The performance of German credit institutions in 2022

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

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

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

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

Business environment and structural developments in the German banking sector

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

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

Macroeconomic setting

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

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

Extensive fiscal policy assistance and …

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

… BaFin's package of macroprudential measures had stabilising effects

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

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

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

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

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

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

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

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

Balance sheet and structural developments in the German banking sector

Consolidation in German banking sector continued

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

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

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

Structural data on German credit institutions

End of year

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

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

Deutsche Bundesbank

Balance sheet growth continued despite monetary policy tightening

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

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

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

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

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

Lending to non-banks grew strongly again

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

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

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

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

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

Methodological notes

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

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

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

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

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

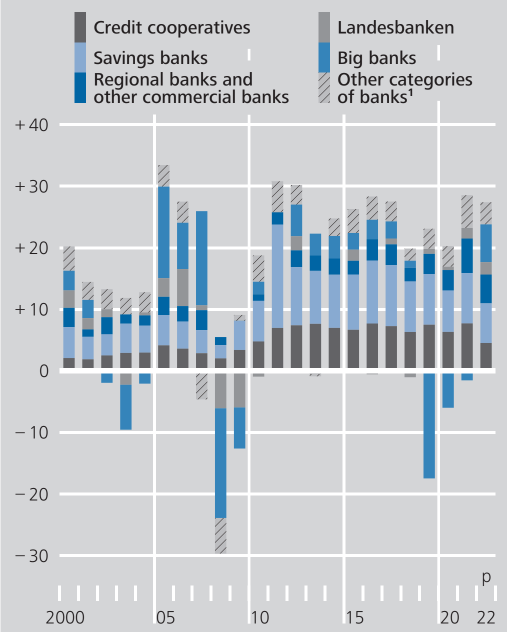
Continued growth in deposits, albeit at a lower growth rate

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

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

Credit institutions' profit for the year before tax*

€ billion



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

Deutsche Bundesbank

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

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

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

Balance sheet equity increased far more strongly than last year

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

Performance, profitability and cost efficiency

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

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

Profit for the financial year

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

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

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

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

25 This development is likely to have been partly driven by the improvement in performance in 2021, with German credit institutions almost doubling their profit for the financial year before tax compared with 2020. When interpreting the data on the equity base, it should be borne in mind that the amounts transferred from the profit for the respective financial year do not increase balance sheet equity until the year after the annual accounts are adopted, while withdrawals from equity items are to be deducted at the latest when the annual accounts are prepared.

26 In addition to the improvement in performance in 2021, the aforementioned merger at one institution belonging to the category of regional and other commercial banks is likely to have been the main driver of this increase. However, Brexit is also likely to have continued to play a role. For more information, see also Deutsche Bundesbank (2022e), pp. 71 f.

27 Statistics on banks' profit and loss accounts are compiled on an annual basis. This involves the evaluation of the profits and losses calculated from the annual accounts (individual accounts prepared in accordance with the German Commercial Code (*Handelsgesetzbuch;* HGB)), which the banks must submit to the Bundesbank pursuant to Section 26 of the German Banking Act *(Kreditwesengesetz)*. As the annual accounts apply to the whole institution (but not to the group), the charges and income of foreign branches are also recorded. See also the box on methodological notes on p. 92.

28 Profit for the financial year before tax is calculated as operating income less administrative spending and net valuation charges plus the balance of the other and extraordinary account.

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

As a percentage of operating income

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

Deutsche Bundesbank

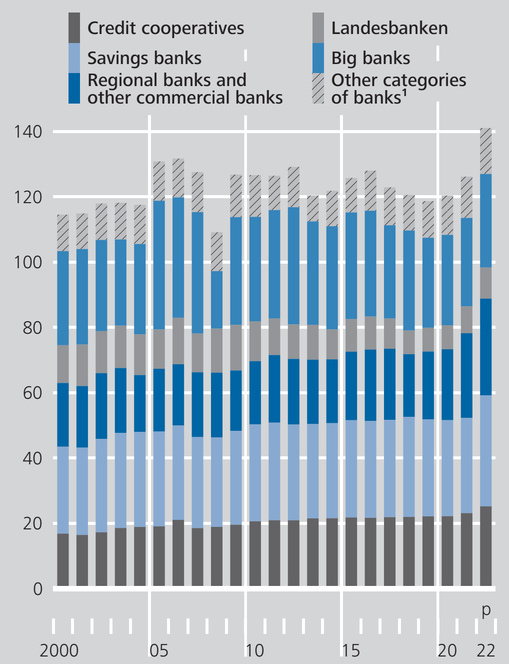
in the individual categories of banks.[29] In 2022, big banks, the Landesbanken and the building and loan associations were the only groupings that managed to increase their profit for the year before tax. The significant growth posted by Landesbanken and building and loan associations was based on a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

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

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

Credit institutions' operating income*

€ billion



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

Deutsche Bundesbank

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

Operating income and its components

Operating income rose sharply in the reporting year

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

Operating income rose across the board for all categories of banks

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

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

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

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

32 Sum of net interest income, net commission income, net result from the trading portfolio, and other operating result.
33 The very sizeable increase of €3.7 billion in the operating income of regional and other commercial banks was partly due to the growth of one institution in this category following mergers with foreign business units.

