The performance of German credit institutions in 2021

German credit institutions recorded a strong improvement in performance in 2021 compared with the year before. Profit for the financial year before tax went up by €12.8 billion and, at €27.1 billion, hit almost double the previous year's figure, taking it well above the long-term average of €18.0 billion for the first time since 2017.

Three-quarters of the increase was the result of a year-on-year reduction in net valuation charges of just over 70%. Against the backdrop of a strong macroeconomic recovery and the absence of the credit defaults initially feared at the beginning of the coronavirus pandemic, German banks scaled back risk provisioning significantly in comparison with 2020 and also released some of the risk provisions that they had formed that year. An increase in operating income of around 5% was another key contributor to the improvement in profit for the year before tax, though this rise was only slightly more than half as significant as the decline in net valuation charges. Meanwhile, the profit for the financial year before tax was weighed down by an increase in banks' general administrative spending of around 6% as against 2020. Despite higher operating income, this led to a slight deterioration in cost efficiency: the cost/income ratio of German credit institutions rose by 0.6 percentage point to 72.9% in the reporting year.

Net commission income proved to be the main driver of growth in operating income in 2021. Climbing by around 18%, it also further built up its role as the second most important source of income for German credit institutions. Net interest income, which remains the most important source of income, recorded a slight increase of 1.4% for the first time since 2018. Nevertheless, its share in operating income declined again in the reporting year. That said, the renewed decline in interest income was more than offset for the institutions by a more pronounced reduction in interest expenditure. In addition, up by around 40%, the trading result also fed into the increase in operating income, whereas the other operating result deteriorated by more than two-thirds on the year. The trading result and other operating result remained only of minor importance as sources of income, however.

In the current year, Russia's war of aggression on Ukraine, in particular, is acting as a drag on macroeconomic developments in Germany and around the globe. With this comes an increased likelihood of credit defaults among both non-financial corporations and households, which could take a toll on the profitability of German credit institutions. Furthermore, against the backdrop of significantly higher inflation expectations, the European Central Bank (ECB) has adjusted its monetary policy stance and taken first steps to bring the era of negative interest rates to an end. Although the rising interest rate level could weigh on German banks' profitability in the short term, the earnings-enhancing effects of monetary policy normalisation are likely to bolster the performance of German institutions in the medium term.

Business environment and structural developments in the German banking sector

In 2021, German credit institutions once again faced a challenging market environment that was still characterised by the effects of the coronavirus pandemic and the ongoing negative interest rate environment. However, the feared defaults on loans did not materialise. A strong macroeconomic recovery overall, combined with extensive monetary and fiscal policy measures, helped the German banking system to close the reporting year in better shape than expected and continue to perform its functions unimpaired.[1]

Macroeconomic setting

Business environment still feeling strain of coronavirus pandemic

Following the sharp slump in the previous year, economic output in Germany rose steeply in 2021. Despite growth of 2.9%, however, gross domestic product (GDP) nevertheless remained significantly below the pre-crisis level of 2019.[2] Industry, in particular, suffered from bottlenecks in the supply of intermediate goods, preventing it from fully realising growth potential. By contrast, private consumption and the services sector were able to rebound strongly in some cases during the second and third quarters of 2021, once coronavirus protection measures were lifted. Extensive containment measures in response to infection rates in the fourth quarter led to severe setbacks to both, though.[3]

Extensive fiscal policy and regulatory measures again prevented macroeconomic downward spiral in 2021

Against this backdrop, German fiscal policy again made a vital contribution to stabilisation in 2021. The economy and households received considerable support in the shape of measures such as transfers to enterprises and short-time working benefits.[4] The stabilisation measures introduced by bank regulators in 2020[5] were also initially kept in place in the reporting year, though their appropriateness was the subject of ongoing review over the course of the year. For example, the recommendation that banks limit dividends, and the flexibility granted by supervisory authorities regarding general payment moratoria both ended.[6] The aforementioned measures had a hand in preventing the defaults on loans that had been feared in the early days of the pandemic and enabling banks' lending to the real economy to go on unhindered.[7]

Monetary policy still very accommodative; emergency monetary policy measures to counter the effects of the coronavirus pandemic

Like the fiscal policy and bank regulatory measures, monetary policy, too, continued to be influenced by the coronavirus pandemic in 2021. As the Governing Council of the ECB expected inflation rates of below 2% in the medium term, it maintained its very expansionary monetary policy stance. The key interest rates were left unchanged at their historically low levels[8] and the asset purchase programme (APP) was continued.[9] The emergency monetary policy measures introduced to combat the effects of the coronavirus pandemic were also kept in place. The aim was still primarily to provide banks with liquidity and, ultimately, to ensure the supply of credit to the real economy. Additional targeted longer-term refinancing operations (TLTRO-III), which German credit institutions made large-scale use of,[10] gave banks access to liquidity at particularly favourable conditions[11] in order to support lending to the

1 See Deutsche Bundesbank (2022a), p. 30 and Deutsche Bundesbank (2021a), p. 7.
2 See Deutsche Bundesbank (2022a), p. 16.
3 See Deutsche Bundesbank (2022b), p. 8, Deutsche Bundesbank (2021b), p. 7, Deutsche Bundesbank (2021c), p. 8 and Deutsche Bundesbank (2021d), pp. 7 f.
4 See Deutsche Bundesbank (2022a), pp. 26 f.
5 For a detailed list of the measures taken by bank regulators and supervisors in response to the coronavirus pandemic, see Deutsche Bundesbank (2021e), p. 92.
6 See Deutsche Bundesbank (2022a), p. 30.
7 See Deutsche Bundesbank (2022a), p. 30.
8 The main refinancing rate was 0%, while the interest rates on the marginal lending facility and the deposit facility stood at 0.25% and -0.5%, respectively.
9 See Deutsche Bundesbank (2022a), p. 20.
10 See Deutsche Bundesbank (2022a), p. 20.
11 In ideal circumstances, i.e. provided eligible net lending between October 2020 and December 2021 reached the lending performance threshold, banks could benefit from an interest rate of up to -1.0% when borrowing under TLTRO-III; see https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr201210_1~e8e95af01c.en.html for details. In such cases, the interest income per euro that credit institutions were able to generate by recourse to TLTRO-III would have exceeded interest expenditure incurred through use of the deposit facility with its likewise negative interest rate of up to -0.5%.

economy. The aim of the pandemic emergency purchase programme (PEPP) was to counter the pandemic-related risks to monetary policy transmission.[12]

Equity and bond markets initially on road to recovery; dampened toward the end of the year, partly due to higher inflation expectations

The monetary policy, fiscal policy and banking regulatory measures not only supported the German banking system, but also had a positive impact on the equity and bond markets. In the first two quarters of 2021, German stock markets temporarily hit historical highs owing to firmer prospects of a macroeconomic recovery and higher corporate earnings expectations.[13] In the fourth quarter of 2021, however, the upturn in the equity markets came to a halt, and the picture was predominantly one of moderate price losses on the previous quarter. This was due to rising inflationary risks and the resulting market expectations of imminent monetary policy tightening.[14]

In the bond markets, hopes of the economic recovery continuing led yields on ten-year Federal bonds (Bunds) to rise somewhat, reaching roughly the level recorded at the start of 2020. From then, they moved sideways under the influence of changing assessments of the pandemic situation, only surging from the end of the fourth quarter of 2021 due to rising inflationary pressure coupled with market expectations of monetary policy tightening. This put the yields on ten-year Bunds back in positive territory for the first time since the second quarter of 2019.[15] At the close of 2021, the yield curve derived from the yields on Federal securities was considerably steeper in the short and medium-term maturity segments than it had been at the beginning of the year.[16]

Balance sheet and structural developments in the German banking sector

Growth in the aggregate of German credit institutions' annual average total assets[17] was down by just under two-thirds compared with 2020. At 2.8%, the growth rate of average total assets in 2021 was close to its long-term average of 2.0%.

Monetary and fiscal policy measures, as well as the persistent negative interest rate environment, continued to drive balance sheet growth, albeit at a slower pace

However, when looking at individual categories of banks, there were greater disparities than in 2020. While 2020 saw aggregate annual average total assets rise across all categories of banks, big banks, in particular, recorded a decline of 10.5% in 2021. By contrast, savings banks and credit cooperatives registered slightly higher growth rates in 2021 than in the previous year, at 7.7% each. In both cases, lending and deposit business is likely to have been the main driver of this, having grown somewhat more strongly in the reporting year than in 2020.[18] However, regional banks and other commercial banks recorded the highest year-on-year growth in their balance sheet (+26.3%), with just over two-thirds of the total increase attributable to a single institution that expanded its presence in Germany after Brexit.[19]

Central bank balances once again the most significant growth item on the assets side of the aggregated bank balance sheet

According to data from the monthly balance sheet statistics, the assets and liabilities sides of the aggregated bank balance sheet followed a similar growth pattern to 2020 in the reporting year, albeit developing at a slower pace in some cases. With regard to the assets side of the aggregated bank balance sheet, German banks' balances with the central bank once again constituted the most significant growth item. On an annual average for 2021, a sharp

12 See Deutsche Bundesbank (2022a), pp. 20 ff.
13 See Deutsche Bundesbank (2021c), pp. 52 f. and Deutsche Bundesbank (2021d), p. 44.
14 See Deutsche Bundesbank (2022b), p. 38 and Deutsche Bundesbank (2021b), p. 42.
15 See Deutsche Bundesbank (2022b), pp. 40 f. and Deutsche Bundesbank (2021b), pp. 45 f.
16 See Deutsche Bundesbank (2022b), p. 41.
17 The figure for total assets was determined on the basis of the rules contained in the German Commercial Code *(Handelsgesetzbuch)*.
18 According to data from the monthly balance sheet statistics, savings banks saw slightly higher growth in lending to domestic non-banks in 2021 than in 2020 – a 0.2 percentage point rise taking it to +4.9%; credit cooperatives recorded growth of +6.6%, which was 0.6 percentage point higher than in the previous year. At +7.0% in each case, both categories of banks saw domestic non-banks' deposits grow roughly 0.6 percentage point more strongly than in the previous year.
19 See the box on p. 71 f.

increase here resulted in a new historical high of around €1,000 billion in total. At +43.0%, the percentage growth was slightly below the level of the previous year, but the absolute increase of €307 billion again exceeded the 2020 figure by a significant margin of around €90 billion.[20] Chiefly responsible for the increase in balances with the central bank were the Eurosystem's asset purchase programmes (public sector purchase programme (PSPP) and PEPP) and German banks' extensive use of TLTRO-III.[21]

Lending the second major driver of growth on the assets side of the aggregated bank balance sheet; pace of growth slower than in the previous year, though

As in 2020, lending continued to be a significant factor in driving growth on the assets side of the aggregated bank balance sheet in the reporting year. However, with an increase of €114 billion in total (previous year: €144 billion), the contribution made by loans to domestic non-banks only amounted to slightly more than one-third of total growth, compared with balances with the central bank. Loan growth in 2021 was one percentage point lower than in 2020, averaging 3.2%. This is likely to have been mainly due to the decline in short-term loans to enterprises and households, which were down by an annual average of 5.8%. The second quarter of 2021, in particular, saw increased repayments of short-term loans to enterprises, some of which had been taken out as a precautionary measure intended to safeguard liquidity during the coronavirus pandemic. The upturn in overall economic activity as well as the disbursement of government transfers to firms particularly hard-hit by the coronavirus pandemic meant firms' financing needs lessened in the second quarter of 2021.[22] Besides this, reduced consumer lending also played into the decline. In the first and fourth quarters of 2021, especially, the restrictions on economic and social life as a result of the pandemic had a dampening effect here.[23]

Distinct growth was recorded, meanwhile, for medium and long-term loans to domestic non-financial corporations and households. Even so, the 5.1% increase was slightly shy of the 20-year peak of 5.3% reached in 2020. As in the previous year, housing loans were the main driver of this development. At 7.1%, their growth in the reporting year even outstripped the 20-year historical high of the previous year by one percentage point.

Comparing the categories of banks, savings banks and credit cooperatives recorded the highest growth rates for housing loans, at +7.7% and +8.8%, respectively. In addition, savings banks and credit cooperatives together accounted for just under two-thirds of the absolute increase in housing loans.

