# Public finances*

## General government budget

### 2022 as a whole[1]

*Deficit developments in 2022 shaped by pandemic drawing to an end, new fiscal support measures and high inflation*

Last year, government finances were shaped by the pandemic drawing to an end, new fiscal support measures and high inflation. Compared with the previous year, relief outweighed burdens, and the deficit ratio fell by 1 percentage point to 2.6%. Extensive new fiscal policy measures were taken in 2022, chiefly to mitigate the effects of the energy crisis. Of these, the payments to gas trading companies (in particular Uniper), energy price allowances for employed persons and pension recipients as well as the first stage of the gas price brake constituted the largest strains on the budget. However, pandemic-related assistance fell sharply (with, above all, lower short-time working benefits and fewer transfers being made to enterprises). In addition, taxes and social contributions rose on the back of the economic recovery. Support measures aside, high inflation also alleviated the pressure on government budgets at first by boosting nominal private consumption, for instance – an important tax reference variable. By contrast, expenditure is yet to demonstrate a broad-based response.[2]

*Interest expenditure driven up by inflation and interest rate reversal, but still low*

However, inflation was quickly and directly reflected in higher financing costs for inflation-linked Federal securities. In addition, the rate of interest on new debt and old debt that was rolled over rose.[3] Nevertheless, the average rate of interest on government debt remained relatively low (around 1%). In relation to gross domestic product (GDP), interest expenditure grew only slightly, from 0.6% to 0.7%.

*Debt ratio likely to have fallen considerably for 2022 as a whole*

The debt ratio is likely to have fallen considerably last year. This is mainly due to the sharp increase in nominal GDP in the denominator. Moreover, central government did not finance its deficit solely from new debt. Instead, it also used cash reserves that had been accumulated during the pandemic. The results for end-2022 are not yet available. The debt ratio had fallen to 66.6% by the end of the third quarter, down from 68.6% at the end of 2021.

### 2023 and medium-term outlook

*Deficit ratio projected to increase in 2023*

The current budget plans set the stage for a renewed rise in the deficit ratio in 2023. There is a high degree of uncertainty, amongst other things, about the costs of the electricity and gas price brakes. These depend on the prices at which utility companies sell electricity and gas (before deducting central government transfers). The development of these prices is difficult to estimate. There will probably be a lag before the unexpected fall in prices on the energy markets is reflected in sales prices. This is because suppliers are likely to have procured the bulk of their energy supplies at higher prices and mostly adjust their sales prices only at infrequent intervals.

*Expenditure growth probably stronger, revenue growth weaker*

There are many reasons why expenditure is likely to rise more sharply than revenue. The volume of temporary support measures is expected to remain high, primarily as a result of the above-mentioned energy price brakes: these are estimated to amount to €83 billion net, or around 2% of GDP (after drawing on

* The section entitled “General government budget” relates to data from the national accounts and the Maastricht debt ratio. This is followed by reporting on budgetary developments (government finance statistics), provided that the corresponding annual results are available.
1 It is not yet possible to gauge the impact that certain temporary measures have had on the deficit for 2022. This article therefore does not contain the usual comments on the structural development of the general government budget.
2 For information on the typical impact of inflation on government finances, see Deutsche Bundesbank (2022a).
3 In principle, the national accounts record interest expenditure on an accruals basis. This expenditure is then less prone to fluctuation due to premia and discounts when securities are issued in the national accounts than it is in the central government budget.

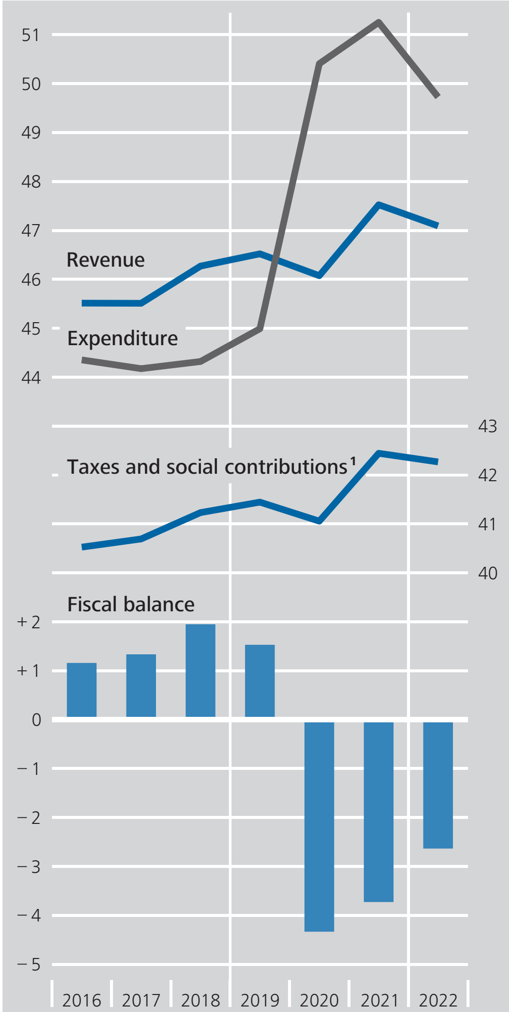
revenue from electricity sales). At the same time, high inflation and the interest rate reversal will probably be increasingly reflected in rising expenditure. Moreover, central government is planning significant additional spending on defence and climate policy. Government revenue now appears likely to develop at a slower pace overall. Gross wages and salaries – a particularly significant item – are set to continue growing dynamically. This is true even before factoring in the tax and social contribution-free inflation compensation bonuses that employers are paying to their employees. However, there is some evidence to suggest that the development of profit-related taxes will be more moderate than the previous year's high level.

*In the medium term, deficits still marked: climate and defence expenditure, in particular, largely credit-financed*

At present, the deficit ratio looks set to decline substantially further in 2024. As things stand, temporary support measures will largely have been phased out by then. The structural deficit ratio could be roughly 1% in 2024 (structural: excluding cyclical influences and temporary measures). Even if central government and state governments comply with the regular limits under the debt brake, general government is expected to record similar structural deficits going forward. This is because central government is still planning major deficits with no direct limits in off-budget entities, especially for climate protection and the armed forces. In addition, the federal states also built up substantial buffers during the pandemic. Over the next few years, these will probably not be used solely for upcoming repayments but for other purposes, too. Deficits at the state government level therefore also appear to be on the cards. The pension insurance scheme is likewise expected to record a deficit: its extensive reserves are sufficient to bridge the foreseeable funding gaps for a number of years. By contrast, at the current contribution rate, the Federal Employment Agency could see significant surpluses.

**General government fiscal ratios***

As a percentage of GDP




***** General government budget as defined in the national accounts. **1** Taxes and social contributions plus customs duties and bank levies to the Single Resolution Fund.
Deutsche Bundesbank

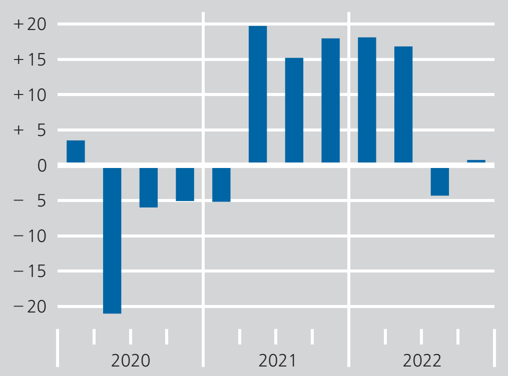
## Limit deficits

*Support measures broadly based and largely financed with new debt*

Last year, there was a swift fiscal policy response to the fallout of the war in Ukraine and the high inflation rates. The support measures implemented to mitigate the impact of rising energy prices chiefly preserve the incentives to save energy. However, they are broadly based and the government largely finances them with new debt. This is part of the reason why the government deficit is set to rise in the already highly inflationary environment. A growing deficit, in and of itself, makes it more difficult for monetary policy to lower inflation. In principle,

**Tax revenue***

Year-on-year percentage change, quarterly figures




Source: Federal Ministry of Finance. * Comprises joint taxes as well as central government taxes and state government taxes. Including EU shares in German tax revenue, including customs duties, but excluding receipts from local government taxes.
Deutsche Bundesbank

this would suggest that it would be appropriate to confine assistance payments, as far as possible, to those in need, and ensure timely counterfinancing. Positive fiscal surprises should not be interpreted as additional fiscal scope. If, for example, support measures were to cost less or revenue were to rise by more than planned, this should then result in lower deficits.