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

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

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

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

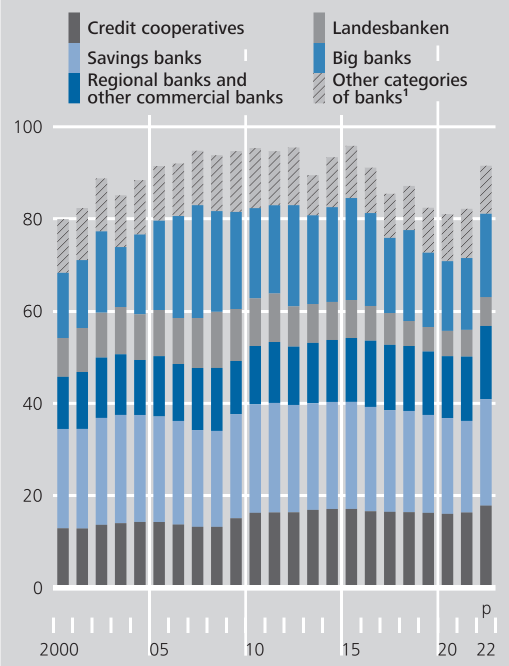
Overall, interest income rose more strongly than interest expenditure in 2022

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

The altered interest rate environment in the wake of monetary policy tightening is likely to

Credit institutions' net interest income*

€ billion



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

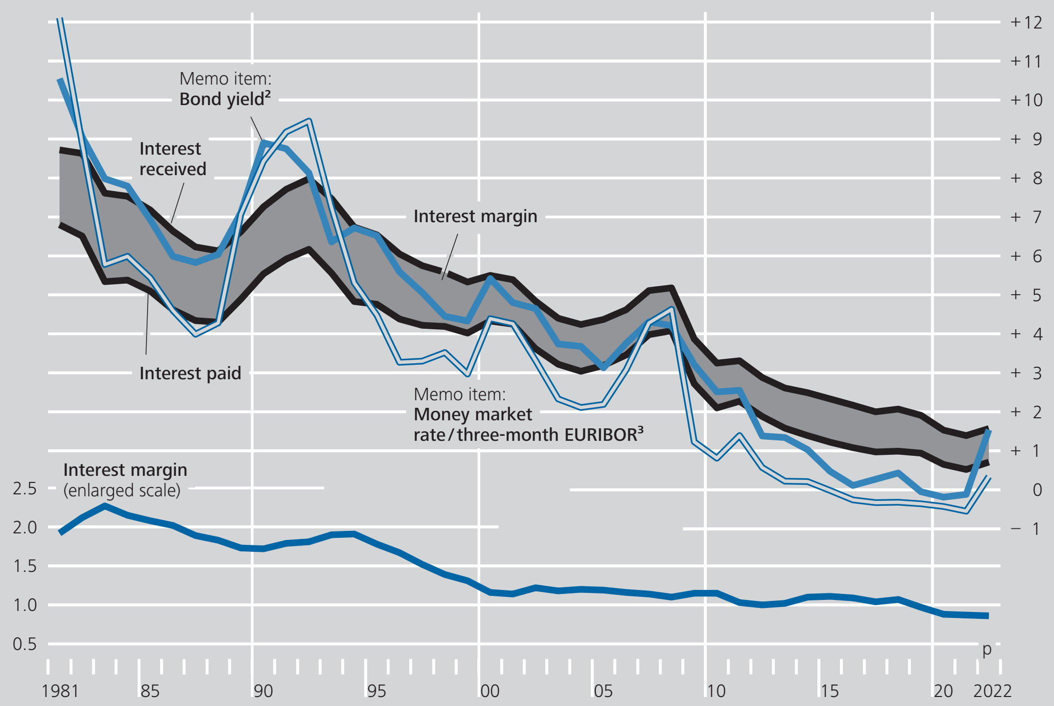
Deutsche Bundesbank

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

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

Interest received and interest paid by credit institutions

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



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

Deutsche Bundesbank

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

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

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

39 See Deutsche Bundesbank (2023d), p. 39.
40 Between January and June 2022, the average interest rate on households' overnight deposits fell from -0.0149% to -0.0196%. Between July and December 2022, the interest rate then rose to +0.0915%. The average interest rate on non-financial corporations' overnight deposits followed a similar pattern, falling from -0.1423% to -0.1463% between January and June 2022 and then rising to +0.1147% from July to December 2022.
41 From July 2022, amounts held in the Eurosystem's deposit facility were no longer remunerated at negative rates; from September 2022, positive interest rates were applied to such holdings. According to the Bundesbank's Annual Report, this generated interest income totalling €2.0 billion for German credit institutions in 2022. The previous year, the negative deposit facility rate entailed interest expenses of €4.8 billion for German banks. See Deutsche Bundesbank (2023a), p. 60.
42 In 2022, German credit institutions generated interest income of €2.0 billion from negatively remunerated refinancing operations with the Eurosystem. The year before, that figure stood at €4.0 billion. See Deutsche Bundesbank (2023a), p. 60.
43 Interest income and interest expenditure rose in equal measure at mortgage banks. Banks with special, promotional and other central support tasks saw interest expenditure climb more strongly than interest income. In the case of building and loan associations, interest expenditure fell more sharply than interest income.