As before, this growth was the product of factors on both the supply and demand side. In particular, robust activity in the construction sector and a continuation of favourable financing costs, but also the sharp rise in prices for construction work and residential property, are likely to have buoyed the persistently brisk demand for housing loans.[24]

Greater demand also drove considerable growth in medium and long-term loans to non-financial corporations. The overall economic recovery in the third quarter of 2021 led to an increase in financing needs, especially in domestically oriented sectors such as construction and real estate. In addition, funding needs for refinancing, debt restructuring and renegotiation remained at elevated levels.[25]

On the supply side, too, banks continued to have a heightened interest in lending business, as obtaining the particularly attractive interest rate on TLTRO-III operations was contingent upon hitting specific lending performance thresholds for the relevant reporting dates.[26]

---

20 The cited figures do not include the cash holdings of German credit institutions.
21 See Deutsche Bundesbank (2021b), p. 32.
22 See Deutsche Bundesbank (2021c), p. 8.
23 See Deutsche Bundesbank (2022b), p. 37 and Deutsche Bundesbank (2021d), p. 36.
24 See Deutsche Bundesbank (2021c), p. 43 and Deutsche Bundesbank (2021d), p. 36.
25 See Deutsche Bundesbank (2021b), p. 8 and pp. 38 f.
26 See Deutsche Bundesbank (2022b), p. 8 and Deutsche Bundesbank (2021d), p. 8.

Interpreting profitability components broken down by category of banks in the context of Brexit

The balance sheet and profit and loss statistics of banks, or monetary financial institutions (MFIs),[1] are broken down by category of banks. This makes it easier not only to identify and compare trends but also to better take account of the specifics and particularities of the individual categories.

The Bundesbank considers a variety of criteria when assigning individual banks to a particular category of banks,[2] and it also reviews these assignments annually.[3]

Brexit has seen the German banking sector face major structural changes in recent years, and these will continue to shape developments in the years to come: so that they might still be able to provide services in the European Union, large and international banks have taken steps from 2019 onwards such as relocating large parts of their business out of the United Kingdom to existing or newly founded institutions established in the European Union, including in Germany. "Brexit banks" is the catch-all used here to refer to these institutions.[4] The resulting business policy, structural and organisational adjustments concern the "Regional banks and other commercial banks" category, in particular, but also, to some extent, the "Branches of foreign banks" and "Foreign banks" categories (the latter of which is a memo item).

The business models of the Brexit banks differ, in some cases considerably, from those of other banks based in Germany. For example, the business relocated to these institutions stems predominantly from capital market business. This income is reflected mainly in net commission income and the trading result. In addition, some Brexit banks primarily conduct Europe-wide business that is not linked to the German market and thus only partially reflects the profitability of local business. Whilst other German banks also operate business models that cover all of Europe, the scale of these is especially great for some large Brexit banks.

Looking at current profitability components by category of banks, Brexit banks are becoming increasingly important, especially among regional banks and other commercial banks. Owing to their size and the ongoing expansion of their total assets, this effect is also likely to be observed to an ever-greater extent over the next few years.[5] The significant improvement in the net commission income and trading result of regional banks and other commercial banks by around 40% and around 130% respectively in 2021 was due chiefly to the growth of a few major Brexit banks. However, the rise in administrative spending for regional banks and other commercial banks compared with 2020 was also due in large part to Brexit banks' expanded business volume.

The increasing importance of Brexit banks needs to be taken into account when interpreting the profitability components considered in this article, with a specific focus on regional banks and other commercial banks.

---

1 MFIs pursuant to Regulation (EU) 2021/379 of the European Central Bank (ECB/2021/2), Article 2(1) (OJ L 73, 3 March 2021, pp. 16-85).
2 Factors taken into consideration include business structure, type of business activity predominantly conducted (e.g. universal versus specialised bank), size of the bank, legal form, banking association membership, presence of a bank office network, operations abroad (via branches and subsidiaries), degree or scope of the bank's investment in other enterprises (participating interests, etc.), and ownership structure of the bank being assigned.
3 For more information on how the categories of banks are broken down, see the section "Categories of banks" under "Explanatory notes" (https://www.bundesbank.de/resource/blob/821484/e6e28e6c018aa7d06a5999f77e1f07ef/mL/erlaeuterungen-data.pdf).
4 It is not possible to clearly distinguish business relocations and changes to business models caused by Brexit from business policy decisions triggered by other factors. In addition, Brexit banks sometimes differ considerably in terms of their business models and the extent of their relocation activities. However, in the case of the institutions analysed here, Brexit was initially the main factor behind any changes. For the purposes of this box, this distinction is enough to highlight difficulties in interpreting profitability components given the business relocations and changes to business models within the affected categories of banks.
5 In 2021, Brexit banks accounted for just over 80% of the increase in the annual average total assets of regional banks and other commercial banks.

However, according to the Bank Lending Survey, neither lending to non-financial corporations nor to households saw any significant easing in credit standards and credit terms and conditions.[27] Private housing loans was the only area where credit standards and credit terms and conditions eased in the second quarter of 2021, though they were soon tightened again in the third quarter. This was due to an elevated level of credit risk according to banks' assessments and a reduced tolerance for risk.[28]

Another sharp rise in German banks' deposit holdings due to pandemic

On the liabilities side of the aggregated bank balance sheet, pandemic-related uncertainty regarding future economic developments as well as restricted consumption options sent the volume of domestic households' and non-financial corporations' deposits soaring again. However, the increase weakened significantly over the course of 2021, mainly as a result of changes in household investment behaviour, meaning that only slight growth was seen towards the end of the year.[29] With average interest rates particularly on overnight deposits having fallen further over the course of the year and inflation rates having increased, households are likely to have become more acutely aware of the real costs involved in holding money.[30]

Overall, at 4.4%, the annual average increase in deposits held by domestic non-banks[31] at German credit institutions in 2021 was around 0.5 percentage point lower than in the previous year. However, the total volume of €3,953 billion meant that a new historical high was reached. As in 2020, growth was concentrated on sight deposits, though at 9.6% their growth rate in the reporting year was just over one percentage point lower than in the previous year. By contrast, time and savings deposits were further scaled back.

Unlike in the previous year, developments in the deposit business varied widely across the different categories of banks. In the reporting year, larger growth was almost exclusively the preserve of savings banks, credit cooperatives and big banks.

Balance sheet equity increased slightly on aggregate

Looked at in aggregate terms, the annual average balance sheet equity[32] of German banks rose by 1.6% to €536 billion in 2021. Increases – in some cases substantial ones – were recorded by all categories of banks[33] except for big banks (-19.8%) and mortgage banks (-6.2%).[34] Regional banks and other commercial banks posted the highest growth rate (+16.0%). A significant portion of that growth was attributable to institutions that strengthened their presence in Germany in the wake of Brexit. Credit cooperatives and savings banks augmented their balance sheet equity by 6.4% and 3.7%, respectively, on an average for 2021.

Consolidation process in German banking sector continued at accelerated pace

Overall, the consolidation process in the German banking sector continued at an accelerated pace in 2021. The total number of credit institutions decreased by 4.2%, following a year-on-year decline of only 2.2%. This was due, in particular, to mergers among credit cooperatives and departures of branches of foreign banks as a result of Brexit.[35]

---

27 See Deutsche Bundesbank (2021b), pp. 38 f.
28 See Deutsche Bundesbank (2021b), p. 38.
29 See Deutsche Bundesbank (2022b), p. 34 and Deutsche Bundesbank (2021d), p. 35.
30 See Deutsche Bundesbank (2022b), pp. 34 f.
31 The deposits of domestic non-banks comprise sight deposits, time deposits and savings deposits as well as savings bonds held by domestic households, non-financial corporations, other financial corporations, general government and non-profit institutions.
32 Including the fund for general banking risks pursuant to Section 340g of the German Commercial Code.
33 Regional banks and other commercial banks, branches of foreign banks, Landesbanken, savings banks, credit cooperatives, building and loan associations as well as banks with special, development and other central support tasks.
34 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. Furthermore, as the data on the equity base are calculated as annual average values, the decline shown here for the big banks does not reflect losses actually observed in 2021, but rather a decline in equity capital already recorded in 2020 as a result of restructuring measures taken in 2019. For more details, see Deutsche Bundesbank (2020), pp. 95 ff.
35 Branches of UK institutions that had not yet ceased making use of EU passport arrangements by the end of 2020, despite Brexit entering into force on 1 January 2021, were not counted as departures until 2021. See Deutsche Bundesbank (2022c), p. 2.

Structural data on German credit institutions

End of year

Category of banks	Number of institutions[1]			Number of branches[1]			Number of employees[2]		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
All categories of banks	1,553	1,519	1,456	26,620	24,060	21,697	560,895	551,976	540,365
Commercial banks	274	270	261	7,601	6,453	5,199	[3] 153,250	[3] 151,600	[3] 146,900
Big banks	4	3	3	6,219	5,146	4,037	.	.	.
Regional banks and other commercial banks	153	151	151	1,215	1,142	1,013	.	.	.
Branches of foreign banks	117	116	107	167	165	149	.	.	.
Landesbanken	6	6	6	236	210	179	28,150	27,150	27,150
Savings banks	380	377	371	8,971	8,318	7,732	205,000	200,700	194,950
Credit cooperatives	844	818	771	8,471	7,765	7,297	[4] 140,650	[4] 138,150	[4] 135,500
Mortgage banks	10	10	9	38	37	32	.	.	.
Building and loan associations	19	18	18	1,278	1,259	1,239	[5] 12,850	[5] 12,500	[5] 12,900
Banks with special, development and other central support tasks	20	20	20	25	18	19	[6] 20,995	[6] 21,876	[6] 22,965

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 "Balance sheet statistics" and "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

The number of branches in Germany also fell again significantly, recording a decline of almost 10%. In addition to the impact of digitalisation on distribution channels as a result of greater use of online banking,[36] this was also due to cost-cutting measures undertaken in the challenging business environment. Big banks, in particular, reduced their number of branches as part of extensive restructuring, but savings banks and credit cooperatives also scaled back their branch networks further.[37]

Performance, profitability and cost efficiency

Significant improvement in performance overall

Generally speaking, the performance of German credit institutions improved considerably in 2021 compared with the previous year. On account of higher results for the financial year before tax, almost all of the categories of banks considered in the statistics on banks' profit and loss accounts[38] were able to increase both their return on equity and their return on assets substantially. The aggregate profit for the financial year before tax almost doubled compared with 2020.

The main driver of this development was a sharp decline in net valuation charges compared with the previous year. German credit institutions significantly reduced their risk provisioning against the backdrop of low credit defaults and an improved macroeconomic envir-

36 Not least the restrictions on public life connected to the coronavirus pandemic are likely to have accelerated digitalisation and contributed to the greater use of online banking. See Deutsche Bundesbank (2022c), p. 8.
37 See Deutsche Bundesbank (2022c), pp. 8 f.
38 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), 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 p. 75.

onment. A comparatively strong rise in income from operating business also contributed significantly to the improvement in profitability. Compared with net valuation charges, however, this increase played a less significant role in the growth in the profit for the financial year before tax.

Profitability was negatively affected by a sharp rise in administrative spending, which was attributable to staff costs and other administrative spending in equal measure. Nevertheless, measured by the cost/income ratio, German banks' cost efficiency deteriorated only marginally on account of operating income, which also went up.

Return on equity and return on assets

Return on equity almost doubled; considerable year-on-year improvement in profitability

Overall, the return on equity (profit for the financial year before tax in relation to the annual average balance sheet equity) almost doubled in 2021. Furthermore, a rise of 2.3 percentage points to 5.1% put it only slightly below the long-term average of 5.2%. This indicates a significant improvement in profitability, chiefly attributable to the increase in the profit for the financial year before tax driven by net valuation charges.