## Strengthen fiscal rules again

*Apply fiscal rules effectively again*

It is important to apply the fiscal rules effectively again in the future. If they continue to be stretched, they will forfeit their binding effect and credibility and will no longer act as a safeguard for sound public finances. If the debt brake is seen as requiring amendment, it should be reformed transparently and, if necessary, the changes written into Germany's Basic Law. The Bundesbank has made reform proposals to this effect.[4]

*Reform of EU fiscal rules under discussion, direction worrying*

The European committees are currently discussing a reform of the EU fiscal rules. It is essential that the Member States agree on effective rules to rapidly reduce high debt ratios, in particular, as sound public finances are a key foundation for a stability-oriented monetary union. The European Commission's reform proposal of November 2022 is unconvincing in this respect. In place of effective standards, it envisages fiscal targets that can be adapted extremely flexibly by each country. The European Commission intends to negotiate these targets with each individual country and over a period of several years. In addition to fiscal sustainability, the targets are to take into account numerous other aspects. They would have to be determined using long-term calculations, which are necessarily strongly assumption-driven and can therefore be adapted. In addition, the Commission would grant considerable discretion. As a result, it may no longer be possible to understand how the fiscal targets are derived and evaluate whether the countries are on track to meeting them. Overall, this would pose a substantial threat to the existing framework. This could be avoided if the reform debate were instead focused on adjusting the existing rules in a manner conducive to maintaining stability.[5] In its latest Annual Economic Report, the Federal Government outlined its ideas for a reform of the framework, arguing in favour of considerably stricter fiscal rules than the European Commission's proposals envisage.

# Budgetary development of central, state and local government

## Tax revenue

### 2022 as a whole

*Tax revenue rose dynamically in 2022 – tax estimate somewhat exceeded*

Tax revenue[6] rose dynamically in 2022, up by 7% on the previous year (see the chart above and the table on p. 67), and growing just as sharply as nominal GDP. This constitutes a surprise to the upside on the official tax estimate of last October in the order of €5½ billion, or ½ percentage point of the growth rate.[7]

**4** See Deutsche Bundesbank (2022b).
**5** See also Deutsche Bundesbank (2019, 2021a).
**6** Including EU shares in German tax revenue, but excluding receipts from local government taxes, which are not yet known for the year as a whole.
**7** For more details on the official tax estimate, see Deutsche Bundesbank (2022c), pp. 61 ff.

**Tax revenue**

| Type of tax | Year as a whole 2021 € billion | 2022 € billion | 2022 Year-on-year change € billion | 2022 Year-on-year change % | Estimate for 2022[1] Year-on-year change % | Q4 2021 € billion | Q4 2022 € billion | Q4 2022 Year-on-year change € billion | Q4 2022 Year-on-year change % |
|---|---|---|---|---|---|---|---|---|---|
| Tax revenue, total[2] | 761.0 | 814.9 | + 53.9 | + 7.1 | + 6.4 | 219.8 | 221.5 | + 1.6 | + 0.7 |
| of which: | | | | | | | | | |
| Wage tax[3] | 218.4 | 227.2 | + 8.8 | + 4.0 | + 3.4 | 62.9 | 67.2 | + 4.3 | + 6.8 |
| Profit-related taxes | 151.9 | 162.9 | + 11.0 | + 7.3 | + 5.1 | 45.9 | 42.4 | − 3.4 | − 7.5 |
| Assessed income tax[4] | 72.3 | 77.4 | + 5.1 | + 7.0 | + 4.5 | 22.2 | 21.7 | − 0.5 | − 2.2 |
| Corporation tax[5] | 42.1 | 46.3 | + 4.2 | + 10.0 | + 5.2 | 13.2 | 13.2 | − 0.0 | − 0.2 |
| Non-assessed taxes on earnings | 27.4 | 32.6 | + 5.2 | + 19.0 | + 19.4 | 7.9 | 6.4 | − 1.5 | − 18.4 |
| Withholding tax on interest income and capital gains | 10.0 | 6.6 | − 3.5 | − 34.6 | − 30.2 | 2.6 | 1.1 | − 1.5 | − 56.8 |
| VAT[6] | 250.8 | 284.9 | + 34.0 | + 13.6 | + 13.0 | 68.8 | 72.3 | + 3.5 | + 5.1 |
| Other consumption-related taxes[7] | 90.6 | 88.4 | − 2.2 | − 2.4 | − 1.8 | 27.8 | 26.1 | − 1.6 | − 5.9 |

Sources: Federal Ministry of Finance, Working Party on Tax Revenue Estimates and Bundesbank calculations. **1** According to official tax estimate of October 2022. **2** Comprises joint taxes as well as central government taxes and state government taxes. Including EU shares in German tax revenue, including customs duties, but excluding receipts from local government taxes. **3** Child benefits and subsidies for supplementary private pension plans deducted from revenue. **4** Employee refunds and research grants deducted from revenue. **5** Research grants deducted from revenue. **6** VAT and import VAT. **7** Taxes on energy, tobacco, insurance, motor vehicles, electricity, alcohol, air traffic, coffee, sparkling wine, intermediate products, alcopops, betting and lottery, beer and fire protection.

Deutsche Bundesbank

*VAT increased sharply*

Specifically, VAT increased by 13½%, contributing more than 60% to the rise in tax revenue. This is clearly disproportionate to its weight in the tax mix. In the wake of sharp price increases, the nominal macroeconomic reference variables private consumption and housing construction grew dynamically. Furthermore, additional revenue resulting from some coronavirus support measures being phased out outweighed shortfalls from other legislative changes.[8]

*Profit-related taxes rose dynamically – despite substantial tax-reducing measures*

Profit-related taxes were up by 7½%. Non-assessed taxes on earnings (income tax on dividends), assessed income tax and corporation tax contributed in roughly equal measure to this increase. Advance payments of assessed income tax and corporation tax – major revenue items – rose dynamically. Various legislative changes, notably the possibility of faster tax write-offs (for instance, for investments in electronic data processing) reduced revenue.

*Wage tax made moderate contribution to growth – tax-reducing measures proved major strain*

Wage tax receipts were up by 4%, driven chiefly by a decline in short-time work. On the other hand, various tax measures significantly reduced revenue.[9] The energy price allowance for employed persons, which was paid out from September onwards, proved a major strain, reducing wage tax revenue by around €10 billion. Without this one-off measure, it would have risen by 8½%.