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

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

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

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

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

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

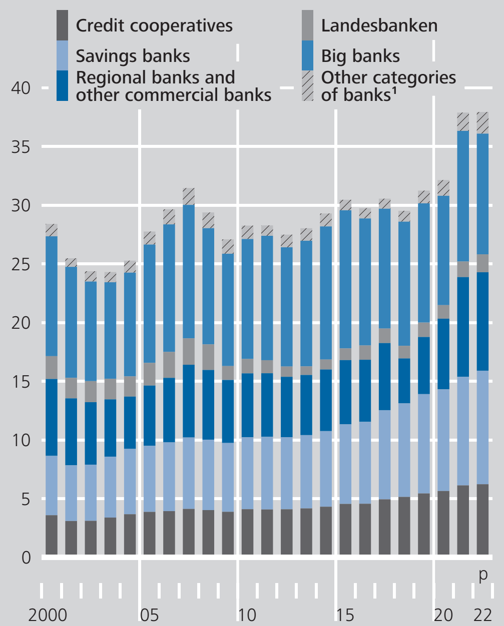
Unlike in 2021, net commission income therefore did not play a part in improving operating income in the reporting year. Commissions received and commissions paid rose by equal amounts in 2022, leaving net commission income unchanged at the previous year's level of €37.9 billion. Owing to strong balance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

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

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

Credit institutions' net commission income*

€ billion



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

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

Heterogeneous developments in net commission income among categories of banks

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

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

Developments in commission margin also heterogeneous across categories of banks

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

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

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

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

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

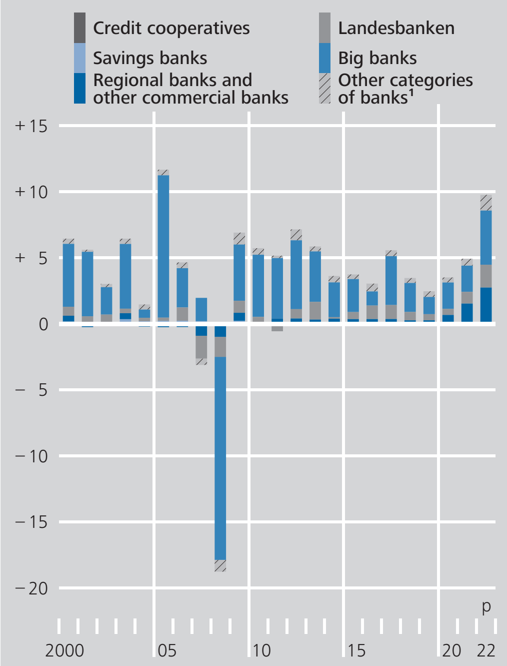
All in all, the improvement in the trading result was mainly due to valuation gains on derivatives, the sale of hedging instruments and the provision of capital market financing. Amid the altered interest rate environment and the macroeconomic uncertainty caused by geopolitical tensions, customers exhibited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

Other operating result significantly improved on the year

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

Credit institutions' trading result*

€ billion



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

Deutsche Bundesbank

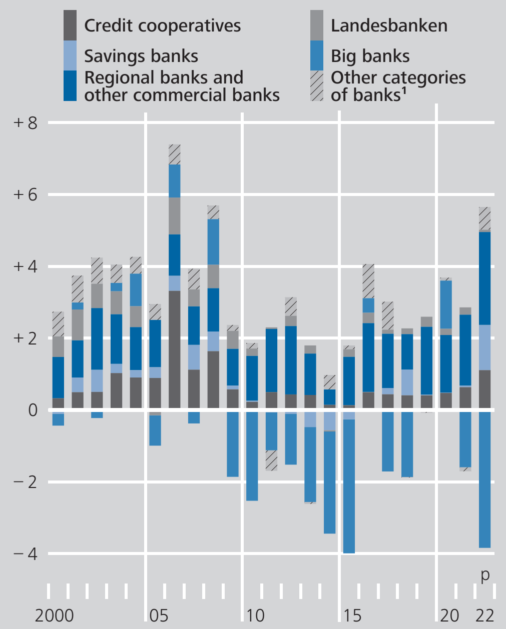
The increase in the other operating result was primarily driven by savings banks and credit cooperatives, as well as regional and other commercial banks. In particular, they dissolved provisions that had been set aside in previous years for restructuring purposes and for legal and litigation risks, for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