Return on equity improved across almost all categories of banks, although extent of improvement varies considerably

Apart from building and loan associations,[39] all categories of banks under review[40] improved their return on equity. However, when comparing categories of banks, the extent of this improvement varies considerably. For example, Landesbanken more than tripled their return on equity in 2021 compared with the previous year owing to a sharp rise in the profit for the financial year. At 4.1%, their return on equity was also well above the long-term average of 1.4%. By contrast, savings banks (+0.9 percentage point) and credit cooperatives (+1.1 percentage point) recorded relatively small rises in their return on equity. In both cases, strong growth in balance sheet equity counteracted the positive effect on their return on equity arising from the increase in profit for the financial year before tax. For savings banks, growth in equity capital reduced the increase in their return on equity by 20%; for credit cooperatives, this increase was narrowed by as much as one-third. With levels of 6.3% and 8.4%, respectively, savings banks and credit cooperatives were nonetheless still among the categories with the highest return on equity in the reporting year, although both categories of banks also fell clearly short of their long-term averages (savings banks: 10.1%; credit cooperatives: 10.5%) in 2021. Regional banks and other commercial banks were almost on par with savings banks in the year under review. Despite the strong growth in balance sheet equity, they improved their return on equity by 1.9 percentage point, raising it to 6.0% and thereby reaching the level of their long-term average. The increasing influence of Brexit banks on the category of regional banks and other commercial banks' profit for the financial year is likely to have played a major role in this development. However, it was big banks that achieved the largest improvement in their return on equity, posting an increase of 4.8 percentage points and thereby having a substantial impact on positive overall development. That said, big banks' return on equity remained in negative territory at -2.3%.[41]

Return on assets likewise up significantly overall

In general, the return on assets (the ratio of profit for the financial year before tax to annual average total assets) moved in parallel with the return on equity. With a rise of 0.13 percentage point, the return on assets almost doubled in 2021, driven by the profit for the financial year before tax. Furthermore, at 0.29%, it reached a level above its long-term average of 0.22% again for the first time since 2018.

39 Building and loan associations' return on equity fell by 0.3 percentage point to 1.4%.
40 Big banks, regional banks and other commercial banks, branches of foreign banks, Landesbanken, savings banks, credit cooperatives, mortgage banks, as well as banks with special, development and other central support tasks.
41 The sharp decline in balance sheet equity (see footnote 34 on p. 72 for more details) on the year slowed down the improvement in the return on equity in 2021, as in 2020.

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.

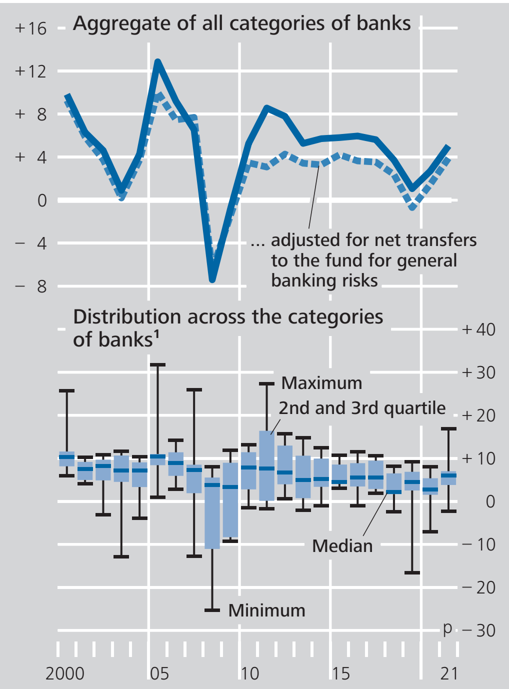
The reporting group for statistics on banks' profit and loss accounts includes all banks which are monetary financial institutions (MFIs) that conform to the definition of a credit institution under the Capital Requirements Regulation (CRR) as set forth in Article 4(1) number 1 of Regulation (EU) No 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 12 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 2021.

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).

Credit institutions' return on equity*

%



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

Deutsche Bundesbank

Year-on-year balance sheet growth had no notable impact on the increase in the return on assets overall. In individual categories of banks, however, its effect on the change in the return on assets was significant. High balance sheet growth at regional banks and other commercial banks driven by Brexit banks had a particularly strong impact. The positive impact of the rise in the profit for the financial year on the return on assets was halved in this case by balance sheet growth. The remaining growth of 0.11 percentage point was nevertheless sufficient to reach a level of 0.41%, which was well above the long-term average of 0.32%. In the reporting year, savings banks raised their return on assets by 0.06 percentage point to 0.54%, but were thus still below the long-term average of 0.62%. Together with credit cooperatives, which reached a level of 0.70% following an increase of 0.08 percentage point in 2021, savings banks ranked once again among the categories of banks with the highest return on assets. Unlike savings banks, however, credit cooperatives' return on assets was slightly above their long-term average of 0.67%. Comparatively strong balance sheet growth – mainly caused by the renewed strong expansion in deposit and lending business – also curbed the increase in savings banks and credit cooperatives' return on assets significantly. In both cases, balance sheet growth reduced the increase in the return on assets – attributable to the rise in the profit for the financial year – by just over one-third.

Profit for the financial year

Profit for the financial year before tax almost doubled compared with 2020, mainly owing to sharp drop in net valuation charges

The profit for the financial year before tax went up by a total of €12.8 billion in 2021 compared with the previous year. At €27.1 billion, it was almost twice the previous year's figure, mainly owing to the sharp reduction in net valuation charges and thus, for the first time since 2017, was both well above the long-term average of €18.0 billion and above the average of €25.4 billion for the years following the financial crisis (2010 to 2018).

Sharp rise in profit for the financial year before tax in almost all categories of banks

Unlike in 2020, all of the categories of banks[42] under review were able to substantially increase their annual result before tax, except for building and loan associations.[43] In absolute terms, the largest growth was recorded by the big banks, whose annual result rose by €4.5 billion. Nevertheless, they were the only category of banks to end the reporting year with a loss before tax, though, at €1.5 billion, this figure amounted to only one-quarter of the shortfall incurred in 2020. By contrast, savings banks and credit cooperatives again recorded the largest profits for the financial year before tax across all categories of banks. At €8.2 billion and €7.7 billion respectively, together they

42 Big banks, regional banks and other commercial banks, branches of foreign banks, Landesbanken, savings banks, credit cooperatives, mortgage banks, as well as banks with special, development and other central support tasks.
43 In 2021, building and loan associations' profit for the financial year declined by around 14% to the low level of €0.2 billion, which was well below the long-term average of €0.7 billion.

Return on equity of individual categories of banks*

%

Category of banks	2017		2018		2019		2020		2021p	
All categories of banks	5.63	(4.08)	3.73	(2.41)	1.07	(– 0.41)	2.71	(1.12)	5.05	(3.23)
Commercial banks	3.95	(2.79)	2.07	(1.54)	– 7.70	(– 8.99)	– 1.56	(– 2.95)	2.68	(1.45)
of which:										
Big banks	2.88	(2.30)	1.14	(1.24)	– 16.63	(– 17.58)	– 7.08	(– 8.22)	– 2.26	(– 2.13)
Regional banks and other commercial banks	5.31	(3.33)	3.30	(1.89)	4.44	(2.69)	4.10	(2.46)	6.04	(3.88)
Landesbanken	1.85	(0.98)	– 2.45	(– 3.89)	2.03	(1.55)	1.29	(0.84)	4.05	(2.28)
Savings banks	9.44	(6.72)	7.19	(4.83)	6.86	(4.83)	5.36	(3.36)	6.28	(4.22)
Credit cooperatives	10.11	(7.05)	8.19	(5.50)	9.17	(6.57)	7.31	(4.98)	8.39	(6.21)
Mortgage banks	5.49	(3.56)	2.09	(0.88)	5.31	(3.75)	8.06	(1.40)	16.91	(5.73)
Building and loan associations	9.18	(7.74)	2.21	(1.02)	3.83	(2.95)	1.66	(0.86)	1.41	(0.50)

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

Deutsche Bundesbank

generated almost 60% of the aggregate profit for the 2021 financial year. However, despite sharp increases of €1.4 billion each, savings banks and credit cooperatives recorded the lowest growth rates (savings banks: +21.3%; credit cooperatives: +22.2%) of all categories of banks.[44] Regional banks and other commercial banks recorded a sharp rise of €2.3 billion (+70.6%) – the growing significance of Brexit banks had an impact here, too.

Sharp reduction in net valuation charges responsible for three-quarters of overall increase in aggregate net profit for the financial year

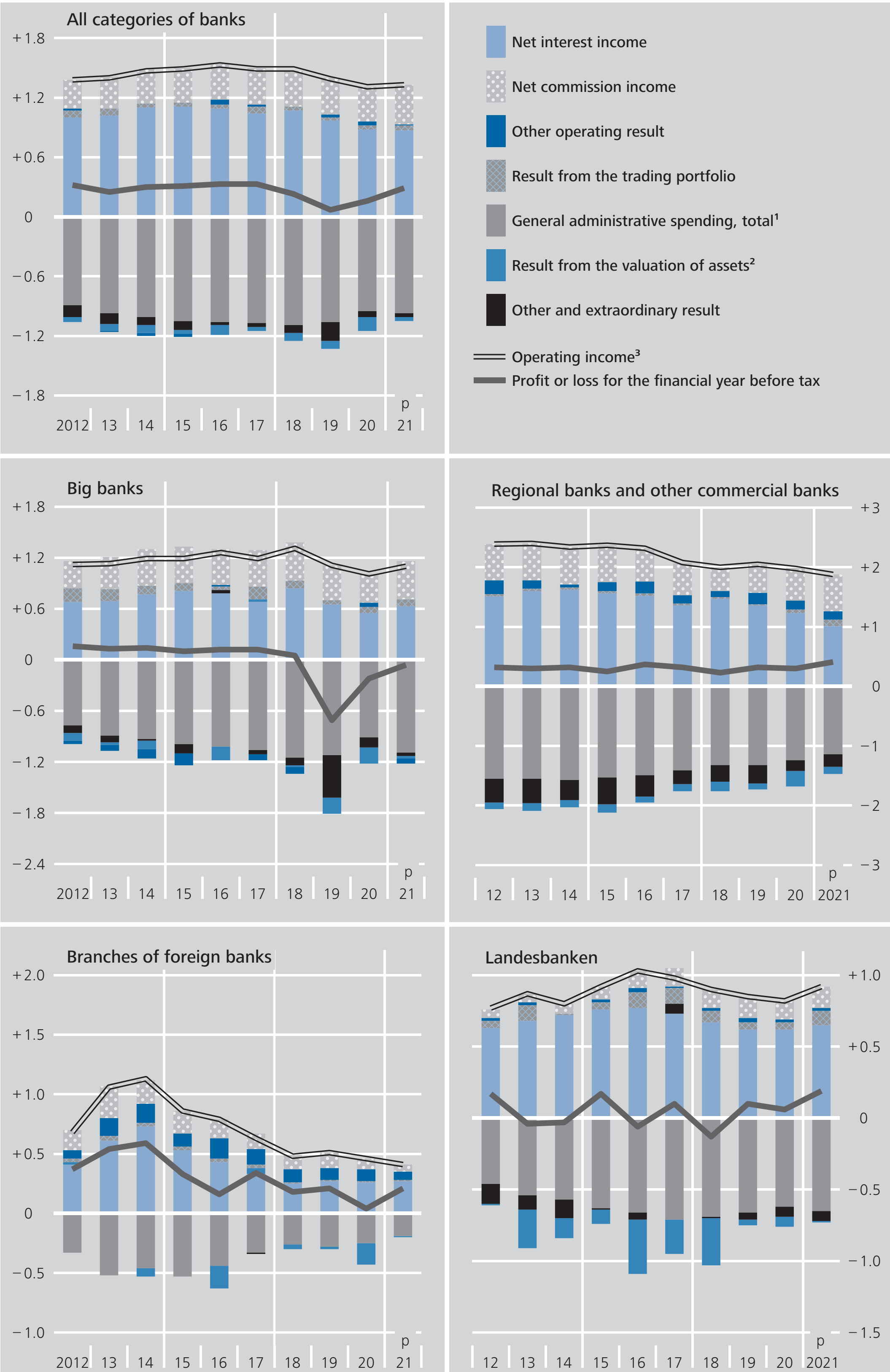
Net valuation charges[45] decreased by €9.7 billion in the year under review to around one-quarter of their figure for the previous year. Totalling €3.6 billion, they were not only well below their long-term average of €13.5 billion, but rather the decline in 2021 also more than offset the doubling of net valuation charges seen in the previous year due to the pandemic and made a major contribution to the increase in profit for the financial year before tax in 2021.