## Outlook for 2023

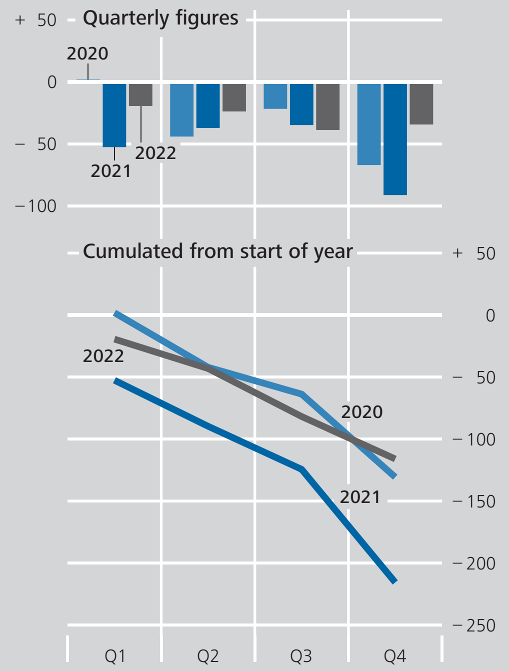
*Tax estimate: revenue growth much weaker in 2023*

For 2023, the official tax estimate, including legislative changes made in the interim, foresees an increase of 3% (including local government taxes). The surprisingly favourable revenue level for 2022 is likely to spill over into the current year. The macroeconomic assumptions in the Annual Economic Report, taken in isolation,

**8** See Deutsche Bundesbank (2022d), p. 67.
**9** For more detailed information, see Deutsche Bundesbank (2022c), p. 61.

**Fiscal balance of central government budget***

€ billion




Source: Bundesbank calculations based on data from the Federal Ministry of Finance. * Excluding off-budget entities. Not adjusted for financial transactions or cyclical effects.
Deutsche Bundesbank

also suggest a slight upward revision of the growth rate.

*Tax measures to throttle revenue in 2023*

Changes in legislation will throttle revenue growth this year. This is mainly due to compensation of bracket creep: the legislator adjusted the income tax scale for 2023 in order to compensate for the high bracket creep in 2022.[10] Child benefit was raised, too – especially for the first two children, but also for the third child. The reduced VAT rate for natural gas and district heating will be another significant factor dampening revenue growth. By contrast, the fact that major support measures from 2022 have come to an end – above all the energy price allowance for employed persons, but also the fuel tax rebate – will boost revenue growth.

## Central government finances

### Central government budget: 2022 as a whole

*2022: sharp drop in core budget deficit – but up somewhat if off-budget entities included*

Central government posted a high deficit of €116 billion in 2022, yet it was €100 billion down on 2021. However, this figure does not include deficits recorded by off-budget entities, which previously had large surpluses. Including those off-budget entities for which figures are available, the deficit actually climbed by €7½ billion to stand at €147 billion (see the table on p. 69, items 3 and 21; the following item numbers also refer to this table).[11]

*Expenditure sharply declining on the whole*

In the core budget, revenue was up by 8% (+€29 billion) on the year. This was mainly due to much higher tax revenue. By contrast, expenditure fell sharply, by 12% (-€70 billion). Transfers to off-budget entities alone declined by €72 billion. The year before had seen a high transfer to the Climate Fund (end-2021) and pre-financing of the Flood Assistance Fund. In addition, there was a sharp decline in coronavirus-related transfers for enterprises (-€35 billion). Conversely, interest payments rose (+€11 billion). Current transfers to the social security funds went up by €4 billion. On the one hand, coronavirus refunds to the health fund (for example, for tests for the general public) increased and the effect of the central government funds for the energy price allow-

**10** See also Deutsche Bundesbank (2022e).
**11** Central government off-budget entities that use the single-entry system and for which data are available when the quarterly reports are concluded (see pp. 73 f.) are factored into the calculations here. These include, in particular, (i) the Economic Stabilisation Fund for Energy Assistance (ESF-E), (ii) the off-budget entities that were included in the debt brake prior to the change made in 2022 and (iii) the Armed Forces Fund (items 16, 17 and 20). The reporting group also includes (iv) the other funds shown in the central government budget's borrowing plan (funds for making provisions for repayment and for extending childcare, item 18) as well as (v) other entities that publish quarterly data early, in particular the precautionary funds for civil servants' pensions and the Economic Stabilisation Fund, excluding the ESF-E (item 19), but not SoFFin, which refinances the bad bank FMSW. Furthermore, FMSW, the fund for the disposal of nuclear energy waste, the motorway company and the development aid company GIZ, in particular, are excluded.

## Key central government budget data*

€ billion

| Item | | Actual 2021 | Target 2022 with ESF-E1 | Provisional actual 2022 | Target 2023 |
|---|---|---|---|---|---|
| 1. | Expenditure of central government budget (CGB)2 | 556.6 | 495.8 | 480.7 | 476.3 |
| | of which: | | | | |
| 1.a | Investment | 45.8 | 51.5 | 46.2 | 71.5 |
| 1.b | Global spending increases/cuts | – | – 6.5 | – | – 6.9 |
| 2. | Revenue of CGB2,3 | 341.0 | 356.2 | 364.7 | 389.9 |
| | of which: | | | | |
| 2.a | Tax revenue4 | 313.5 | 328.4 | 337.2 | 358.1 |
| 2.b | Global revenue increases/shortfalls | – | – 1.0 | – | – 4.9 |
| 3. | Fiscal balance of CGB (2.-1.) | – 215.6 | – 139.6 | – 116.0 | – 86.4 |
| 4. | Coin seigniorage of CGB | 0.2 | 0.2 | 0.1 | 0.2 |
| 5. | Transfer to (–)/withdrawal from reserves (+) in CGB | – | 0.5 | 0.5 | 40.5 |
| 6. | Net borrowing (–)/repayment (+) of CGB (3.+4.+5.) | – 215.4 | – 138.9 | – 115.4 | – 45.6 |
| 7. | Cyclical component in the budget procedure5 | – 14.3 | – 7.9 | – 2.2 | – 15.3 |
| 8. | Balance of financial transactions of CGB | 3.0 | – 2.8 | – 4.1 | – 17.7 |
| 9. | Structural net borrowing (–)/repayment (+) of CGB (6.-7.-8.) | – 204.1 | – 128.2 | – 109.1 | – 12.6 |
| 10. | Amount exceeding limit in CGB (13.-9.) | 192.0 | 115.7 | 96.6 | – |
| 11. | Amount exceeding limit incl. ESF-E (10.-15.) | 192.0 | 315.7 | 276.0 | – |
| 12. | Memo item: Amount exceeding limit with balance of off-budget entities (10.-16.-17.) | 123.0 | 162.9 | 121.9 | 142.5 |
| 13. | Standard upper limit: Structural net borrowing (0.35% of GDP)6 | – 12.1 | – 12.5 | – 12.5 | – 12.6 |
| 14. | Structural balance of CGB (3.-7.-8.) | – 204.3 | – 128.9 | – 109.7 | – 53.4 |
| 14.a | As before, with estimate of potential output acc. to 2023 Annual Economic Report | – 208.6 | – 134.0 | – 109.2 | – 59.5 |
| 15. | Structural net borrowing of ESF-E | – | – 200.0 | – 179.4 | – |
| 16. | Deficit of ESF-E | – | – 35.1 | – 30.2 | – 121.2 |
| 16.a | ESF-E funds remaining thereafter | – | 164.9 | 169.8 | 48.6 |
| 17. | Balance of special funds (SFs) relevant to the debt brake prior to 20227 | 69.0 | – 12.0 | 4.9 | – 21.4 |
| 17.a | Climate and Transformation Fund | 53.9 | – 6.5 | 5.3 | – 14.1 |
| 17.b | Relief Fund (2013 flood) | – 0.2 | – 0.5 | – 0.2 | – 0.2 |
| 17.c | Fund to Promote Municipal Investment | – 1.0 | – 1.2 | – 0.7 | – 1.0 |
| 17.d | Digitalisation Fund | 0.2 | – 0.2 | 2.1 | – 2.7 |
| 17.e | Fund for Primary School-Age Childcare Provision | 0.5 | – 0.4 | – 0.1 | – 0.4 |
| 17.f | Relief Fund (2021 flood) | 15.6 | – 3.2 | – 1.6 | – 3.0 |
| 18. | Balance of SFs for making provisions for repayment and for extending childcare7 | 0.9 | 4.2 | 4.4 | 5.5 |
| 19. | Balance of other SFs without own constitutional rules8 | 6.3 | . | – 9.9 | . |
| 20. | Balance of Armed Forces SF | – | – 0.1 | – | – 8.4 |
| 20.a | Borrowing authorisation remaining thereafter | – | 99.9 | 100.0 | 91.6 |
| 21. | Balance of CGB and SFs (3.+16.+17.+18.+19.+20.) | – 139.4 | – 182.7 | – 146.8 | – 231.7 |
| 22. | Reserves of SFs for 16. and 17. | 112.2 | 265.1 | 286.9 | 144.4 |
| 23. | Central government assets in civil servants' pension reserve and civil servants' pension fund9 | 28.1 | . | . | . |
| 24. | Level of general reserves of CGB | 48.2 | 48.2 | 48.2 | 7.7 |
| 25. | Balance on control account | 47.7 | 47.7 | 47.7 | 47.7 |
| 26. | Total outstanding repayment amount including Armed Forces SF (from 11. and 18.) | 261.6 | 577.4 | 537.6 | 546.0 |
| 27. | Total outstanding repayment amount from NGEU transferse,10 | 14 | 36 | 30 | 54 |