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

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

Credit institutions' other operating result*

€ billion



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

Deutsche Bundesbank

Net valuation charges

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

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

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

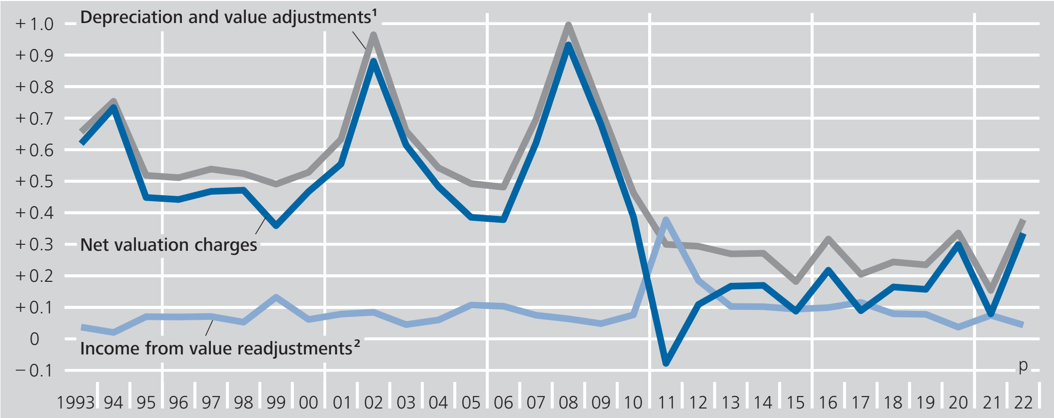
Savings banks and credit cooperatives accounted for bulk of rise in net valuation charges

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

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

48 Net valuation charges comprise the effects of value adjustments, write-ups and write-downs on accounts receivable and securities in the liquidity reserve. In addition, income and charges in connection with transfers from and to loan-loss provisions are taken into account, as are transfers and releases relating to undisclosed reserves pursuant to Section 340f of the German Commercial Code. However, due to the cross-offsetting option permissible under the Commercial Code, the annual accounts do not show the extent to which undisclosed reserves have been formed or dissolved.
49 For more information, see the box on pp. 105 f.

Net valuation charges overall and by component*



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

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

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

Administrative spending

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

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

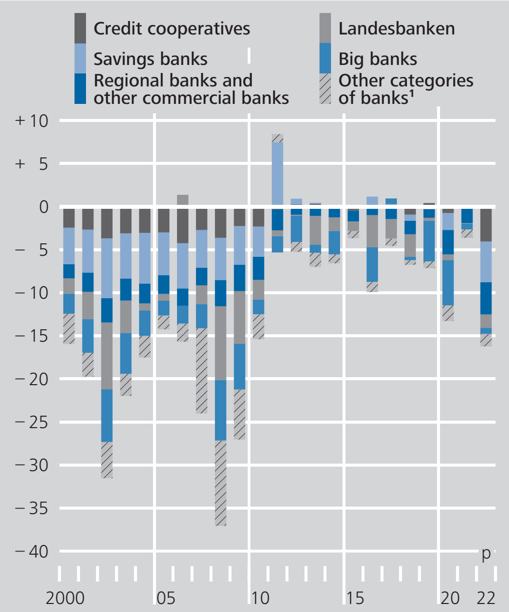
Higher staff costs and higher other administrative spending contributed equally to overall increase in general administrative spending

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

50 General administrative spending encompasses staff costs and other administrative spending. Other administrative spending includes, for example, investment in product development, information technology, and digitalisation. In addition, other administrative spending also comprises depreciation of and value adjustments to tangible and intangible assets.
51 Comparing the categories of banks under analysis, the share of staff costs at savings banks (around 61%) and at credit cooperatives (around 56%) remained above average in the reporting year owing to their heavily staff-based business model with many branches nationwide. At big banks, by contrast, staff costs accounted for a share of around 45%.

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

€ billion

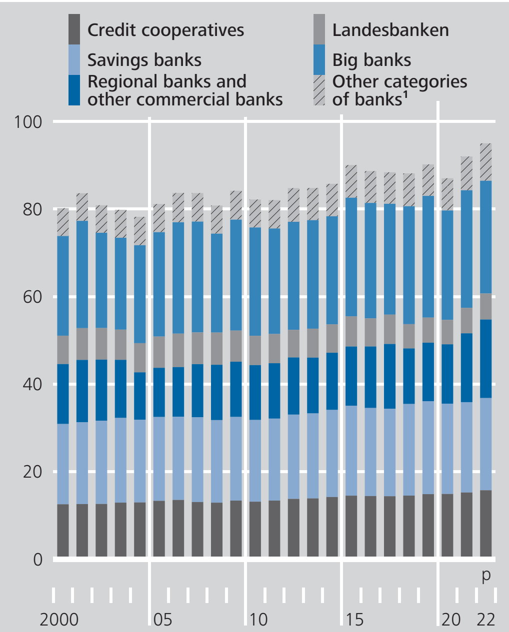


* Net valuation charges excluding investment in tangible and financial fixed assets. Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. 1 Branches of foreign banks, mortgage banks, banks with special, development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

Deutsche Bundesbank

Credit institutions' administrative spending*

€ billion



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

Deutsche Bundesbank

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

Increased administrative burden observable in almost all bank categories

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

Balance in the other and extraordinary account

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

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

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

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

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

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

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

Key metrics for valuation of securities in the banking book*

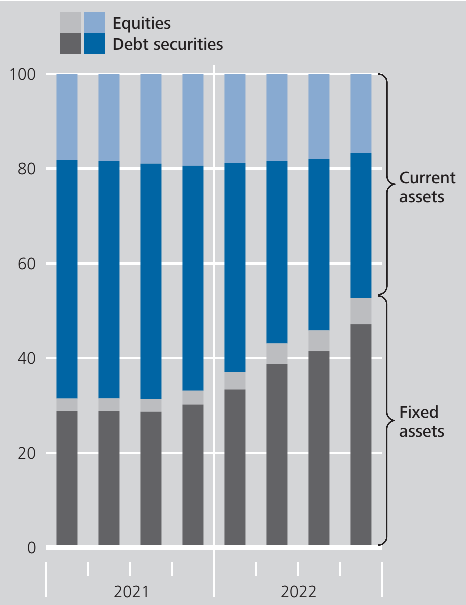
* Institutions preparing their financial statements according to the German Commercial Code (HGB accounting standard). **1** Negative values represent write-downs. **2** The market interest rate corresponds to euro area yields according to ECB yield curves at the end of each quarter for AAA-rated debt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