German credit institutions significantly scaled back their risk provisioning compared with the previous year and released some of the risk provisions they had formed in 2020 during the reporting year. For example, depreciation of and value adjustments to loans and advances, and provisions for contingent liabilities and for commitments halved and, at €7.0 billion, were well below the long-term average of €17.4 billion in the year under review. At the same time,

44 Apart from the branches of foreign banks, which increased their low level of profit for the financial year almost sevenfold to €0.3 billion, Landesbanken recorded the largest growth rate in profit for the financial year before tax (+218.2%), primarily on the back of significantly higher operating income.
45 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 German Commercial Code, the annual accounts do not show the extent to which undisclosed reserves have been formed or released.

Return on assets and its components by category of banks*

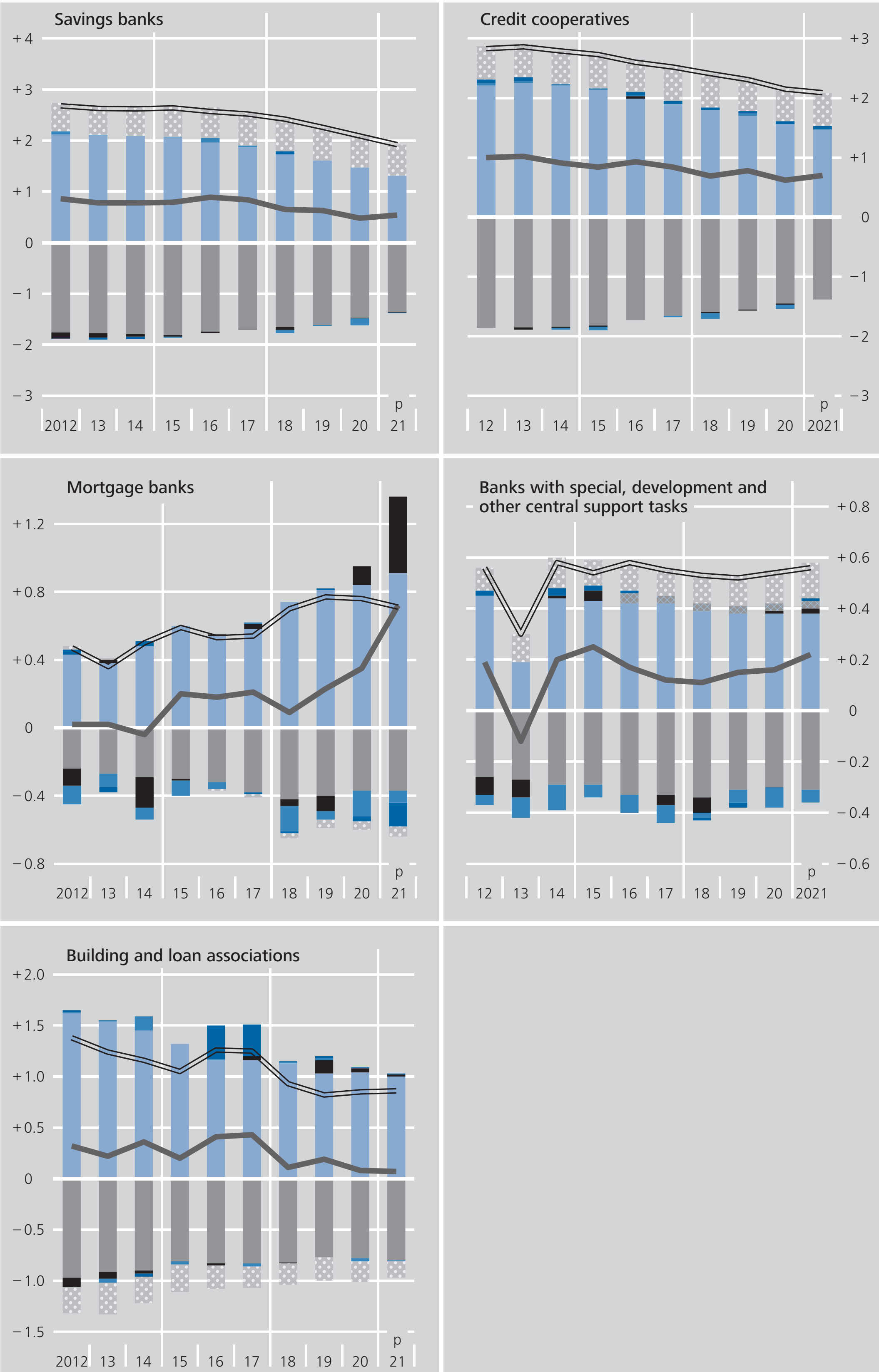
As a percentage of total assets; the charts below use different scales



* 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 total assets; the charts below use differents scales



3 Gross earnings plus result from the trading portfolio and other operating result.

Deutsche Bundesbank

Major income and cost items for individual categories of banks in 2021p

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	65.1	57.5	53.7	70.7	68.1	70.6	129.2	116.9	68.4
Net commission income	30.0	41.1	32.8	16.1	31.7	26.6	− 8.8	− 18.2	24.4
Result from the trading portfolio	3.9	7.3	5.8	10.7	0.0	0.0	0.0	0.0	6.2
Other operating result	0.9	− 5.9	7.7	2.5	0.1	2.8	− 20.4	1.2	1.1
Operating income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
General administrative spending	− 72.9	− 99.2	− 60.6	− 70.6	− 70.8	− 65.9	− 52.5	− 93.6	− 55.5
of which: Staff costs	− 37.0	− 42.9	− 29.0	− 34.3	− 43.2	− 37.5	− 24.6	− 35.1	− 27.1
Other administrative spending	− 35.9	− 56.3	− 31.6	− 36.2	− 27.5	− 28.4	− 27.9	− 58.5	− 28.3
Result from the valuation of assets	− 2.8	− 2.5	− 6.4	− 0.6	− 0.6	− 0.1	− 9.5	− 0.7	− 9.7
Other and extraordinary result	− 2.8	− 4.0	− 11.2	− 8.1	− 0.6	− 0.5	63.5	2.5	3.7

Deutsche Bundesbank

income from value readjustments to loans and advances, and provisions for contingent liabilities and for commitments doubled on the year to €3.4 billion. This item had still been declining in 2020. In absolute terms, at €7.9 billion, the decrease in the depreciation of and value adjustments to loans and advances, and provisions for contingent liabilities and for commitments accounted for just over 80% of the total decline in net valuation charges.

There were several reasons for this development. For example, the high number of defaults on loans feared at the beginning of the coronavirus pandemic did not materialise, not least due to extensive fiscal and monetary policy measures.[46] Furthermore, given the more favourable macroeconomic situation overall and with the share of non-performing loans in the total credit volume declining up to the third quarter of 2021, German banks still assessed credit risk to be low.[47]

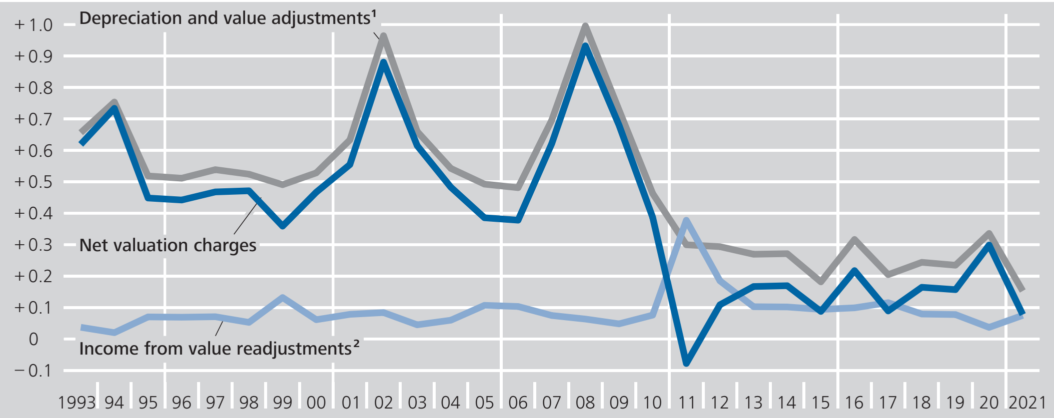
All categories of banks reduced their net valuation charges on a large scale

The reduction in net valuation charges was generally observed across all categories of banks, albeit to varying degrees. In particular, savings banks and credit cooperatives – which together generated more than half of the aggregate profit for the financial year before tax in 2021 – but also big banks reduced their net valuation charges by around 90% or more on the year. In contrast to the overall development, however, a relatively large share of the drop in net valuation charges at savings banks and credit cooperatives was also attributable to higher income from value readjustments to loans and advances, and provisions for contingent liabilities and for commitments. Meanwhile, at around 40%, regional banks and other commercial banks decreased their net valuation charges to a comparatively moderate degree, even though they had made the larg-

46 See Deutsche Bundesbank (2022a), p. 30.
47 See Deutsche Bundesbank (2022a), pp. 30 f. and Deutsche Bundesbank (2021a), p. 41.

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

est contribution in absolute terms to the increase in net valuation charges in 2020.

Operating income second major driver of increase in profit for the financial year before tax behind net valuation charges

German credit institutions' operating business proved robust in 2021 despite the prolonged negative interest rate environment and the coronavirus pandemic. Operating income[48] expanded relatively sharply on the year by €5.8 billion (+4.8%). Thus, both the absolute and percentage increase were more than three times the level recorded in 2020. Furthermore, operating income in 2021 was the second major driver of the increase in the aggregate profit for the financial year before tax; nonetheless, the decline in net valuation charges was almost twice as significant.

Growth in operating income chiefly driven by net commission income

The expansion in operating income in 2021 was primarily caused by strong growth in net commission income. Increases in net interest income and the trading result also had a positive impact on operating income. Taken together, however, these increases were just sufficient to offset the decline in the other operating result. In line with this, the shares of the individual sources of income in total operating income shifted slightly. With a share of around two-thirds of operating income, net interest income was again the most important source of income for German banks in 2021. However, its share in operating income fell again compared with 2020. By contrast, net commission income built up its role as the second most important source of income, accounting for 30% of operating income. The trading result and other operating result remained only of minor importance overall.

Growth in operating income across categories of banks significantly more heterogeneous in the reporting year than in 2020

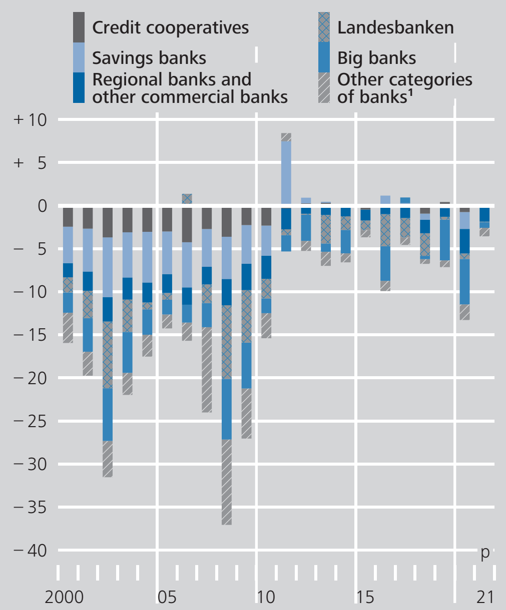
After all categories of banks except for savings banks had recorded increases in their operating income in 2020, the picture was much more mixed in 2021. For example, growth in operating income was observed particularly at regional banks and other commercial banks and at credit cooperatives. Due to the growing importance of Brexit banks, regional banks and other commercial banks recorded the largest growth, both in absolute terms (+€4.2 billion) and in relative terms (+19.5%), driven primarily by net commission income and the trading result. Credit cooperatives came in second with an increase of +€1.0 billion; they benefited chiefly from net commission income, followed by net interest income.