* Sources: Federal Ministry of Finance and Bundesbank calculations. For methodological notes, see Deutsche Bundesbank (2016) and Deutsche Bundesbank (2022d), p. 71. **1** ESF-E: Economic Stabilisation Fund for Energy. Deficit and reserves updated in line with reserves figures in budget plan for 2023, structural net borrowing including financial transactions (still to be specified). **2** Excluding transfers to/withdrawals from reserves and including net tax revenue (see footnote 4). **3** Excluding coin seigniorage. **4** After deduction of supplementary central government transfers, shares of energy tax revenue, compensation under the 2009 reform of motor vehicle tax and budgetary recovery assistance to federal states. **5** For 2021 final settlement, for 2022 according to budget plan and actual figures from January, for 2023 according to budget plan. **6** Based on gross domestic product in the year before the comprehensive budget is prepared. **7** Budgeted figures for 2022 and 2023 from borrowing plan. **8** Entities with quarterly data, but excluding data on budgeted results in central government's borrowing plan. Above all, ESF (excluding ESF-E), civil servants' pension reserve and civil servants' pension fund, but excluding SoFFin, which refinances central government's bad bank (FMSW). **9** Market values according to central government balance sheet for 2021. Continuous inflows; withdrawals from the fund planned from 2030, from reserves from 2032. **10** Actual NGEU figure for 2021 as well as budgeted figures and estimates, each multiplied by Germany's share of 25½% in EU gross national income.

Deutsche Bundesbank

ance for pension recipients was also felt. On the other hand, central government no longer had to make extensive transfers to the Federal Employment Agency to offset the deficit, as it had done in 2021. Assistance to other countries rose by €4 billion, in all probability mainly to Ukraine. By contrast, the new assistance provided for enterprises under the energy cost-containment programme had barely any impact.

*Compared with figures in budget plan, core budget deficit significantly lower, but new burdens offloaded to off-budget entities*

The deficit in the core budget was €24 billion lower than in the budget plan. Additional tax receipts of €8½ billion were recorded on the revenue side. Expenditure was €15 billion lower on balance than the amount envisaged in the budget plan. Spending was down, especially on transfers made to enterprises to compensate for the pandemic and high energy costs. However, central government offloaded significant burdens from the energy crisis to the Economic Stabilisation Fund (mainly to the ESF-E, item 16 and p. 73).

*Borrowing far above limit imposed under debt brake*

Central government's debt brake relates to the structural net borrowing of the core budget and off-budget entities.[12] This means that the ESF-E must also be included. For the core budget, structural net borrowing amounted to €109 billion (item 9). The structural figure is determined by deducting the net acquisition of financial assets of €4 billion and the cyclical burden of €2 billion (items 7 and 8). With the escape clause activated, the core budget already exceeded the standard ceiling (of €13 billion at the end of the period under review) by almost €97 billion. In addition – and also under an activated escape clause – the ESF-E likewise reported structural net borrowing, of €179 billion (item 15). This comes from its net borrowing of €200 billion less the acquisition of shares in and capital injections to gas trading companies. The Federal Ministry of Finance deducts these payments as financial transactions in its accounts. However, from an economic perspective, this approach is unconvincing. These are ultimately payments to offset losses and do not lead to the formation of financial assets, and precisely this should be the precondition for excluding any associated new debt from the debt brake. Consequently, the national accounts do not record these payments as financial transactions, but rather as deficit-increasing capital transfers.

## Central government budget: 2023 budget plan

*Central government to formally comply with debt brake in 2023, but overall deficit very high …*

The 2023 core budget, together with the ESF-E, is to comply again with the ceiling for net borrowing imposed under the debt brake. However, this can only be achieved by using the large reserves in the central government budget (item 5) and, above all, in the ESF-E (change compared with actual 2022 in item 16a). In total, central government plans a deficit of €232 billion (item 21) in 2023, including its off-budget entities.[13] It intends to finance this as follows:

- structural net borrowing in the core budget according to the standard debt brake limit of €13 billion;
- net borrowing for cyclical burdens and financial transactions in the core budget of €33 billion;
- recourse to core budget reserves in the amount of €41 billion;
- recourse to credit-financed reserves of the ESF-E in the amount of €121 billion;

12 At the beginning of 2022, central government changed the way in which it calculates the structural results for the debt brake. Off-budget entities that do not obtain financing by means of their own borrowing authorisations (e.g. the Climate Fund) are now excluded from the debt brake. Previously, their budget balances were counted towards the debt brake. This meant that pre-financing via emergency loans was not possible. See also Deutsche Bundesbank (2022d), p. 71.

13 This includes the budgeted figures of central government's off-budget entities in accordance with the core budget borrowing plan. Compared with the actual balances shown in item 21, it does not include, above all, the precautionary funds for civil servants' pensions or the ESF, excluding the ESF-E.

– recourse to reserves of other special funds included, in particular the Climate Fund, in the total amount of €16 billion;

– net borrowing for the Armed Forces Fund of €8½ billion, which is not included in the debt brake as a result of a constitutional amendment.

*… and even rising sharply compared with 2022 – central government finances thus on expansionary course*

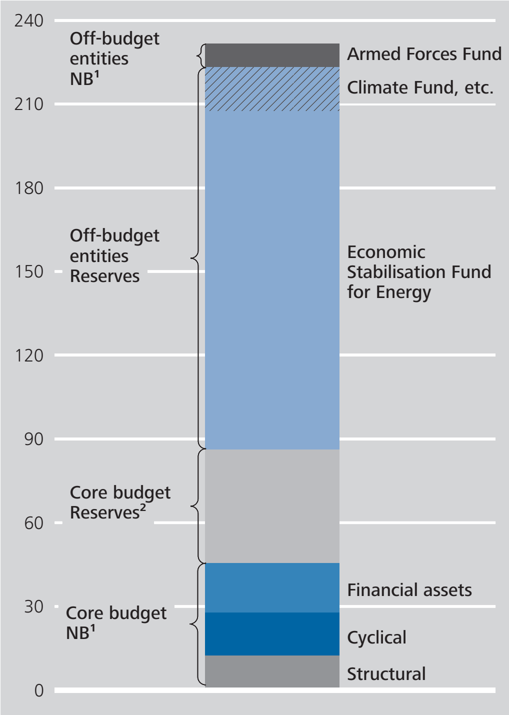
As a result, central government thus formally complies with the standard debt brake limit in 2023, but is planning a very high and sharply rising deficit: for the core budget and those off-budget entities with budget figures, the combined deficit is expected to be €85 billion higher than the result for 2022 (item 21). The fiscal policy stance is therefore expansionary. However, the macroeconomic environment is shaped by high inflationary pressures and a tightening of monetary policy.