Deutsche Bundesbank

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

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

%, end of quarter figures



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

Deutsche Bundesbank

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

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

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

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

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

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

Breakdown of extraordinary result

€ million

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

Deutsche Bundesbank

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

Profitability and cost efficiency

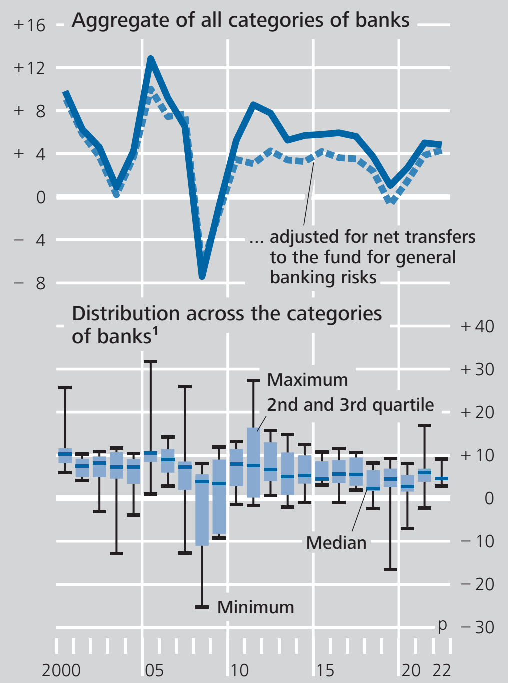
Return on equity

Decline in return on equity indicates reduced profitability

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

Credit institutions' return on equity*

%



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

Deutsche Bundesbank

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

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

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

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

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

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

Return on equity of individual categories of banks*

%

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

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

Deutsche Bundesbank

Return on assets

Overall return on assets also decreased

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

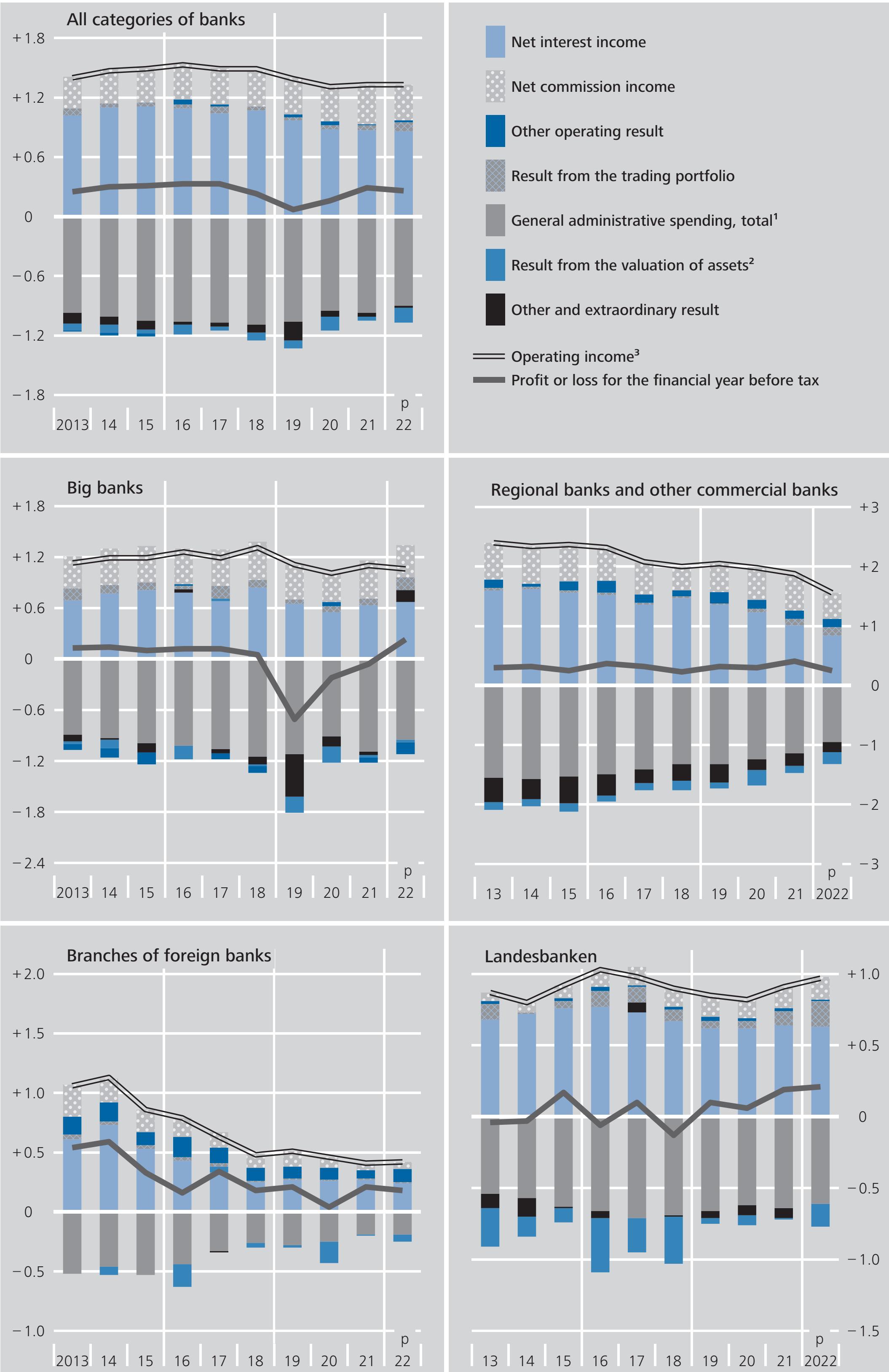
The picture is also similar to that of the return on equity with regard to the categories of banks. Here, too, only the big banks (+0.29 percentage point), the building and loan associations (+0.06 percentage point) and the Landesbanken (+0.02 percentage point) recorded increases. The big banks' return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