In 2021, it was mainly big banks and once more savings banks that recorded declines in their operating income (-€0.6 billion and -€0.2 billion, respectively). In the case of savings banks,

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

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

€ billion

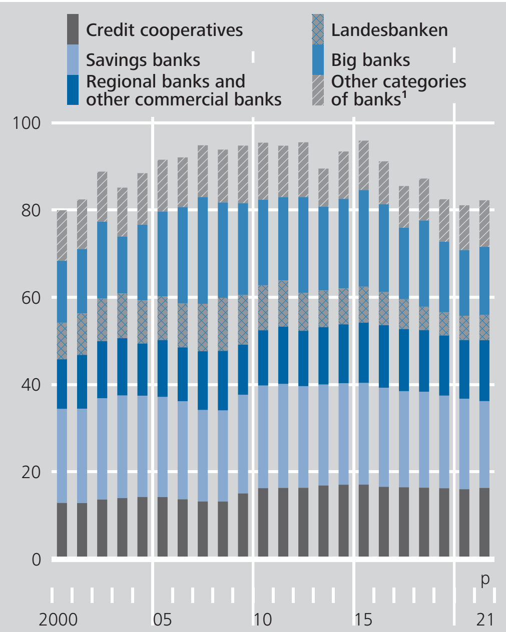


* Net valuation charges excluding investment in tangible and financial fixed assets. Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development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

Deutsche Bundesbank

Net interest income generated by credit institutions*

€ 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

a relatively steep drop in net interest income outstripped the increase in net commission income. By contrast, big banks saw a sharp decrease in the other operating result outweigh their otherwise positive growth in net interest income and commission income.

Net interest income rose again slightly for the first time since 2018, but interest income continued to fall

German credit institutions' net interest income rose slightly in the year under review for the first time since 2018 and, at €82.2 billion, was €1.2 billion (+1.4%) higher than in the previous year. This was mainly due to higher current income from shares and other variable-yield securities, as well as from participating interests, which are likewise included in net interest income. By contrast, net interest income in the narrower sense, i.e. the contribution to earnings by interest-related business, improved only slightly despite increased lending. Looking at the categories of banks, the rise in net interest income was generally broad-based: with the exception of savings banks and building and loan associations, all of the categories of banks under review[49] recorded higher net interest income than in 2020. The largest individual contributions to the growth in total net interest income were made by big banks as well as regional banks and other commercial banks, accounting for €0.5 billion each. Landesbanken and credit cooperatives also made significant contributions to the overall expansion, each recording a rise in net interest income of €0.3 billion on the year. Conversely, with a drop of €0.9 billion (-4.2%), savings banks were the only category of banks to record a significant decline in net interest income.[50]

Overall, the increase in net interest income in 2021 was achieved on the back of parallel developments in interest income and interest expenditure. Thus, interest income in the broader

49 Big banks, regional banks and other commercial banks, branches of foreign banks, Landesbanken, credit cooperatives, mortgage banks, as well as banks with special, development and other central support tasks.
50 At €0.02 billion, the decline in net interest income among building and loan associations was very small and had virtually no impact on the overall change.

Fall in interest income more than offset overall by lower interest expenditure in 2021

sense[51] fell by €9.1 billion on the year in 2021, while interest expenditure dropped by €10.2 billion over the same period. Unlike in previous years, German credit institutions were able to more than offset the decline in interest income by lowering interest expenditure in the reporting year. Moreover, this development was observed not only at the aggregate level, but also across all categories of banks[52] except savings banks and building and loan associations.

In the reporting year, the persistent negative interest rate environment led to lower interest income for German credit institutions, not only as a result of the negative remuneration of excess liquidity in the Eurosystem's deposit facility.[53] In fact, interest rates for lending dropped again, according to data from the MFI interest rate statistics. Alongside interest rates on loans to enterprises, this particularly related to interest rates in the high-volume business of lending to households. As a consequence, even the high growth in the volume of lending business – especially in the granting of new housing loans – was unable to halt the decline in interest income. However, in 2021, German banks made greater use of instruments to lower their interest expenditure than they had in the previous year. This included the near full utilisation of exemption allowances, introduced at the end of 2019, for the negative deposit facility rate as well as the further expanded use of refinancing operations with the Eurosystem at sometimes negative rates (in particular TLTRO-III).[54] Moreover, further extensive changes to terms and conditions for customer deposit business (including the increased passing on of negative interest rates)[55] contributed to the decrease in interest expenditure.[56]

Interest margins fell to new lows despite rise in net interest income

Although German credit institutions managed to slightly improve their net interest income in 2021 as against the previous year, the interest margin (net interest income in the broader sense in relation to annual average total assets) fell by 0.01 percentage point to the new low of 0.87% in the reporting year. The dampening effect of balance sheet growth on the interest margin proved to be twice as large as the positive effect that the increase in net interest income had on the interest margin. In the case of savings banks and credit cooperatives, whose business models are shaped by interest-related business in particular, the declines seen in interest margins of 0.16 percentage point and 0.09 percentage point respectively were, in fact, largely driven by strong balance sheet growth. At the same time, interest income in the narrower sense decreased again in both categories of banks despite the strong expansion of lending. Nevertheless, savings banks and credit cooperatives continued to record the highest interest margins among all categories of banks under review in 2021, at 1.31% and 1.47% respectively, even though these were new lows in both cases.

Net commission income significantly better overall and across the board

Net commission income increased by €5.8 billion (+17.9%) on the year to €37.9 billion. Both the absolute increase and the growth rate were more than six times higher in the reporting year

51 Interest income in the narrower sense plus current income from variable-yield securities, participating interests and shares in affiliated enterprises as well as income from profit pooling, profit transfer agreements and partial profit transfer agreements.
52 Big banks, regional banks and other commercial banks, branches of foreign banks, Landesbanken, credit cooperatives, mortgage banks, as well as banks with special, development and other central support tasks.
53 In its Annual Report for 2021, the Bundesbank reported interest income from negatively remunerated deposits by German banks in the deposit facility amounting to €4.8 billion (previous year: €2.7 billion). This figure already takes into account the deposit facility's two-tier remuneration system. The sharp rise, which is likely to have been reflected in higher interest expenditure at German banks, was due to a 73% increase in negatively remunerated holdings in the deposit facility. See Deutsche Bundesbank (2022a), pp. 71 ff.
54 In 2021, German credit institutions made greater use of TLTRO-III than in 2020, using it to generate interest income of €4.0 billion (previous year: €1.8 billion), as outlined in the Bundesbank's Annual Report for 2021. See Deutsche Bundesbank (2022a), pp. 71 ff.
55 According to the MFI interest rate statistics, the average interest rate on new overnight deposits from non-financial corporations was -0.09% in December 2020. In December of the reporting year, this figure had already reached -0.14%. The average interest rate on new overnight deposits from retail customers was virtually zero in December 2020, moving into negative territory for the first time in February 2021, and standing at -0.01% in December 2021.
56 For an assessment of the extent to which changes to terms and conditions in deposit business lowered interest expenditure in 2021, see the box on pp. 84 f.

Change in German banks' interest expenditure caused by adjustments to terms and conditions in deposit business with non-banks in the 2021 calendar year

In terms of content and methodology, the following analysis is based on the box entitled "Change in German banks' interest expenditure caused by adjustments to terms and conditions in deposit business with non-banks in the 2020 calendar year", which was included in the September 2021 Monthly Report as part of the article on the performance of German credit institutions in 2020. In the context of the negative interest rate environment prevailing since 2014, this box will estimate the amount by which German banks used adjustments to terms and conditions in deposit business to lower their interest expenditure during calendar year 2021 compared with the previous year. All deposits held by non-banks (non-MFIs) are included in the analysis. Other effects of negative interest rates on banks' interest expenditure and interest income as well as on all other income and expenditure items are disregarded, however. The following analysis therefore does not allow a conclusive assessment of the overall effect of negative interest rates on banks' profitability.[1]

The table on p. 85 summarises the results of the calculations. Compared with 2020, interest expenditure in deposit business is likely to have fallen by an estimated €1.6 billion in 2021. The decline was almost 20% larger than in the previous year (-€1.3 billion), with residents' deposit business again accounting for the lion's share of the reduction, at around €1.4 billion. Interest expenditure in business with non-resident depositors dropped by just under €0.2 billion on the year.

In 2021, the decline in interest expenditure was greater than in 2020 in almost all deposit categories. As in the previous year, German banks reduced their interest expenditure on sight deposits and time deposits in particular during the reporting year. At €0.6 billion, the fall in interest expenditure on sight deposits was up by a relatively moderate amount (around 10%) on the previous year's figure, while the decrease in interest expenditure on time deposits, at just over €0.8 billion, was around 40% higher than in 2020. Only in the case of savings deposits and long-term time deposits held by non-financial corporations and non-resident depositors did interest expenditure decline more slowly than in the previous year.

Once again, the introduction and/or expansion of negative deposit rates also had an impact on overall developments. Around half of the total reduction in interest expenditure was achieved through (increasingly) negative average interest rates on deposits. In addition to the increase in the negative average interest rate on short-term time deposits, in 2021 this was probably partly due, in particular, to the interest on households' sight deposits. The latter had moved closer and closer to the zero mark up until January 2021, but remained in positive territory. From February 2021 onwards, however, consistently negative average interest rates on households' sight deposits were observed for the first time, and these expanded over the course of the year.

1 For further methodological notes, see Deutsche Bundesbank (2021e), pp. 107 f.

Change in interest expenditure* in existing deposit business with the non-financial sector in 2021 vs. 2020 and 2020 vs. 2019

€ million

Deposit category	Residents: Households	Residents: Non-financial corporations	Residents: Other non-financial sector	Residents: Total change in interest expenditure	Non-residents: Depositors, total	Total: Change in interest expenditure	Total: of which: Introduction or expansion of negative deposit interest
Deposits repayable on demand							
2020	− 149.25	[1] − 235.27	[1] − 117.43	− 501.95	[1] − 66.23	− 568.17	[1] − 418.92
2021	[1] − 158.50	[1] − 279.16	[1] − 117.88	− 555.54	[1] − 72.04	− 627.58	[1] − 469.08
Savings deposits[2]							
2020	− 166.26		− 0.85	− 167.11	− 1.94	− 169.04	.
2021	− 113.80		− 0.36	− 114.16	− 1.49	− 115.66	.
Fixed-term deposits							
Maturity < 2 years							
2020	− 0.38	[1] − 72.33	[1] − 115.55	− 188.26	[1] − 63.20	− 251.46	[1] − 228.91
2021	− 23.59	[1] − 104.57	[1] − 112.37	− 240.54	[1] − 123.66	− 364.19	[1] − 340.60
Maturity > 2 years							
2020	− 226.82	− 31.33	− 119.09	− 377.24	36.59	− 340.65	.
2021	− 228.76	− 29.57	− 236.21	− 494.54	36.54	− 458.00	.
Total							
2020	.	.	.	− 1,234.55	− 94.77	− 1,329.32	− 647.83
2021	.	.	.	− 1,404.78	− 160.65	− 1,565.43	− 809.68

* Negative values indicate a decrease in interest expenditure. **1** Reduction in interest expenditure in deposit business as a result of negative average interest rates. **2** Households' and non-financial corporations' holdings of savings deposits are reported only jointly in the MFI interest rate statistics.