*More favourable budgetary developments possible – in the core budget, for example, for interest rates*

However, as in previous years, the core budget and the larger off-budget entities could fare more favourably overall than planned. As far as the core budget is concerned, interest expenditure, for one, could be lower (for information on off-budget entities, see p. 74). Central government foresees high discounts when new debt instruments are issued.[14] From the current perspective, these appear cautious. By contrast, the more favourable than planned core budget outturn for 2022 is likely to have little impact on the current year. For example, tax revenue in 2022 developed roughly as expected when the 2023 budget plan was finalised. The alleviating effect that lower pandemic and energy crisis-related expenditure had on the 2022 core budget will not continue. This expenditure will either be phased out on schedule almost completely or has been offloaded to off-budget entities by central government.

**Planned central government deficit for 2023, broken down by type of financing**

€ billion




**1** Net borrowing. **2** Including coin seigniorage.
Deutsche Bundesbank

## Central government budget: outlook as of 2024

*For 2024, finance ministry already sees need for consolidation vis-à-vis previous plans*

For 2024, the Federal Ministry of Finance expects a need for consolidation vis-à-vis the figures budgeted in the summer of 2022.[15] The old budget plan fully exhausted the debt brake limit. This meant that it did not leave any scope for the budgetary burdens that are now looming. Although the last tax estimate of autumn 2022 projected additional revenue of €16 billion for central government in 2024, shortfalls as a result of measures taken in the interim are higher. On balance, this will result in revenue shortfalls that outweigh previous provisions. The most recent changes envisaged by the Federal Ministry of Finance, especially for tax deductibility of write-downs, would therefore have to be offset by counterfinancing. In addition, given rising prices, higher expenditure appropriations – by a significant margin in some cases – would appear reasonable, especially for spending on personnel and purchases of tangible goods. According to the new Annual Eco-

**14** If central government were to book this part of interest expenditure on an accruals basis, too, this would bypass the erratic impact of premia and discounts on interest expenditure. See Deutsche Bundesbank (2021b), pp. 47 ff.
**15** See Federal Ministry of Finance (2023), p. 2.

nomic Report, higher cyclical burdens will create additional scope of €4 billion. However, it seems questionable whether this is sufficient to offset the additional burdens.

*Upcoming benchmark figures up to 2027 signal major challenges for defence and climate protection ahead*

The need for consolidation is set to increase significantly going forward. This may already be apparent in the benchmark figures up to 2027, which are due in March. The benchmark figures are based on an adjusted tax estimate. The general expectation is that these figures will put revenue higher than in the fiscal plan from 2022. However, there will also be a need for financing if the government continues to compensate for bracket creep in the income tax scale. In addition, in contrast to the previous fiscal plan, the Bundesbank cannot be expected to make any profit distributions in the coming years. At the end of the new planning phase for the benchmark figures, in particular, there is a risk of considerable gaps in the core budget. This is because the scope in off-budget entities created by means of borrowing will be exhausted in the medium term. As the funding needs for defence and climate protection are likely to persist, the core budget would then have to step in and finance them. Extrapolating the figures, this amounts to around €50 billion per year.

*Thereafter, further budget strains due to debt repayments and demographic change*

In subsequent years, additional substantial financing burdens will follow. Repayment of emergency borrowing during the coronavirus crisis and of EU borrowing allocated to NextGenerationEU will begin as of 2028. Together, these will place a burden on the central government budget in the amount of €15 billion per year. As of 2031, there will be an additional annual repayment burden of €9 billion for the Armed Forces Fund and the ESF-E. This does not include ongoing debt servicing, which will put increasing pressure on the core budget. Furthermore, after the middle of this decade, considerable additional demographic burdens from the pension insurance scheme will have to be factored into the central government budget. Nevertheless, the Federal Government intends to maintain the guaranteed minimum threshold for the replacement rate for pensions beyond 2025 (see p. 77).

*Ruling by Federal Constitutional Court on use of emergency borrowing by Climate Fund still pending*

The Climate Fund's funding is at risk. The Federal Constitutional Court ruled in December that the Fund may make use of pandemic-related emergency borrowing for the time being. However, if the outcome of the main proceedings brought to court is that this has caused borrowing by central government to be excessive, central government would subsequently be forced to correct this. It is therefore still unclear whether central government will have to finance the Climate Fund from elsewhere (at the same time, however, the corresponding part of the repayment burden from 2028 would then be eliminated).

*Government should publish rather than shelve plans for financing outstanding burdens*

Looking ahead, it can be seen that central government has created some breathing room in its core budget only temporarily. In doing so, it has increased the squeeze on the budget in subsequent years. For example, the burden of debt servicing will grow: there will be interest to pay on the emergency borrowing, and borrowing made possible by activation of the escape clause as well as borrowing for the Armed Forces Fund will later have to be repaid out of the central government budget. Furthermore, climate and defence policy will have to be financed in the medium term without making use of pandemic-related emergency borrowing or special borrowing for the Armed Forces Fund. Central government has merely shelved its decisions on these matters. To make it easier for households and enterprises to plan ahead, the Federal Government should explain as soon as possible how it ultimately intends to finance the burdens and close the gaps. To achieve this, either expenditure needs to be reprioritised or an agreement on higher levies needs to be reached. For a debt brake to be effective, it is important not to overuse the escape clause. This essentially suggests that it would be appropriate to confine assistance payments, as far as possible, to those in need, and counterfinance them in a timely manner. If there are signs of budgetary relief, as is currently the case with the energy price brakes (see p. 74), it would be logical not to spend this relief elsewhere. This would also be a useful contribution from fiscal policy in the current highly inflationary environment.

### Central government off-budget entities: results for 2022 as a whole and …

*Large deficit from measures taken in response to energy crisis*

The central government off-budget entities included in this report recorded a large deficit totalling €31 billion last year (see the table on p. 69, items 16 to 20). By contrast, there was still a surplus of €76 billion for 2021, as the central government budget had pre-financed the Climate Fund and Flood Assistance Fund (2021 Flood Relief Fund). The following is a breakdown for 2022:

– At €30 billion, the ESF-E recorded the main deficit. The Fund acquired or recapitalised gas trading companies at risk of bankruptcy for a total of €21 billion. In addition, it paid €9 billion in December gas and district heating bills for all households and many enterprises.

– The remaining part of the ESF also recorded a large deficit of €14 billion. Payments for loans taken out significantly exceeded loan repayments received. Although there is no breakdown indicating whether these loans were used for the purpose of coronavirus assistance or energy crisis assistance, the latter appears to have caused the deficit: when authorisation for coronavirus assistance ended in the summer of 2022, there was still a surplus of €3 billion.

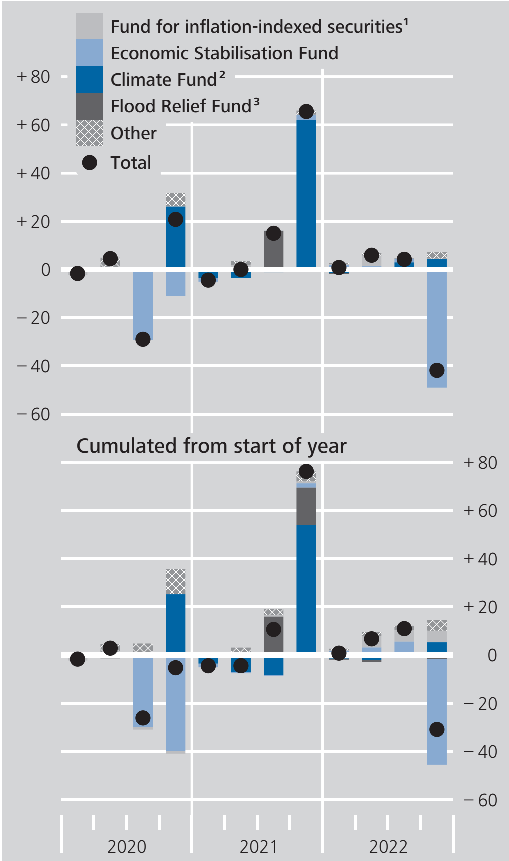
– At €1½ billion, the Flood Assistance Fund's deficit again remained fairly small. It therefore still has reserves of €14 billion.