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

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

Return on assets and its components by category of banks*

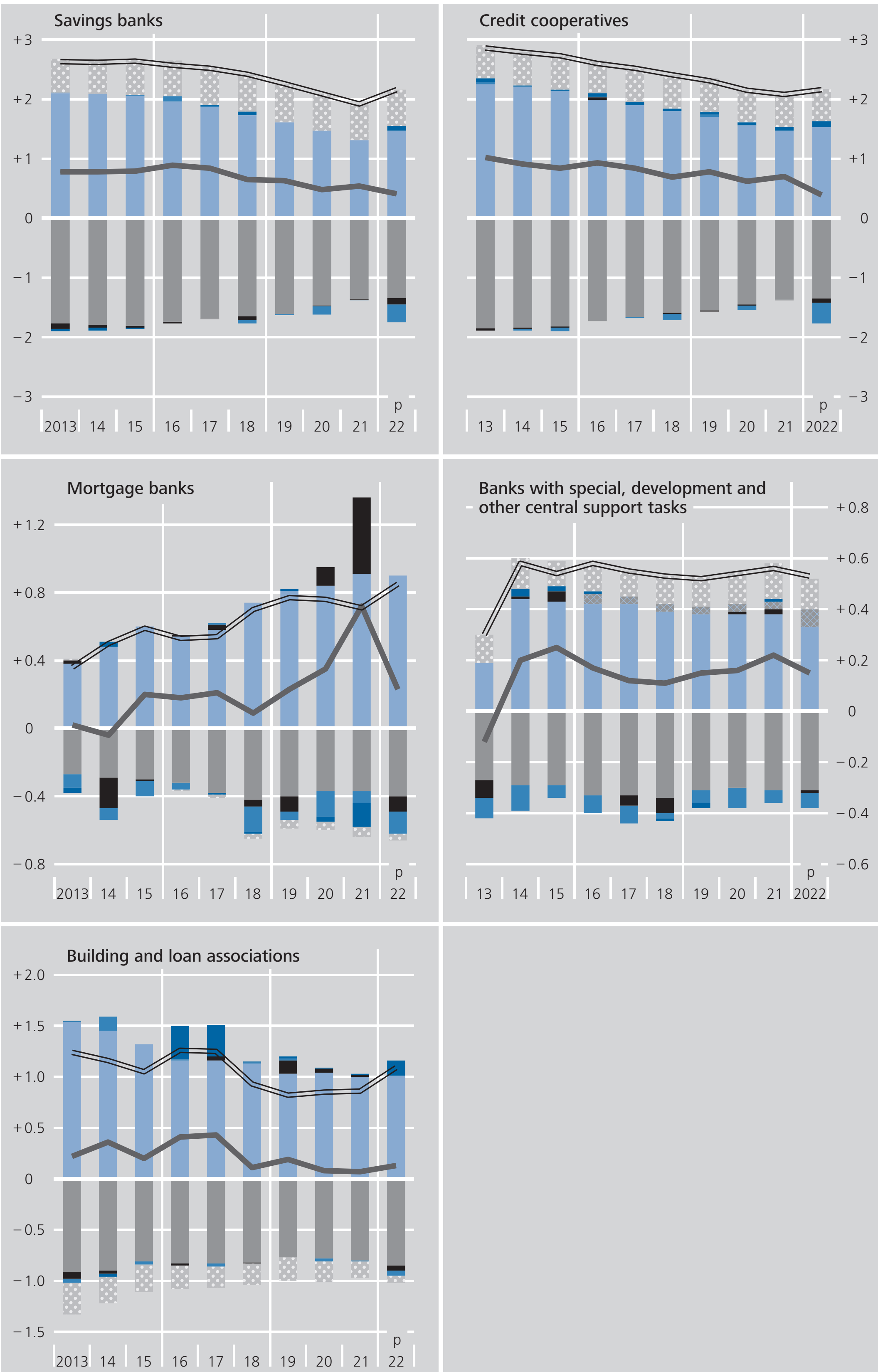
As a percentage of average total assets for the year; the charts below use different scales