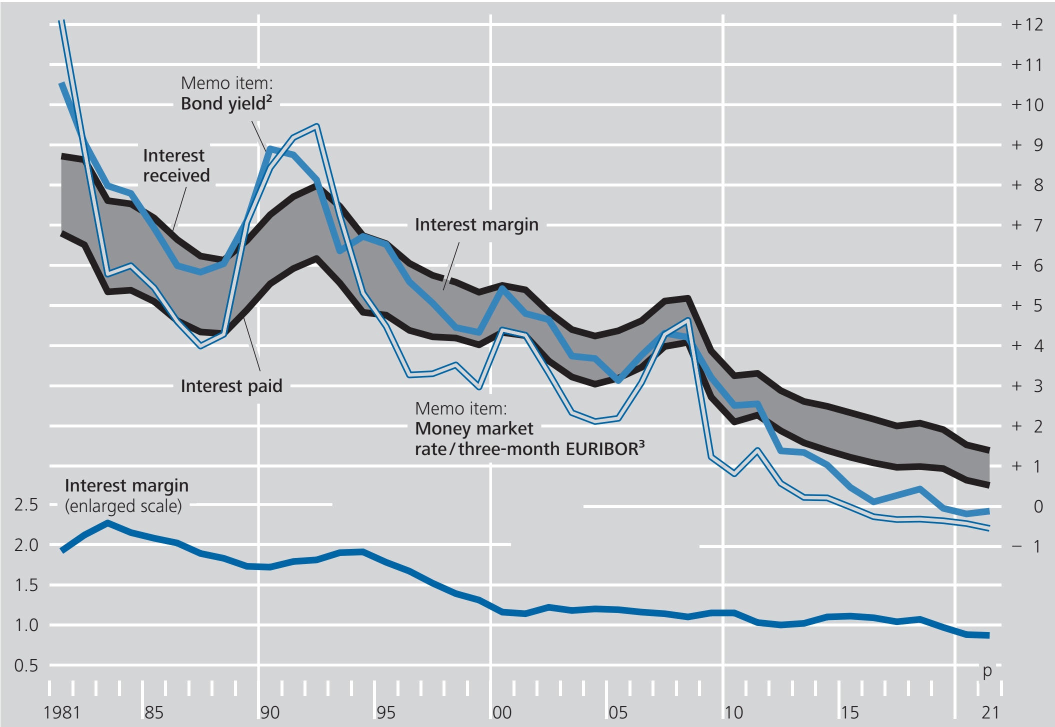
Deutsche Bundesbank

The fall of around €1.6 billion in interest expenditure in deposit business also more than offset the net interest expenditure caused by the negative interest rates on the deposit facility in the 2021 calendar year, to a greater extent than in 2020. Net interest expenditure is calculated as interest expenditure from remuneration of excess liquidity less interest income from participation in the negatively remunerated targeted longer-term refinancing operations (TLTRO-III). It fell by around 20% to €0.8 billion in the 2021 calendar year.[2]

2 See Deutsche Bundesbank (2022a), pp. 71 ff. According to data in the Bundesbank's Annual Report for 2021, German banks are likely to have incurred interest expenses of €4.8 billion from the negative remuneration of the balances in the deposit facility (previous year: €2.7 billion). This figure already takes into account the deposit facility's two-tier remuneration system. In the same period, German credit institutions generated interest income of €4.0 billion from participation in TLTRO-III (previous year: €1.8 billion). At €0.8 billion on balance, German banks' direct net interest expenditure incurred through negative interest rates on the deposit facility is thus likely to be 20% lower in 2021 than in the previous year (2020: €1.0 billion).

Interest received and interest paid by credit institutions

As a percentage of total assets[1]



1 Up to end-1998, as a percentage of the average volume of business. **2** Average yield on domestic bearer debt securities. **3** Up to end-1998, money market rate for three-month funds in Frankfurt am Main.
Deutsche Bundesbank

than in 2020. The role of net commission income as the second most important source of income after net interest income thus continued to grow. In addition, net commission income in 2021 was well above the long-term average of €28.6 billion. The main drivers of growth across all categories of banks were strong growth in securities and deposit business with customers, in payments, in brokerage business and in asset management, but also in fees for services.

In contrast to the previous year, developments in 2021 were very consistent when comparing the categories of banks. With the exception of branches of foreign banks and mortgage banks, all categories of banks[57] substantially increased their net commission income. Regional banks and other commercial banks, in particular, recorded high growth rates (+41.4%). Although this category of banks only generated a little less than one-quarter of total net commission income, it accounted for just over 40% of the overall increase in net commission income. Brexit banks once again proved to be the major driver of this development, as their business models are geared more towards commission-based activities than those of most other banks in Germany.

By contrast, the savings banks and credit cooperatives made disproportionately small contributions to the increase in aggregate net commission income, with comparatively minor improvements in their individual net commission income (+6.7% and +8.5%, respectively). Savings banks generated just under one-quarter of total net commission income, but contributed only around 10% to the overall increase. Credit cooperatives contributed around 8% to the overall increase, although their share

57 Big banks, regional banks and other commercial banks, Landesbanken, savings banks, credit cooperatives, building and loan associations as well as banks with special, development and other central support tasks.

in aggregate net commission income came to about 16%.

Overall, commission margin rose to highest level since start of the negative interest rate phase in 2014 and was well above the long-term average

Following its decline in 2020, the commission margin (net commission income in relation to annual average total assets) rose by 0.05 percentage point to 0.40% in the reporting year, outstripping the long-term average of 0.35%. Growth in annual average total assets again had a dampening effect on the commission margin in the reporting year, but unlike in the previous year, the positive effect of the sharp rise in net commission income was the dominant factor.

Developments in commission margin heterogeneous across categories of banks, however

A comparison of the various categories of banks, however, revealed mixed developments. Commission margins were seen to increase, in particular, at big banks (+0.11 percentage point) and regional banks and other commercial banks (+0.07 percentage point). Just under half of the sharp increase in the case of big banks was attributable to annual average total assets declining steeply. By contrast, the strong balance sheet growth at regional banks and other commercial banks ate up around two-thirds of the increase in the commission margin due to the higher net commission income.

At savings banks and credit cooperatives, balance sheet growth likewise had a dampening effect on the increase in the commission margin. Despite higher net commission income, the commission margin of credit cooperatives remained unchanged at the previous year's level; savings banks recorded a slight decline in the commission margin of 0.01 percentage point.

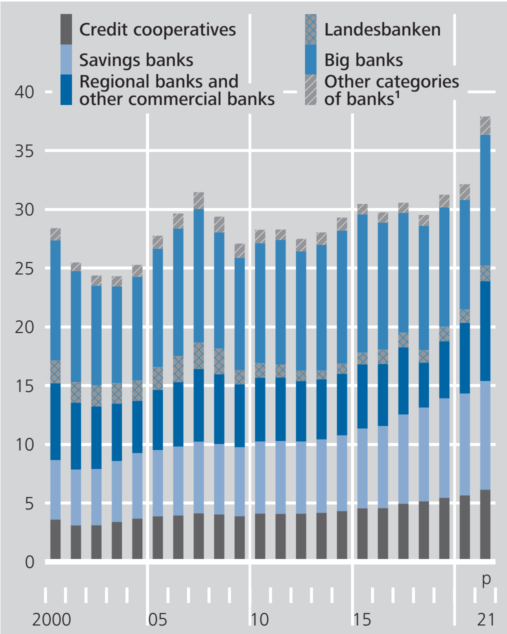
Trading result again strongly improved, primarily due to a sharp rise at regional banks and other commercial banks

The net result from the trading portfolio rose by €1.4 billion (+40.3%) on the year in 2021 and, at €4.9 billion, was well above the long-term average of €3.6 billion. As a result, the share of operating income accounted for by the trading result also grew to just under 4% (previous year: just under 3%). In addition, the trading result in the reporting year was more than four times as large as the other operating result, after both had been at the same level in 2020.

As in previous years, the trading result was still primarily relevant for big banks, regional banks and other commercial banks as well as Landesbanken. While the trading result of the big banks stayed at the previous year's level, regional banks and other commercial banks proved to be the main drivers of overall growth in the reporting year. Owing to business relocations in the wake of Brexit, they more than doubled their trading result for the second time in a row, boosting it by €0.9 billion to €1.5 billion. They also generated the second-highest trading result after the big banks and were thus still ahead of the Landesbanken, which likewise almost doubled their result from the previous year, at €0.9 billion. Together, these three categories of banks generated just under 90% of the overall trading result.

Net commission income generated by credit institutions*

€ billion

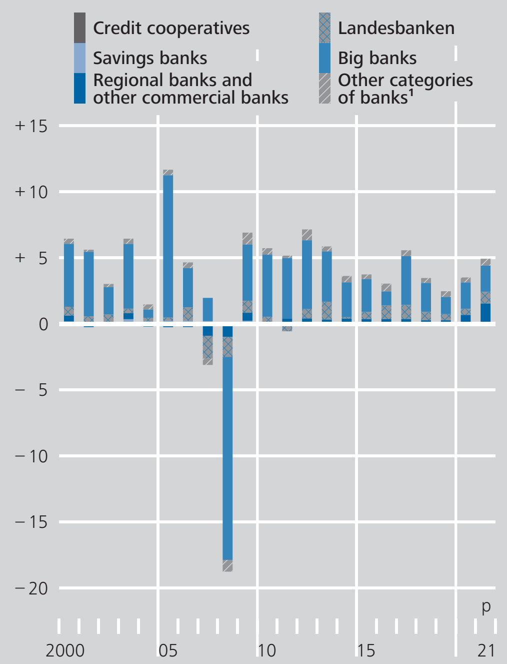


* Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

Deutsche Bundesbank

Credit institutions' trading result*

€ billion

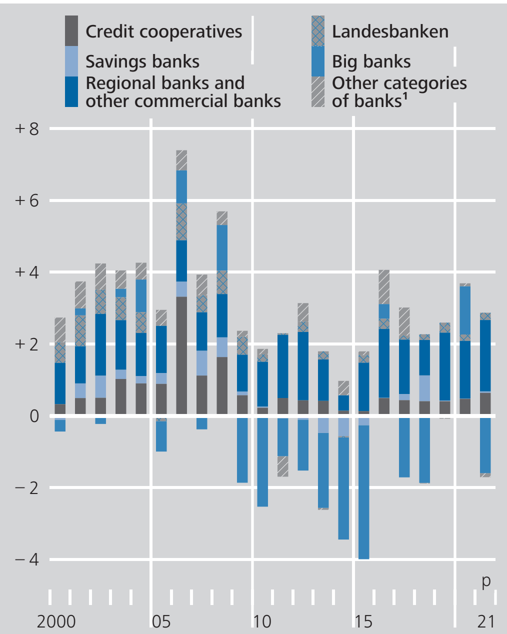


* Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

Deutsche Bundesbank

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

Other operating result down by more than two-thirds year on year

The other operating result[58] declined by more than two-thirds (-€2.5 billion) to €1.2 billion in 2021. The share of operating income accounted for by the other operating result thus fell to below 1% in the reporting year. This decline was attributable almost exclusively to big banks, whose other operating result was down by €2.9 billion year on year. This was chiefly due to net expenditure arising from the marking-up of provisions for pensions and other post-employment benefit obligations.

Balance of other and extraordinary items in reporting year of lesser importance for development of profit for financial year before tax

Unlike in 2019 and 2020, the balance in the other and extraordinary account[59] in the reporting year was only of minor importance for the increase in the aggregate profit for the financial year. Despite a significant improvement of almost 40% (in absolute terms: +€2.3 billion), in 2021 the balance in the other and extraordinary account made a comparatively small contribution to growth in aggregate profit for the financial year. The improvement was also driven mainly by a higher valuation of participating interests at one institution belonging to the big banks category.

General administrative spending[60] climbed significantly by €5.0 billion (+5.7%) to €92.0 billion in 2021. Looking at profit for the financial year before tax, this strong increase thus ate up

58 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).
59 The other and extraordinary account includes depreciation 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.
60 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.

Breakdown of extraordinary result

€ million

Item	2019	2020	2021p
Other and extraordinary result	– 16,133	– 5,822	– 3,554
Income (total)	4,201	4,247	5,713
Value readjustments to participating interests, shares in affiliated enterprises, and securities treated as fixed assets	1,609	1,350	2,145
from loss transfers	734	590	1,220
Extraordinary income	1,858	2,307	2,348
Charges (total)	– 20,334	– 10,069	– 9,267
Depreciation of and value adjustments to participating interests, shares in affiliated enterprises, and securities treated as fixed assets	– 12,158	– 2,839	– 1,494
from loss transfers	– 908	– 328	– 318
Extraordinary charges	– 3,152	– 3,972	– 3,585
Profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement	– 4,116	– 2,930	– 3,870

Deutsche Bundesbank

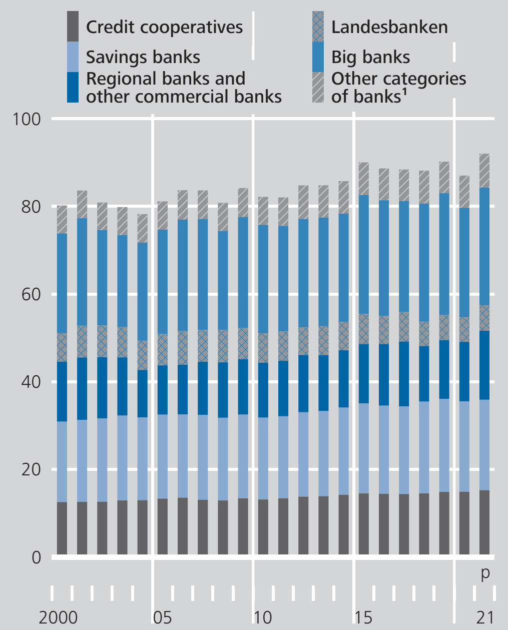
Increase in general administrative spending largely overshadowed improvement in operating income

around 84% of the improvement in operating income. In particular, disproportionately large increases in the general administrative spending of big banks (+€1.9 billion) and regional banks and other commercial banks (+€2.2 billion) led to the sharp overall increase. Together, these two categories of banks accounted for around 80% of the overall rise in general administrative spending. By contrast, credit cooperatives recorded only a slight increase (+€0.3 billion), while savings banks' spending stagnated.