– Meanwhile, the Climate Fund recorded a surplus of €5½ billion (budget estimate: deficit of €6½ billion). On balance, only half of the projected expenditure amount of €28 billion was spent. First, spending on some programmes was very limited. Second, the Fund did not provide the planned amount of €3 billion to compensate for the reduction in the EEG levy in the electricity price at the start of 2022. The Fund's surplus was broadly in line with the (ultimately credit-financed) central government grant last year. Its financial reserves thus rose to €91 billion.

– The precautionary funds for civil servants' pensions recorded surpluses amounting to €3 billion. The surpluses were around as large as in previous years.

**Fiscal balances of central government's off-budget entities***

€ billion, quarterly figures




Source: Bundesbank calculations based on data from the Federal Ministry of Finance. * Only entities using a single-entry accounting system, i.e. excluding, in particular, the bad bank FMS Wertmanagement and also SoFFin, which uses a single-entry accounting system and which refinances FMS Wertmanagement. **1** Precautionary fund for final payments of inflation-indexed Federal securities. **2** Climate and Transformation Fund; up to 2022, Energy and Climate Fund. **3** Relief fund for 2021 flood.

Deutsche Bundesbank

– The surplus of the precautionary fund for final payments of inflation-indexed Federal securities amounted to €5 billion. Central government provided funds, with disbursements not being reflected in the Fund's balance until a later date.[16]

– The Armed Forces Fund had no spending in 2022. However, contractual obligations in the order of €10 billion appear to have been entered into at the expense of later years.

*High emergency borrowing to pre-finance ESF-E*

Following last year's deficit of €30 billion, the ESF-E still has €170 billion in funds from emergency borrowing from 2022. The funds are now available without budget legislators having declared an emergency for the current year. In addition, they approved the emergency borrowing before budgeting the funds in detail. In this respect, the approach is similar to the pre-financing of the Climate Fund with the second supplementary budget for 2021.

### … outlook for 2023

*In 2023, very large expected deficit for ESF-E and …*

The deficits of the central government off-budget entities included in this report are expected to increase considerably this year. According to the central government budget figures for 2023, they will reach €145 billion (see the table on p. 69, items 16 to 18 and 20). The economic plan of the ESF-E alone envisages a deficit of €121 billion. It is difficult to gauge how much the now lower gas prices will reduce the ESF-E's expenditure. Where supply prices for consumers have already been set in advance by the suppliers, the Fund's expenditure on the gas price brake will not fall. Where gas trading companies receiving support are now obtaining replacement gas for resold deliveries from Russia more cheaply, the Fund will save on capital injections. It still seems very uncertain what financing contribution will be made by skimming off the high revenues from electricity producers – not least due to different price levels exempt from skimming.

*… significant expected deficits for Climate Fund …*

The Climate Fund's economic plan envisages a deficit of €14 billion. This plan includes additional, unspecified revenue of €6 billion. In fact, revenue was already €2 billion below budget estimates in 2022. If greater use is made of spending programmes than last year, a significant deficit appears feasible.

*… and Armed Forces Fund*

A deficit of just over €8 billion is projected for the Armed Forces Fund. It remains to be seen to what extent major projects will be implemented this year.

*Other off-budget entities expected to close 2023 broadly balanced overall*

In the case of the precautionary fund for final payments of inflation-indexed Federal securities, the surplus is set to increase slightly, with planned additional revenue exceeding the estimated burdens from a maturing bond. It would thus largely offset the planned deficits in the Flood Assistance Fund and Digitalisation Fund.

### Hardly any figures budgeted for off-budget entities in later years, but large deficits expected

*In medium term, large deficit expected for Armed Forces Fund and Climate Fund, whereas strain on ESF-E will dissipate*

For the following years, transparency regarding the central government off-budget entities included in this report continues to decrease. So far, the government has only published the Climate Fund's financial planning up to 2026 from last summer. Its deficit estimates increase further for a time and remain significant until 2026. In the case of the Armed Forces Fund, the deficit is expected to grow even more sharply. By contrast, the ESF-E is likely to significantly reduce its deficit. There is not yet any consumer relief enshrined in law for 2024. Recent decreases in energy prices also suggest that the approved scope for borrowing will not be exhausted even if the price brakes are extended until the end of April 2024.

16 In the national accounts, however, expenditure in the core budget for this Fund already counts as current interest expenditure and is reflected in the general government fiscal balance.

## State government budgets[17]

### 2022 as a whole

*Substantial improvement in state government core budgets: large surplus in 2022*

State government core budgets closed 2022 with a large surplus of €14 billion. In the previous year, they had recorded a small surplus of €1 billion (before closing entries, e.g. to allocate funds to off-budget entities).

*Strong growth in tax revenue, drop in pandemic-related transfers*

Revenue in the core budgets rose significantly, up by 5% over the year as a whole. This was driven by strong tax revenue (+10%). By contrast, receipts from public administrations fell sharply (-9½%). This was due to the pandemic coming to an end. As a result, for example, central government's coronavirus assistance, which was channelled through state government budgets (mainly transfers to enterprises), decreased. At 2½%, expenditure growth was only half as strong as growth in revenue.

*Probably even higher surplus when factoring in off-budget entities*

Including their off-budget entities, the federal states are also likely to have closed last year with a large surplus (consolidated annual figures are still pending). After three quarters, a consolidated surplus of €26 billion was recorded. The very large surplus in the core budgets was countered by only a small deficit in the off-budget entities. In the final quarter of 2022, some federal states directed sizeable amounts into special funds.[18] The deficit in the core budgets in the fourth quarter (-€14 billion) is therefore likely to be accompanied by a significant surplus in the off-budget entities. In this respect, the consolidated balance of core budgets and off-budget entities for 2022 as a whole is set to still far exceed the balance of core budgets alone.

### Outlook for 2023

*Federal states' finances expected to deteriorate this year, …*

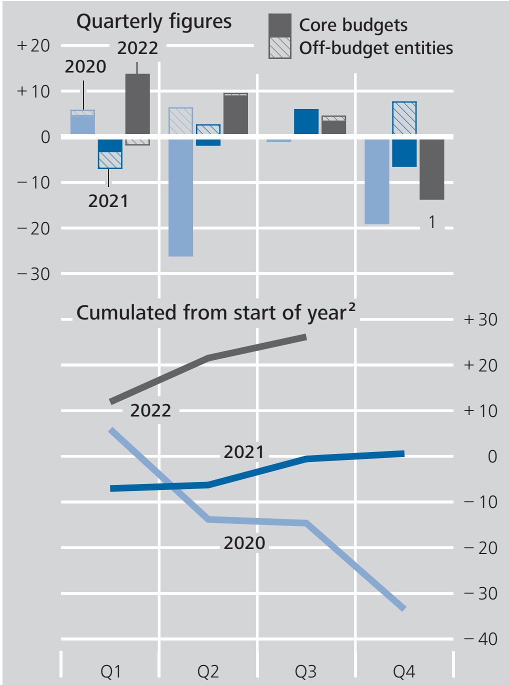
The federal states' finances are expected to deteriorate this year. The latest tax estimate and legislative changes made in the interim suggest that their tax revenue will see little further growth. By contrast, expenditure is likely to increase more sharply. Personnel expenditure, for instance, looks set to rise further. Staffing levels will be stepped up and pay will be raised, in some cases markedly: some federal states will gradually bring in higher salaries for teaching staff at primary schools in the future, for example. Transfers to local governments will probably also increase dynamically. Federal states are expected to provide more funds, not least for the expansion of childcare and for refugees from Ukraine. Moreover, it is likely that the sharp rise in prices will gradually have a stronger impact on federal states' tangible goods purchases.