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

Deutsche Bundesbank

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

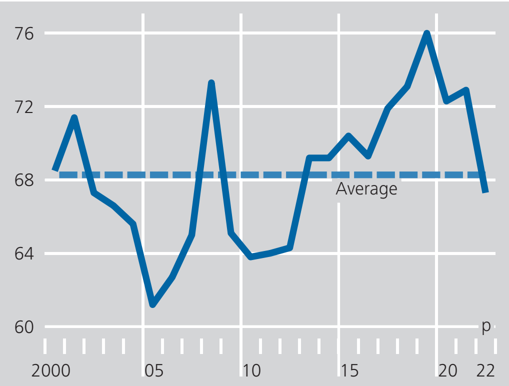


3 Sum of net interest income, net commission income, net result from the trading portfolio, and other operating result.

Deutsche Bundesbank

Ratio of credit institutions' administrative spending to operating income*

%



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

Cost/income ratios by category of banks

%

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

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

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

Cost efficiency

Significant overall improvement in cost efficiency compared with previous year

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

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

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

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

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

Outlook

Business environment remains challenging for German credit institutions

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

Eurosystem continues to tighten monetary policy

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

Uncertain earnings outlook for German credit institutions

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

Added challenges of digitalisation, climate action and cyber risks

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

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

List of references

Deutsche Bundesbank (2023a), Annual Report 2022.

Deutsche Bundesbank (2023b), Monthly Report, February 2023.

Deutsche Bundesbank (2023c), Changes in bank office statistics in 2022, press release of 7 July 2023.

Deutsche Bundesbank (2023d), Monthly Report, June 2023.

Deutsche Bundesbank (2023e), Monthly Report, August 2023.

Deutsche Bundesbank (2023f), Monthly Report, May 2023.

Deutsche Bundesbank (2023g), Monthly Report, July 2023.

Deutsche Bundesbank (2022a), Financial Stability Review 2022.

Deutsche Bundesbank (2022b), Monthly Report, November 2022.

Deutsche Bundesbank (2022c), Monthly Report, May 2022.

Deutsche Bundesbank (2022d), Monthly Report, August 2022.

Deutsche Bundesbank (2022e), Monthly Report, September 2022.

Deutsche Bundesbank (2013), Financial Stability Review 2013.

Institute of Public Auditors in Germany (2012), Stellungnahme des Bankenfachausschusses BFA 3 „Einzelfragen der verlustfreien Bewertung von zinsbezogenen Geschäften des Bankbuchs (Zinsbuchs)" of 30 August 2012.

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

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

As a percentage of average total assets for the year°

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

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

Deutsche Bundesbank

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

As a percentage of average total assets for the year°

Financial year	All categories of banks	Commercial banks: Total	of which: Big banks[1]	of which: Regional banks and other commercial banks[1]	Landesbanken[1]	Savings banks[1]	Credit cooperatives	Mortgage banks[1]	Building and loan associations	Banks with special, development and other central support tasks
	General administrative spending									
2016	1.06	1.14	1.02	1.49	0.66	1.74	1.73	0.32	0.83	0.33
2017	1.07	1.14	1.06	1.41	0.71	1.69	1.66	0.38	0.83	0.33
2018	1.09	1.17	1.15	1.32	0.69	1.65	1.59	0.42	0.82	0.34
2019	1.06	1.16	1.12	1.32	0.66	1.61	1.55	0.40	0.77	0.31
2020	0.95	0.98	0.91	1.24	0.62	1.47	1.45	0.37	0.78	0.30
2021	0.97	1.07	1.09	1.14	0.64	1.36	1.37	0.37	0.80	0.31
2022	0.90	0.92	0.95	0.95	0.61	1.34	1.35	0.40	0.85	0.31
	Result from the trading portfolio									
2016	0.04	0.04	0.04	0.04	0.11	0.00	0.00	0.00	0.00	0.04
2017	0.07	0.12	0.15	0.03	0.11	0.00	0.00	0.00	0.00	0.03
2018	0.04	0.07	0.09	0.03	0.08	0.00	0.00	0.00	0.00	0.03
2019	0.03	0.04	0.05	0.02	0.05	0.00	0.00	0.00	0.00	0.03
2020	0.04	0.07	0.07	0.06	0.05	0.00	0.00	0.00	0.00	0.03
2021	0.05	0.09	0.08	0.11	0.10	0.00	0.00	0.00	0.00	0.03
2022	0.09	0.14	0.15	0.14	0.18	0.00	0.00	0.00	0.00	0.07
	Operating result before the valuation of assets									
2016	0.47	0.39	0.23	0.83	0.38	0.83	0.87	0.21	0.43	0.25
2017	0.42	0.30	0.13	0.67	0.27	0.83	0.86	0.16	0.42	0.23
2018	0.40	0.31	0.16	0.68	0.21	0.77	0.81	0.28	0.11	0.18
2019	0.33	0.21	− 0.01	0.73	0.18	0.65	0.76	0.38	0.04	0.21
2020	0.36	0.28	0.10	0.75	0.20	0.62	0.71	0.39	0.07	0.23
2021	0.36	0.27	0.01	0.74	0.27	0.56	0.71	0.34	0.05	0.25
2022	0.43	0.31	0.11	0.62	0.36	0.82	0.81	0.45	0.24	0.21
	Result from the valuation of assets									
2016	− 0.10	− 0.14	− 0.16	− 0.10	− 0.38	0.09	0.01	− 0.04	0.01	− 0.07
2017	− 0.04	− 0.02	0.03	− 0.12	− 0.24	0.02	− 0.02	0.01	− 0.03	− 0.07
2018	− 0.08	− 0.06	− 0.02	− 0.16	− 0.33	− 0.06	− 0.10	− 0.15	0.01	− 0.02
2019	− 0.08	− 0.16	− 0.19	− 0.10	− 0.04	− 0.02	0.04	− 0.05	0.02	− 0.05
2020	− 0.14	− 0.21	− 0.19	− 0.26	− 0.07	− 0.14	− 0.07	− 0.15	− 0.03	− 0.08
2021	− 0.04	− 0.06	− 0.03	− 0.12	− 0.01	− 0.01	0.00	− 0.07	− 0.01	− 0.05
2022	− 0.15	− 0.09	− 0.03	− 0.20	− 0.16	− 0.30	− 0.35	− 0.13	− 0.05	− 0.06