Increased staff costs and higher other administrative spending made equal contributions to the overall rise in general administrative spending. The share of total general administrative spending accounted for by staff costs remained

Credit institutions' administrative spending*

€ billion

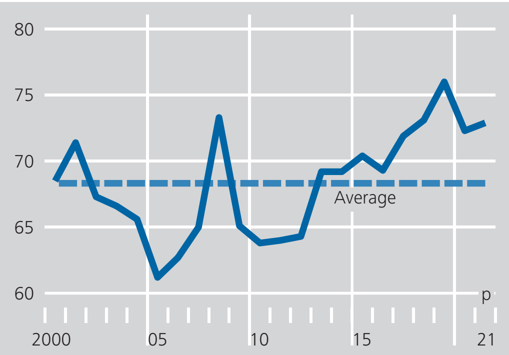


* Where credit institutions have been reassigned to a different category of banks, this is taken into account as of the date of reclassification. **1** Branches of foreign banks, mortgage banks, banks with special, development and other central support tasks, and building and loan associations.

Deutsche Bundesbank

Ratio of credit institutions' administrative spending to operating income*

%



* Sum of net interest income, net commission income, 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]		
	2019	2020	2021p
All categories of banks	76.0	72.3	72.9
Commercial banks	84.9	77.7	79.9
Big banks	100.9	90.3	99.2
Regional banks and other commercial banks	64.4	62.4	60.6
Branches of foreign banks	54.4	53.2	46.2
Landesbanken	78.5	75.9	70.6
Savings banks	71.4	70.1	70.8
Credit cooperatives	67.2	67.2	65.9
Mortgage banks	51.2	49.0	52.5
Building and loan associations	94.6	91.4	93.6
Banks with special, development and other central support tasks	59.7	56.2	55.5

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

Deutsche Bundesbank

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

stable year on year at just under 51%.[61] Amongst other things, higher social security contributions and restructuring expenses for early retirement schemes or severance payments led to the increase in staff costs. The increase in other administrative spending was primarily attributable to IT and digitalisation costs. However, higher expenditure in connection with the European bank levy and the statutory deposit guarantee fund also had an impact on other administrative spending. In addition, intangible assets were amortised heavily in some cases.

Cost efficiency

Cost efficiency slightly worse overall year on year

Measured by the cost/income ratio in its broad definition (administrative spending relative to operating income), German credit institutions' cost efficiency deteriorated slightly in 2021. Despite higher operating income, the rise in administrative spending led to a year-on-year increase in the cost/income ratio of 0.6 percentage point to 72.9%. The cost/income ratio thus remained well above the long-term average of 68.2%.

In a comparison of the categories of banks, big banks recorded the largest deterioration in the cost/income ratio, with an increase of 8.9 percentage points compared with the previous year. Here, the sharp rise in administrative spending was responsible for around three-quarters of the increase; around one-quarter was caused by the decline in operating income. At 99.2%, the big banks also continued to record the highest cost/income ratio across all categories of banks. Savings banks' cost/income ratio deteriorated by 0.7 percentage point, even though their administrative spending remained virtually unchanged as against 2020. In their case, the change in the cost/income ratio in the reporting year was caused almost exclusively by the decline in operating income. By contrast, credit cooperatives improved their cost/income ratio by 1.3 percentage points in 2021, as their operating income rose more than their administrative spending.

61 Comparing the categories of banks under analysis, the share of staff costs at savings banks (around 61%) and at credit cooperatives (around 57%) 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 43%.

Estimation of the effect of an interest rate reversal on the interest margin of German credit institutions

Given the current interest rate reversal, the following is an estimation of the impact of an interest rate hike on the interest margin of German banks. It does not, however, include a comprehensive quantification of the overall effect on banks' profitability; for example, derivative interest rate hedges are not taken into account. Nor does it include an assessment of any need for write-downs that may arise from price losses on securities held for banks' own accounts.

For the purposes of the estimation, an interest rate shock in the form of an unexpected parallel shift in the yield curve by +2% is assumed. This is consistent with the Basel interest rate shock scenario, which banking supervisors regularly use to measure banks' interest rate risk.[1] The central data for the analysis consists of the balance sheet and maturity structure of each institution as approximated using the monthly balance sheet statistics as at the reporting date of 31 December 2021.[2] This is then used to calculate the change in an institution's interest margin in the first, second and third years after the interest rate increase. A constant balance sheet structure is assumed here. If a transaction expires within the three-year observation period, it is fully replaced by a similar transaction – under new conditions – in the same month it expired. Furthermore, as per the empirical evidence, it is assumed that banks pass on the interest rate increase in lending business in full, but pass it on only partially in deposit business with non-banks.[3]

The effect of relief arising from the cessation of negative remuneration on banks' central bank balances is not modelled. Therefore, the results are only suitable for interpreting interest rate increases above the zero lower bound on interest rates reached by the policy rate as a result of the monetary policy decisions of 21 July 2022. When classifying the results, it should also be borne in mind that interest rate increases are anticipated by the markets and banks, which can lead to a steeper, flatter or humped yield curve. Compared with the unexpected parallel shift, a steeper curve is likely to generally mitigate the negative impact on earnings, while a flatter curve could amplify said impact. On the whole, however, the present assessment is likely to be considered conservative.

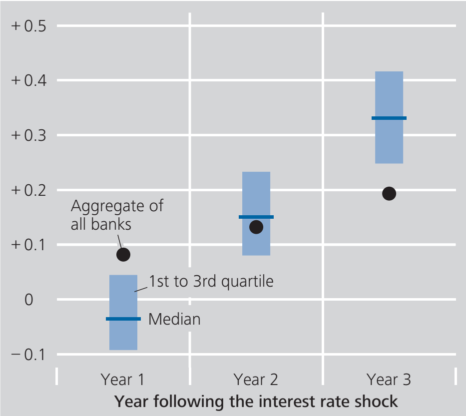
The chart on p. 92 summarises the results of the analysis by showing the change in the interest margin from its baseline as at 31 December 2021.[4]

Overall, the majority of institutions would suffer only small reductions in the interest margin in the short term. In the medium term, however, an interest rate reversal should have a marked positive impact on the interest margin of German banks across the board, as the proportion of higher-yielding claims in the banking book is likely to gradually increase and rising market interest rates are liable to only partially be passed on to depositors.

1 See Deutsche Bundesbank (2017), p. 49.
2 See the chapter on monthly balance sheet statistics in Deutsche Bundesbank (2022e).
3 See Busch and Memmel (2021).
4 Here, the balance sheet value as at 31 December 2021 is used instead of the annual average total assets when calculating the interest margin. The reason for this is that the change in net interest income was estimated for a balance sheet structure that had remained constant since the end of 2021.

Change in the interest margin

Percentage points



Deutsche Bundesbank

According to the results of the analysis, the short-term impact on the interest margin of individual banks is nevertheless heterogeneous. Although the interest margin of the aggregate of German banks already rises by around 0.08 percentage point in the first year after the interest rate hike, interest margins actually fall at around 60% of institutions. For just under 30% of institutions, the decline in the interest margin would be stronger than the decline in the aggregate interest margin in the business environment of 2020, which was shaped by the coronavirus pandemic.[5] A significant decline in the interest margin of more than 0.20 percentage point[6] would be expected at only around 1% of institutions.

The heterogeneity of the short-term impact of an interest rate reversal is also evident at the bank category level. The analysis shows less than 5% of commercial banks and one-third of Landesbanken experiencing falling interest margins in the first year, compared with three-quarters of credit cooperatives and two-thirds of savings banks, along with around half of the remaining institutions.

In the medium term, however, the interest margin of German institutions is likely to benefit from an interest rate increase. Just over 90% of institutions would see positive effects in the second year after the interest rate hike (almost all institutions in the third year). The increase in the aggregate interest margin of all banks would amount to around 0.13 percentage point in the second year after the interest rate shock (0.19 percentage point in the third year).

5 In 2020, the aggregate interest margin fell by 0.09 percentage point on the year.
6 This corresponds to just under one-quarter of the annual average interest margin in 2021.

Outlook

Business environment increasingly challenging for German credit institutions

This year, numerous developments are having an impact on the business environment for German credit institutions. Uncertainty surrounding the economic setting is increasing for now. The elimination of most coronavirus mitigation measures lent a strong boost to service providers, which had been hit particularly hard by them, and to the attendant consumption expenditure.[62] However, economic developments are increasingly being affected by the impact of the Russian war of aggression on Ukraine. The main adverse factors here are high commodity prices, severe trade restrictions due, amongst other things, to sanctions and countermeasures, and potential energy shortages.[63] If the economic environment deteriorates further, this could also weigh on the profitability of German banks, through higher credit losses for example. Additionally, high inflation and the level of uncertainty, particularly with regard to the energy supply, are major burdens on enterprises and households[64] and could ultimately increase counterparty credit risk by way of reduced debt servicing capacity.

ECB changes monetary policy stance: discontinuation of net purchases under APP and PEPP and exit from negative interest rates

Furthermore, the ECB has changed its monetary policy stance in view of already high inflation rates and further increases in inflation expectations. Net purchases under the PEPP and the APP were discontinued at the end of March 2022 and end of June 2022 respectively, and the interest rate reversal commenced with the interest rate decision of 21 July 2022. However, the continued reinvestment of freed up funds from the purchase programmes is intended to ensure, amongst other things, that banks have sufficient liquidity. Although the rising interest rate level could weigh on German banks' profitability in the short term, the earnings-enhancing effects of monetary policy normalisation are likely to bolster the performance of German institutions in the medium term.[65]

Added challenges of digitalisation and climate action

The profitability of German institutions will probably also continue to be affected by structural changes in future. Besides investment in digitalisation, investments made with climate considerations in mind will increasingly pose a major challenge for the sector. The ECB's climate stress test showed that German banks are likely to cope with transition risks, but even though German institutions performed comparatively well, climate risks need to be addressed in more depth overall. The extent to which climate-related investment also offers growth opportunities for banks thus remains to be seen.

62 However, it is currently difficult to gauge the extent to which new waves of coronavirus will make it necessary to reinstate protective measures in the autumn and winter of this year.
63 See Deutsche Bundesbank (2022d), p. 5.
64 See Deutsche Bundesbank (2022d), p. 5.
65 The box on pp. 91 f. estimates the effect of the interest rate reversal on the interest margin of German banks.

List of references

Busch, R. and C. Memmel (2021), Why are bank rates on deposits so low?, Credit and Capital Markets, Vol. 54(4), pp. 641-668.

Deutsche Bundesbank (2022a), Annual Report, 2021.

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

Deutsche Bundesbank (2022c), Bank office report 2021, Development of the bank office network in 2021.

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

Deutsche Bundesbank (2022e), Banking statistics guidelines, Special Statistical Publication No 1, January 2022.

Deutsche Bundesbank (2021a), Financial Stability Review, 2021.

Deutsche Bundesbank (2021b), Monthly Report, November 2021.

Deutsche Bundesbank (2021c), Monthly Report, August 2021.

Deutsche Bundesbank (2021d), Monthly Report, May 2021.

Deutsche Bundesbank (2021e), Monthly Report, September 2021.

Deutsche Bundesbank (2020), Monthly Report, September 2020.

Deutsche Bundesbank (2017), Monthly Report, October 2017.

Deutsche Bundesbank (2013), Financial Stability Review, 2013.

The tables accompanying this article are printed on pp. 95 ff.