*… but they are still unlikely to run a deficit*

At present, however, it is not expected that the federal states as a whole will fall into deficit in 2023. They went into this year in a very favour-

**State government fiscal balance**

€ billion




Sources: Federal Statistical Office and Bundesbank calculations. **1** Figure calculated using monthly cash statistics from the Federal Ministry of Finance; quarterly data are not yet available. **2** Core budgets and off-budget entities together.

Deutsche Bundesbank

**17** The information on the core budgets is based on the monthly cash statistics.
**18** Some supplementary budgets envisaged pre-financing crisis funds. Under these budgets, €5 billion flowed into the corresponding pot in North Rhine-Westphalia, €3 billion in Saarland and €1 billion in Schleswig-Holstein.

able starting position. In addition, it is largely central government that is financing the measures intended to cushion the impact of the energy crisis and high inflation on households and enterprises.

### Some federal states will activate escape clauses again in 2023

*Federal states with large reserves – formed in part from emergency borrowing*

Federal states have been topping up their reserves in recent years. One factor in this was that fiscal balances were better than planned. In some cases, reserves were also formed from emergency borrowing.[19] Some federal states have already decided to activate the escape clauses for their debt brakes in the context of the war in Ukraine.

*Large-scale emergency borrowing for Bremen this year despite already very high debt and repayment agreements*

This year, for example, Bremen is choosing a path similar to the one taken by Saarland[20] at the end of last year: a supplementary budget for 2023 is set to allow for large-scale emergency borrowing (€3 billion). Both Bremen and Saarland are already highly indebted. They therefore receive extensive budgetary recovery assistance from central government. It was agreed that this assistance would be used in part to bring down debt. In Bremen, the planned emergency borrowing would increase debt by €4,400 per capita. Some of the funds are to be made available until 2027 for measures to address the climate or energy crisis. To date, there are only plans for how a small portion of these funds are to be used. Such an approach severely limits the binding effect of the debt brake.[21] The Stability Council had already recognised that there was a looming budgetary emergency in Bremen before the government presented the supplementary budget, and has therefore called for a restructuring programme. Bremen's already very high debt and its repayment obligation following central government's budgetary recovery assistance suggest that new debt should be treated with extreme caution.

# Social security funds

## Pension insurance scheme

### 2022 as a whole

*Significant surplus in 2022*

The German statutory pension insurance scheme recorded a surplus of €3 billion in 2022 (preliminary data). This constitutes a year-on-year improvement of just over €1½ billion. This is chiefly due to the fact that contribution receipts grew strongly. Thanks to the surplus, the sustainability reserve reached €43 billion at the end of 2022. At just under 1.7 times the scheme's monthly expenditure, it is around €37 billion above the statutory minimum of 0.2 times its monthly expenditure.

*Contribution receipts grew strongly, pensions rose by an annual average of 3%*

Revenue went up by 4½% on the year. There was a strong 5½% rise in contribution receipts, bolstered by the decline in short-time work. At 2%, central government funds increased moderately. They are tied largely to the wage developments of the previous year, which were very weak owing to the pandemic. Expenditure rose by just over 3½%. On average across the year, pensions increased by 3%. The number of pensions paid continued to grow only moderately. Expenditure on basic pension top-ups went up sharply due to the pension insurance scheme having also retroactively paid out some top-ups for 2021. At €1 billion, however, it was almost €½ billion lower than expected.

### Outlook for 2023

*Broadly balanced result expected in 2023*

The pension insurance scheme's finances are expected to deteriorate this year. However, it could close 2023 broadly balanced. Revenue will grow significantly. That said, it will rise more

**19** See Deutsche Bundesbank (2022f).
**20** At the end of 2022, the highly indebted federal state of Saarland pre-financed a special fund on a large scale using emergency borrowing. This is intended to enable investment in the transformation of the regional economic structure over a period of ten years. For more detailed information, see Deutsche Bundesbank (2022f), p. 26.
**21** See also Independent Advisory Board to the Stability Council (2022).

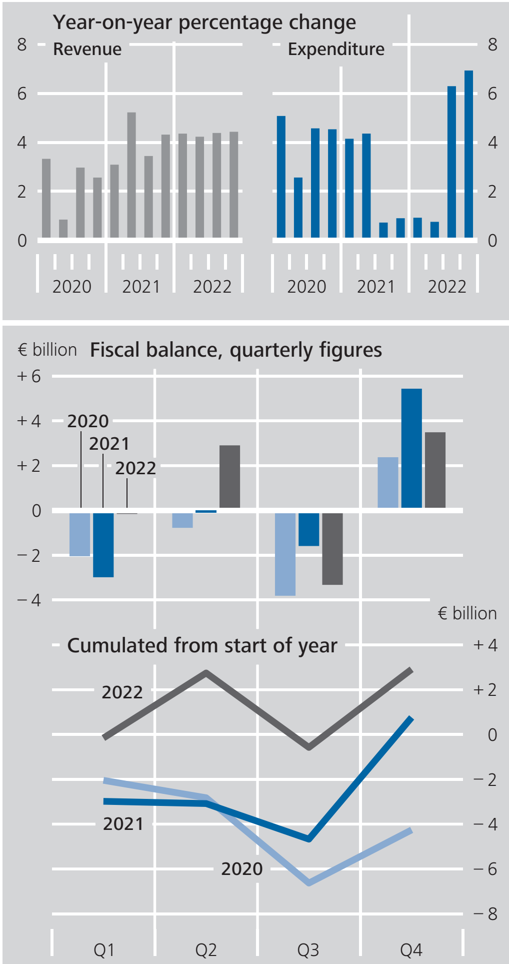
slowly than wages and salaries owing to enterprises paying out social contribution-exempt inflation compensation bonuses. Expenditure will climb sharply until the middle of the year due to the large pension adjustment of mid-2022 in the amount of 5½% on average across Germany. Pension expenditure is then likely to increase more slowly as of July 2023. According to the 2022 pension insurance report, pensions will be adjusted by a national average of around 3½%. On an annual average, they will thus grow by around 4½%. In addition, the number of pensions paid will go up.

### Challenging outlook

*In medium to long term, demographic developments will put pressure on pension finances*

Demographic trends will put greater pressure on the pension insurance scheme from the mid-2020s onwards. This is also illustrated by the Federal Government's pension insurance report from the end of 2022, which runs until 2036. According to the report, the contribution rate will rise sharply even though the replacement rate will fall significantly. Compared with the 2021 report, however, the core variables of the pension insurance scheme are set to develop more favourably. The main reason for this is that the Federal Government now assumes stronger migration and a somewhat weaker increase in life expectancy. In addition, pensions will grow more slowly because legislators have since adjusted the pension formula to keep the replacement rate[22] at a minimum threshold of 48%. Without this measure, pensions would have temporarily gone up by just over 2%. According to the pension insurance report, the contribution rate will jump in 2027 from its current level of 18.6% to 19.3%. Thereafter, it is set to rise to 21.3% by 2036. The replacement rate will remain broadly stable at 48% until 2025. Under the law as it currently stands, the rate then no longer being guaranteed will cause it to fall to 45% by 2036. However, the Federal Government intends to maintain the minimum threshold even after 2025. The contribution rate and central government grants would thus have to rise more sharply than already currently envisaged.[23]