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

Deutsche Bundesbank

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

As a percentage of average total assets for the year°

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

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

Credit institutions' profit and loss accounts*

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

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

General administrative spending			Operating result before the valuation of assets (col. 11 less col. 12)	Result from the valuation of assets (other than tangible or financial fixed assets)	Operating result (col. 15 plus col. 16)	Other and extra-ordinary result	Profit or loss (–) for the financial year before tax (col. 17 plus col. 18)	Taxes on income and earnings	Profit or loss (–) for the financial year after tax (col. 19 less col. 20)	
Total (col. 13 plus col. 14)	Staff costs	Total other administrative spending4								
12	13	14	15	16	17	18	19	20	21	Financial year
									€ billion	
90.0	46.0	44.0	37.9	– 3.5	34.4	– 7.8	26.6	8.4	18.1	2015
88.7	44.6	44.0	39.4	– 8.8	30.6	– 2.8	27.8	7.9	19.9	2016
88.4	44.6	43.8	34.5	– 3.6	30.9	– 3.4	27.5	7.5	20.0	2017
88.1	44.3	43.9	32.4	– 6.8	25.7	– 6.8	18.9	6.7	12.2	2018
90.2	44.4	45.7	28.5	– 6.7	21.8	– 16.1	5.6	7.8	– 2.2	2019
87.0	44.2	42.8	33.4	– 13.3	20.1	– 5.8	14.3	8.4	5.9	2020
92.0	46.7	45.3	34.2	– 3.6	30.6	– 3.5	27.0	9.8	17.3	2021
95.0	48.4	46.6	46.1	– 16.2	29.8	– 2.4	27.4	5.5	21.9	2022
									Year-on-year percentage change	
– 1.5	– 3.1	0.1	4.0	– 150.3	– 10.9	63.9	4.6	– 6.7	9.9	2016
– 0.3	– 0.1	– 0.5	– 12.2	58.7	1.0	– 20.8	– 1.0	– 4.3	0.4	2017
– 0.3	– 0.6	0.1	– 6.0	– 86.9	– 16.9	– 101.0	– 31.5	– 11.2	– 39.1	2018
2.3	0.4	4.3	– 12.2	0.7	– 15.2	– 136.2	– 70.1	16.6	.	2019
– 3.5	– 0.5	– 6.4	17.2	– 97.7	– 7.6	63.9	153.3	7.5	.	2020
5.7	5.7	5.7	2.4	72.7	52.0	39.1	89.1	16.3	192.5	2021
3.3	3.6	2.9	34.8	– 347.8	– 2.4	31.1	1.4	– 43.6	26.9	2022
									As a percentage of average total assets for the year	
1.05	0.53	0.51	0.44	– 0.04	0.40	– 0.09	0.31	0.10	0.21	2015
1.06	0.53	0.53	0.47	– 0.10	0.37	– 0.03	0.33	0.09	0.24	2016
1.07	0.54	0.53	0.42	– 0.04	0.37	– 0.04	0.33	0.09	0.24	2017
1.09	0.55	0.54	0.40	– 0.08	0.32	– 0.08	0.23	0.08	0.15	2018
1.06	0.52	0.54	0.33	– 0.08	0.26	– 0.19	0.07	0.09	– 0.03	2019
0.95	0.48	0.47	0.36	– 0.14	0.22	– 0.06	0.16	0.09	0.06	2020
0.97	0.49	0.48	0.36	– 0.04	0.32	– 0.04	0.29	0.10	0.18	2021
0.90	0.46	0.44	0.43	– 0.15	0.28	– 0.02	0.26	0.05	0.21	2022

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

Profit and loss accounts by category of banks*

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

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

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

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

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

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

Deutsche Bundesbank

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

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

Credit institutions' charge and income items*

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

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

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

Deutsche Bundesbank

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

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