7	91.2	93.5	107.5	93.7	90.1	88.3	92.5	84.7	95.9	90.5	88.9
2013	102.0	99.8	94.1	96.4	112.2	96.8	92.3	88.8	97.5	86.6	98.1	92.3	90.9
2014	102.3	99.1	94.1	96.5	114.5	97.1	92.9	89.6	97.7	87.4	98.2	92.5	91.5
2015	92.5	89.5	85.5	86.0	106.1	88.6	89.8	90.3	88.9	83.6	94.4	87.8	87.0
2016	95.2	91.4	87.8	p 87.3	110.1	90.6	90.7	90.7	90.4	84.9	95.0	88.8	88.1
2017	97.4	93.4	89.0	p 87.9	112.4	91.8	91.9	90.9	93.3	85.7	96.3	89.9	88.9
2018	99.9	95.5	90.5	p 89.4	117.3	95.0	93.2	91.0	96.4	86.7	97.7	91.2	90.8
2019	98.1	93.1	88.8	p 86.9	115.4	92.3	92.2	91.2	93.5	85.8	96.4	89.9	89.4
2020	99.6	93.5	89.4	p 87.2	119.4	93.8	92.4	91.5	93.5	86.4	96.4	90.1	90.2
2021	99.6	93.4	p 88.8	p 85.7	120.8	94.2	93.4	91.9	95.6	86.8	97.4	90.7	91.0
2020 Apr.	98.1	92.5			117.5	93.0					96.1	90.0	90.2
May	98.3	92.6	88.9	p 87.0	117.5	92.9	91.9	91.9	91.9	86.4	96.3	90.2	90.2
June	99.7	93.8			119.1	94.0					97.0	90.8	90.8
July	100.4	94.4			120.3	94.7					96.0	90.0	90.2
Aug.	101.5	94.8	90.3	p 87.9	122.4	95.8	92.3	91.0	94.2	86.6	97.0	90.7	91.2
Sep.	101.5	94.9			122.4	95.7					96.8	90.7	91.1
Oct.	101.3	94.8			122.4	95.7					96.7	90.5	91.0
Nov.	100.6	94.3	90.5	p 87.5	121.6	95.1	93.1	91.3	95.5	86.9	96.5	90.1	90.5
Dec.	101.8	95.2			122.9	96.0					97.0	90.5	90.9
2021 Jan.	101.3	95.3			122.4	96.0					98.0	91.4	91.7
Feb.	100.6	94.5	90.1	p 87.6	121.5	95.1	93.5	91.8	96.0	87.2	97.9	91.2	91.5
Mar.	100.3	94.1			121.2	94.8					97.7	91.1	91.4
Apr.	100.6	94.3			121.9	95.2					97.8	91.2	91.6
May	100.8	94.3	89.6	p 86.0	122.3	95.3	93.5	91.6	96.2	86.8	98.1	91.3	91.7
June	100.2	93.7			121.5	94.6					97.9	91.1	91.5
July	99.7	93.4			120.8	94.2					97.7	91.0	91.2
Aug.	99.3	93.1	p 88.7	p 85.3	120.4	93.7	93.5	91.9	95.6	86.8	97.4	90.7	90.9
Sep.	99.4	93.2			120.4	93.7					97.4	90.7	90.8
Oct.	98.4	92.4			119.5	93.1					96.7	90.0	90.2
Nov.	97.6	91.7	p 86.6	p 83.7	118.8	92.6	93.4	92.5	94.6	86.4	96.2	89.5	89.8
Dec.	97.1	91.2			119.0	92.4					95.8	89.0	89.5
2022 Jan.	96.6	91.2			118.6	p 92.3					96.0	89.0	p 89.5
Feb.	96.9	91.7	p 84.9	p 82.2	118.9	p 92.7	92.9	92.3	93.7	85.7	96.1	89.1	p 89.5
Mar.	95.9	91.3			118.4	p 92.6					96.3	89.5	p 90.0
Apr.	95.2	89.9			116.4	p 90.2					96.0	88.9	p 88.8
May	95.6	90.3	p 83.7	p 80.8	116.2	p 90.0	92.4	92.0	92.8	85.3	96.6	89.6	p 89.2
June	95.9	90.5			116.5	p 90.1					95.7	88.8	p 88.4
July	94.1	p 89.0			114.6	p 88.8					94.9	p 88.0	p 87.6
Aug.	93.6	p 88.7	...	...	114.1	p 88.5	...	...	...	...	94.5	p 87.7	p 87.3
Sep.	94.2	p 89.3			114.5	p 88.8					p 96.0	p 89.2	p 88.7

* 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 countries: Australia, Bulgaria, Canada, China, Croatia, Czechia, Denmark, Hong Kong, Hungary, Japan, Norway, Poland, Romania, Singapore, South Korea, Sweden, Switzerland, the United Kingdom and the United States. Where current price and wage indices were not available, estimates were used. **2** Includes countries belonging to the group EER-19 and additionally 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 suspends 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) 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 group EER-19. **6** Euro area countries (current composition) and countries belonging to the group EER-42.

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. In addition, the new Statistical Series provide a new basic structure and advanced options for using data and are also available on the Bundesbank's website.

Annual Report

Financial Stability Review

Monthly Report

A list of the articles published in the period from 2010 to 2021 is available on the Bundesbank's website.