**Finances of the German statutory pension insurance scheme***




Source: German statutory pension insurance scheme (Deutsche Rentenversicherung Bund). * Preliminary quarterly figures. The final annual figures differ from the total of the reported quarterly figures as the latter are not revised.
Deutsche Bundesbank

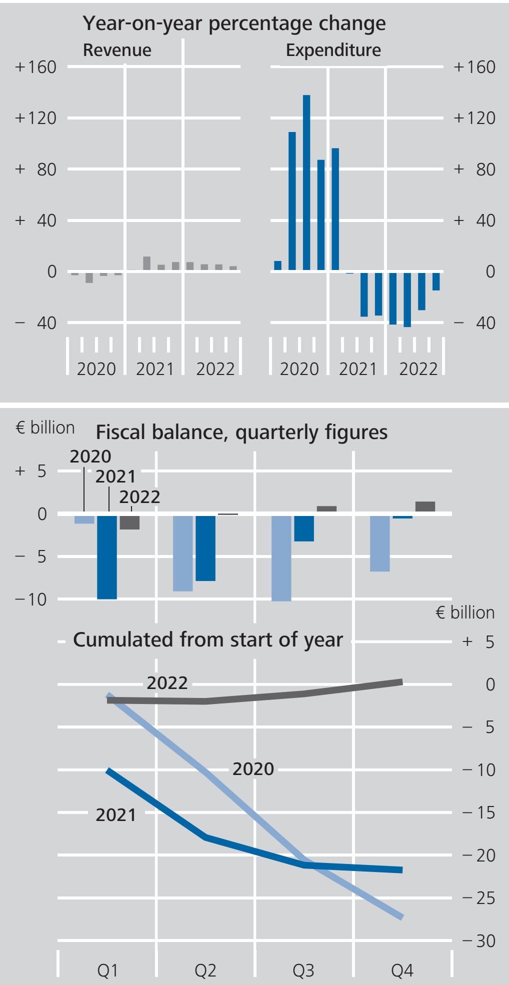
## Federal Employment Agency

### 2022 as a whole

In 2022, the Federal Employment Agency posted a small surplus of €½ billion.[24] A con-

22 An individual's statutory pension entitlement divided by pre-retirement earnings, after deduction of social contributions.
23 See Deutsche Bundesbank (2022g).
24 In the core budget, i.e. excluding the civil servants' pension fund. Owing to the coronavirus crisis, the fund also received no transfers in 2022. As a result, it posted a deficit of €½ billion. Its holdings were down to €8 billion at the end of the year.

**Finances of the Federal Employment Agency***




Source: Federal Employment Agency. * Including transfers to the civil servants' pension fund and before payment of central government grants.
Deutsche Bundesbank

*Only a small central government loan for Federal Employment Agency in 2022*

siderable deficit of €22 billion had been recorded in the preceding year owing to the pandemic (before the payment of central government grants). The pay-as-you-go sub-schemes for insolvency benefit and winter employment compensation posted a surplus of just over €½ billion in 2022. At the end of 2022, they thus had reserves totalling slightly less than €3½ billion. A small deficit of €½ billion was recorded in the core budget of the Federal Employment Agency, which is financed by contributions. Its reserves had been exhausted. The Federal Government therefore covered the deficit with loans that are to be repaid this year.

*Revenue from contributions rose significantly*

Revenue rose by 5½%. Contribution receipts increased even more sharply, climbing by 7%, mainly owing to declining short-time work and higher employment. Revenue from insolvency benefit contributions fell by 18%. At the start of 2022, the corresponding contribution rate decreased by one-quarter to 0.09%.

*Expenditure down sharply: declining short-time work and unemployment*

Expenditure was more than one-third lower than in the previous year. Spending on unemployment benefits fell by 15% (-€3 billion), whilst expenditure on short-time work fell by as much as 82%, or €17 billion. The Federal Employment Agency spent 4½% less on active labour market policy measures. Starting from a historical low in the previous year, insolvency benefit increased by 8½%.

## Outlook for 2023

*Larger surplus planned for 2023*

The Federal Employment Agency foresees a marked improvement in its financial situation this year: in its budget plan, it estimates a surplus of €2½ billion in its core budget (excluding transfers to the civil servants' pension fund of just over €½ billion).[25] This plan is based on central government's projection from autumn 2022, according to which the contribution base will increase significantly. Additionally, the contribution rate went up by 0.2 percentage point at the start of the year, to 2.6%. It had been temporarily lowered starting in 2019. The idea behind this was to prevent the sizeable reserves at that time from becoming even larger. The fact that the insolvency benefit contribution rate will decrease further to 0.06% will have a dampening effect on revenue. Overall, revenue is expected to increase by 12½% on the year (compared with the annual result for 2022, which was not yet available when the budget was drawn up). At the same time, the Federal Employment Agency is anticipating significantly higher spending: it foresees additional expenditure of 11% on unemployment

**25** Repayment of the central government loan (like payments by central government to balance the budget in the past) will not affect the budget balance.

benefits, a major expenditure item. The main reason for this is that per capita benefits will increase. In addition, the Federal Employment Agency calculates that spending on active labour market policy measures will be considerably higher.

*As things stand, balance will be better*

As things stand, the Federal Employment Agency's surplus will be larger than planned this year. The figures budgeted for active labour market policy measures appear to be too high – as has often been the case in the past. However, everything depends on how the labour market develops. The Annual Economic Report now holds out the prospect of improved macroeconomic activity. This is likely to ease the burden on the Federal Employment Agency on balance. However, it is uncertain to what extent enterprises are paying social contribution-exempt inflation compensation bonuses to their employees.

## List of references

Deutsche Bundesbank (2022a), The typical impact of inflation on government finances, Monthly Report, August 2022, pp. 63-64.

Deutsche Bundesbank (2022b), Central government's debt brake: options for stability-oriented further development, Monthly Report, April 2022, pp. 49-66.

Deutsche Bundesbank (2022c), Public finances, Monthly Report, November 2022, pp. 59-76.

Deutsche Bundesbank (2022d), Public finances, Monthly Report, February 2022, pp. 62-80.

Deutsche Bundesbank (2022e), Inflation-induced bracket creep in the income tax scale, Monthly Report, June 2022, pp. 63-73.

Deutsche Bundesbank (2022f), State government finances in 2021: surplus and additional reserves from emergency borrowing, Monthly Report, October 2022, pp. 13-33.

Deutsche Bundesbank (2022g), Pension insurance scheme: long-term scenarios and reform options, Monthly Report, June 2022, pp. 47-61.

Deutsche Bundesbank (2021a), Public debate on the review of the EU economic governance, Bundesbank contribution, October to December 2021, https://www.bundesbank.de/resource/blob/884874/6fbc73f386fe4e3091bcba4055f7fc93/mL/2021-12-22-public-debate-eu-economic-governance-download.pdf

Deutsche Bundesbank (2021b), Federal debt: allocate premia on accruals basis in budgetary interest expenditure, Monthly Report, June 2021, pp. 47-51.

Deutsche Bundesbank (2019), European Stability and Growth Pact: individual reform options, Monthly Report, April 2019, pp. 77-90.

Deutsche Bundesbank (2016), Key central government budget data in connection with the debt brake, Monthly Report, February 2016, pp. 68-69.

Federal Ministry of Finance (2023), Aufstellungsrundschreiben zum Bundeshaushalt 2024, p. 2, https://www.bundeshaushalt.de/static/daten/2024/soll/Aufstellungsrundschreiben-2024.pdf

Independent Advisory Board to the Stability Council (2022), 19. Stellungnahme zur Einhaltung der Obergrenze für das strukturelle gesamtstaatliche Finanzierungsdefizit, December 2022, https://www.stabilitaetsrat.de/DE/Beirat/Dokumente/Dokumente_node.html