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

As a percentage of total assets°

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]									
2015	2.33	1.66	1.33	2.71	3.04	2.90	2.84	4.07	3.18	2.21
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	0.97	0.90	1.21	2.95	1.58	1.63	2.35	1.92	0.93
	Interest paid									
2015	1.22	0.67	0.52	1.14	2.29	0.84	0.71	3.47	1.85	1.76
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	0.22	0.27	0.20	2.30	0.27	0.16	1.43	0.91	0.55
	Excess of interest received over interest paid = net interest income (interest margin)									
2015	1.11	0.99	0.81	1.56	0.76	2.06	2.14	0.60	1.32	0.45
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	0.65	1.31	1.47	0.91	1.00	0.38
	Excess of commissions received over commissions paid = net commission income (commission margin)									
2015	0.35	0.47	0.43	0.62	0.09	0.60	0.57	0.00	– 0.27	0.11
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	0.62	0.15	0.61	0.55	– 0.06	– 0.16	0.14

* 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; 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. For footnotes **1** and **2**, see p. 96.
Deutsche Bundesbank

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

As a percentage of total assets°

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									
2015	1.05	1.11	0.99	1.53	0.63	1.81	1.82	0.30	0.81	0.32
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	0.65	1.36	1.37	0.37	0.80	0.31
	Result from the trading portfolio									
2015	0.04	0.08	0.09	0.04	0.05	0.00	0.00	0.00	0.00	0.03
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
	Operating result before the valuation of assets									
2015	0.44	0.36	0.20	0.84	0.28	0.82	0.91	0.29	0.23	0.26
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
	Result from the valuation of assets									
2015	− 0.04	− 0.03	0.00	− 0.14	− 0.10	0.01	− 0.06	− 0.09	− 0.03	− 0.03
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

For footnotes * and °, see p. 95. **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 allocated to the category "Regional banks and other commercial banks" and Landesbank Berlin allocated to the category "Savings banks". DSK Hyp AG (formerly SEB AG) allocated to the category "Mortgage banks". Wüstenrot Bank Aktiengesellschaft Pfandbriefbank allocated to the category "Regional banks and other commercial 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 total assets°

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									
2015	0.40	0.33	0.21	0.70	0.18	0.83	0.85	0.20	0.20	0.23
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
	Other and extraordinary result									
2015	– 0.09	– 0.19	– 0.11	– 0.45	– 0.01	– 0.03	– 0.02	– 0.01	0.00	– 0.01
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
	Profit or loss (–) for the financial year before tax									
2015	0.31	0.14	0.10	0.25	0.17	0.79	0.84	0.20	0.20	0.21
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
	Profit or loss (–) for the financial year after tax									
2015	0.21	0.09	0.06	0.16	0.10	0.54	0.57	0.17	0.16	0.17
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

For footnotes * and °, see p. 95. For footnote **1**, see p. 96.
Deutsche Bundesbank

Credit institutions' profit and loss accounts*

Financial year	Number of reporting institutions	Total assets[1]	Interest business: Net interest income (col. 4 less col. 5)	Interest business: Interest received[2]	Interest business: Interest paid	Commissions business: Net commission income (col. 7 less col. 8)	Commissions business: Commissions received	Commissions business: 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									
2014	1,715	8,452.6	93.4	210.8	117.4	29.3	42.6	13.3	3.6	− 2.5	123.8
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	9,468.6	82.2	131.4	49.2	37.9	53.6	15.7	4.9	1.2	126.2
	Year-on-year percentage change										
2015	− 2.1	1.8	2.7	− 4.7	− 10.6	4.0	4.5	5.5	3.0	11.1	3.3
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	46.6	1.5
2021	− 3.6	2.8	1.4	− 6.5	− 17.2	17.9	14.9	8.2	40.3	− 68.4	4.8
	As a percentage of total assets										
2014	.	.	1.10	2.49	1.39	0.35	0.50	0.16	0.04	− 0.03	1.47
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

* 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 ad-ministrative spending4								
12	13	14	15	16	17	18	19	20	21	Financial year
									€ billion	
85.8	44.0	41.8	38.1	– 6.6	31.5	– 6.5	25.0	7.6	17.4	2014
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	46.8	45.3	34.2	– 3.6	30.6	– 3.6	27.1	9.7	17.3	2021
									Year-on-year percentage change	
5.0	4.7	5.3	– 0.6	46.9	9.0	– 19.7	6.3	11.2	4.1	2015
– 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	5.8	5.7	2.4	73.2	52.4	39.0	89.6	16.1	194.0	2021
									As a percentage of total assets	
1.01	0.52	0.49	0.45	– 0.08	0.37	– 0.08	0.30	0.09	0.21	2014
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

2 Interest received plus current income and profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement. **3** Net interest and commission income plus 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									
		Total assets[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										
2016	1,611	8,355,020	91,146	181,543	90,397	29,746	43,201	13,455	3,046	4,065	128,003
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	32,137	46,684	14,547	3,513	3,691	120,415
2021	1,358	9,468,587	82,227	131,409	49,182	37,904	53,644	15,740	4,927	1,165	126,223
	Commercial banks										
2016	171	3,580,912	34,768	56,451	21,683	16,204	23,873	7,669	1,429	2,427	54,828
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	29,933	38,899	8,966	19,719	28,398	8,679	3,512	501	53,665
	Big banks[7]										
2016	4	2,575,072	20,126	33,572	13,446	10,817	13,510	2,693	1,069	405	32,417
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
	Regional banks and other commercial banks[7]										
2016	148	942,665	14,369	22,343	7,974	5,286	10,245	4,959	340	1,916	21,911
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	13,949	16,741	2,792	8,506	14,175	5,669	1,515	1,987	25,957
	Branches of foreign banks										
2016	19	63,175	273	536	263	101	118	17	20	106	500
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	416	47	– 369	89	138	49	12	109	626
	Landesbanken[7]										
2016	9	975,957	7,558	27,464	19,906	1,216	2,810	1,594	1,026	289	10,089
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	1,147	2,692	1,545	456	179	7,341
2021	6	898,065	5,826	26,496	20,670	1,326	3,118	1,792	886	204	8,242

For footnotes ***** and **1**-**7**, see pp. 102 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	
88,653	44,615	44,038	39,350	− 8,754	30,596	− 2,812	27,784	7,875	19,909	− 15,395	4,514	2016
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
92,019	46,763	45,256	34,204	− 3,562	30,642	− 3,554	27,088	9,741	17,347	− 8,528	8,819	2021
											Commercial banks	
40,723	17,379	23,344	14,105	− 5,130	8,975	− 2,248	6,727	1,954	4,773	148	4,921	2016
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
42,887	19,260	23,627	10,778	− 2,338	8,440	− 3,994	4,446	2,033	2,413	2,206	4,619	2021
											Big banks[7]	
26,378	11,134	15,244	6,039	− 4,021	2,018	1,127	3,145	864	2,281	1,918	4,199	2016
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
											Regional banks and other commercial banks[7]	
14,065	6,121	7,944	7,846	− 988	6,858	− 3,375	3,483	1,022	2,461	− 1,750	711	2016
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
15,732	7,531	8,201	10,225	− 1,658	8,567	− 2,917	5,650	2,018	3,632	− 442	3,190	2021
											Branches of foreign banks	
280	124	156	220	− 121	99	0	99	68	31	− 20	11	2016
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	− 15	322	3	325	99	226	− 11	215	2021
											Landesbanken[7]	
6,412	2,889	3,523	3,677	− 3,725	− 48	− 499	− 547	505	− 1,052	182	− 870	2016
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

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

Financial year	Number of reporting institutions	€ million Total assets[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]										
2016	403	1,154,475	22,667	30,520	7,853	6,975	7,423	448	10	7	29,659
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	19,880	23,964	4,084	9,239	10,307	1,068	11	41	29,171
	Credit cooperatives										
2016	972	832,181	16,578	21,180	4,602	4,577	5,601	1,024	10	495	21,660
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	16,327	18,121	1,794	6,146	7,512	1,366	11	640	23,124
	Mortgage banks[7]										
2016	15	289,800	1,565	11,623	10,058	− 43	176	219	0	14	1,536
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
	Building and loan associations										
2016	20	215,668	2,503	6,233	3,730	− 503	1,260	1,763	0	717	2,717
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
	Banks with special, development and other central support tasks										
2016	21	1,306,027	5,507	28,072	22,565	1,320	2,058	738	571	116	7,514
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
	Memo item: Banks majority-owned by foreign banks[8]										
2016	34	762,620	8,950	13,098	4,148	3,157	5,057	1,900	718	402	13,227
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	33	973,433	9,348	11,326	1,978	4,639	6,755	2,116	539	650	15,176
2021	33	1,194,952	9,257	10,344	1,087	6,025	8,808	2,783	973	254	16,509

* 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** Net interest and commission income plus 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 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

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 extraordinary result	Profit or loss (–) for the financial year before tax (col. 17 plus col. 18)	Taxes on income and earnings	Profit or loss (–) for the financial year after tax (col. 19 less col. 20)	Withdrawals from or transfers to (–) reserves and participation rights capital[6]	Balance sheet profit or loss (–) (col. 21 plus col. 22)	Financial year
Total (col. 13 plus col. 14)	Staff costs	Total other administrative spending[4]										
12	13	14	15	16	17	18	19	20	21	22	23	
Savings banks[7]												
20,110	12,587	7,523	9,549	1,062	10,611	– 386	10,225	2,939	7,286	– 5,728	1,558	2016
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
20,640	12,610	8,030	8,531	– 186	8,345	– 171	8,174	2,679	5,495	– 4,162	1,333	2021
Credit cooperatives												
14,423	8,649	5,774	7,237	103	7,340	361	7,701	2,104	5,597	– 4,246	1,351	2016
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
15,242	8,674	6,568	7,882	– 17	7,865	– 123	7,742	2,012	5,730	– 4,457	1,273	2021
Mortgage banks[7]												
937	410	527	599	– 113	486	39	525	127	398	– 1,138	– 740	2016
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
Building and loan associations												
1,798	692	1,106	919	22	941	– 51	890	160	730	– 548	182	2016
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
Banks with special, development and other central support tasks												
4,250	2,009	2,241	3,264	– 973	2,291	– 28	2,263	86	2,177	– 4,065	– 1,888	2016
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
Memo item: Banks majority-owned by foreign banks[8]												
9,072	4,329	4,743	4,155	– 1,012	3,143	– 1,604	1,539	636	903	2,646	3,549	2016
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
9,525	4,585	4,940	5,651	– 1,866	3,785	– 1,256	2,529	1,175	1,354	853	2,207	2020
11,274	5,718	5,556	5,235	– 565	4,670	– 496	4,174	2,326	1,848	630	2,478	2021

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 allocated to the category "Regional banks and other commercial banks" and Landesbank Berlin allocated to the category "Savings banks". DSK Hyp AG (formerly SEB AG) allocated to the category "Mortgage banks". Wüstenrot Bank Aktiengesellschaft Pfandbriefbank allocated to the category "Regional banks and other commercial banks". **8** Separate presentation of the (legally independent) banks majority-owned by foreign banks and included in other categories of banks.

Credit institutions' charge and income items*

Financial year	Number of reporting institutions	Charges, € billion										
							General administrative spending					
								Staff costs				Other administrative spending[1]
										Social security costs and costs relating to pensions and other benefits		
		Total	Interest paid	Commissions paid	Net loss from the trading portfolio	Gross loss on transactions in goods and subsidiary transactions	Total	Total	Wages and salaries	Total	of which: Pensions	
2013	1,748	285.8	138.7	12.6	0.3	0.0	81.1	43.8	35.2	8.6	2.9	37.4
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	203.7	49.2	15.7	0.0	0.0	87.1	46.8	36.4	10.3	4.4	40.4

Financial year	Income, € billion								
		Interest received			Current income				Profits transferred under profit pooling, a profit transfer agreement or a partial profit transfer agreement
	Total	Total	from lending and money market transactions	from debt securities and Debt Register claims	Total	from shares and other variable yield securities	from participating interests[2]	from shares in affiliated enterprises	
2013	300.4	213.6	184.9	28.7	10.0	6.0	1.0	3.0	4.6
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	221.1	121.6	111.6	10.0	7.1	4.0	1.3	1.7	2.7

* 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	Extra-ordinary 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	1.9	16.8	10.6	3.6	0.7	3.4	7.4	0.2	4.9	2013
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	9.7	0.3	3.9	2021

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
40.6	6.2	0.2	4.0	1.5	17.9	4.7	0.9	0.9	2013
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	2.3	1.2	2021