Monthly Report articles

January 2022
- Changes in the secured money market
- Climate change and climate policy: analytical requirements and options from a central bank perspective
- Scenario-based equity valuation effects induced by greenhouse gas emissions

February 2022
- The current economic situation in Germany

March 2022
- Monetary policy in a prolonged period of low interest rates – a discussion of the concept of the reversal rate
- German balance of payments in 2021

April 2022
- Potential macroeconomic consequences of the war in Ukraine – simulations based on a severe risk scenario
- Development of the debt situation in the euro area private non-financial sector since the outbreak of the COVID-19 pandemic
- Central government's debt brake: options for stability-oriented further development
- Demand for euro banknotes issued by the Bundesbank: current developments

May 2022
- The current economic situation in Germany

June 2022
- Outlook for the German economy for 2022 to 2024
- Pension insurance scheme: long-term scenarios and reform options
- Inflation-induced bracket creep in the income tax scale

– Public finances in the euro area: current developments and challenges
– The Bundesbank's surveys of firms – applications for assessing the financial situation in the corporate sector

July 2022
– Distributional Wealth Accounts for households in Germany – results and use cases
– Factors influencing international portfolio flows
– Cross-border interoperability of central bank digital currency
– Government debt in the euro area: developments in creditor structure

August 2022
– The current economic situation in Germany

September 2022
– Negative interest rate policy period and pandemic as reflected in the Bank Lending Survey
– Productivity effects of reallocation in the corporate sector during the COVID-19 crisis
– The performance of German credit institutions in 2021
– The role of the International Monetary Fund in preventing and managing crises

October 2022
– State government finances in 2021: Surplus and additional reserves from emergency borrowing
– Member States' financial relationships with the EU budget and the Next Generation EU off-budget entity in 2021
– The validity of interest parity in times of crisis
– Market conditions for Bunds in the context of monetary policy purchases and heightened uncertainty

Statistical Series*

Banks
– Banking statistics, monthly
– Statistics on payments and securities trading, September

Corporate financial statements
– Consolidated financial statement statistics, June/December
– Financial statement statistics (extrapolated results), December
– Financial statement statistics (ratios), May
– Financial statement statistics (ratios – provisional data), May

Economic activity and prices
– Seasonally adjusted business statistics, monthly

Exchange rates
– Exchange rate statistics, monthly

External sector
– Balance of payments statistics, monthly
– Direct investment statistics, April
– International investment position and external debt, monthly

Macroeconomic accounting systems
– Financial accounts, June

Money and capital markets
– Capital market indicators, monthly
– Investment funds statistics, monthly
– Securities issues statistics, monthly

Special Statistical Publications

1 Banking statistics guidelines, January 2022[1,2]

2 Banking statistics, customer classification, January 2022[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

Special Publications

Makro-ökonometrisches Mehr-Länder-Modell, November 1996[1]

Europäische Organisationen und Gremien im Bereich von Währung und Wirtschaft, May 1997[1]

Die Zahlungsbilanz der ehemaligen DDR 1975 bis 1989, August 1999[1]

The market for German Federal securities, May 2000

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

Bundesbank Act, September 2002

Die Europäische Union: Grundlagen und Politikbereiche außerhalb der Wirtschafts- und Währungsunion, April 2005[1]

Die Deutsche Bundesbank – Aufgabenfelder, rechtlicher Rahmen, Geschichte, April 2006[1]

European economic and monetary union, April 2008

Weltweite Organisationen und Gremien im Bereich von Währung und Wirtschaft, March 2013[1]

Discussion Papers°

22/2022
The augmented bank balance-sheet channel of monetary policy

23/2022
Pulling ourselves up by our bootstraps: the greenhouse gas value of products, enterprises and industries

24/2022
CDS market structure and bond spreads

25/2022
Carbon pricing, border adjustment and climate clubs: An assessment with EMuSe

26/2022
Spending effects of child-related fiscal transfers

27/2022
The impact of weight shifts on inflation: Evidence for the euro area HICP

28/2022
Smart or smash? The effect of financial sanctions on trade in goods and services

29/2022
Information transmission between banks and the market for corporate control

30/2022
Loan pricing in internal capital markets and the impact of the two-tier system – Finance groups in Germany

31/2022
A review of some recent developments in the modelling and seasonal adjustment of infra-monthly time series

32/2022
New facts on consumer price rigidity in the euro area

33/2022
Going below zero – How do banks react?

For footnotes, see p. 88•.

34/2022
Global monetary and financial spillovers: Evidence from a new measure of Bundesbank policy shocks

35/2022
Robust real-time estimates of the German output gap based on a multivariate trend-cycle decomposition

36/2022
The impact of natural disasters on banks' impairment flow – Evidence from Germany

37/2022
Basel III and SME bank finance in Germany

38/2022
The effects of sanctions on Russian banks in TARGET2 transactions data

39/2022
The Eurosystem's asset purchase programmes, securities lending and Bund specialness

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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* The Statistical Series replace the Statistical Supplements and, in part, the Special Statistical Publications; they will be provided exclusively on the Bundesbank's website under Publications/Statistics.
o Discussion papers published from 2000 are available online.
1 Publication available in German only.
2 Available only as a download.