Sovereign and Public Sector

Free State of Bavaria Rating Report



Credit strengths

- Low debt burden
- · Excellent capital market access
- Ample liquidity
- Strong budgetary performance
- · Wealthy economy
- Highly integrated institutional framework

Credit weaknesses

- Limited revenue flexibility
- · High pension liabilities
- Sizeable, although largely low-risk, contingent liabilities

Ratings & Outlook

Foreign and local

currency

Long-term issuer rating AAA/Stable Senior unsecured debt AAA/Stable Short-term issuer rating S-1+/Stable

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Issuer page

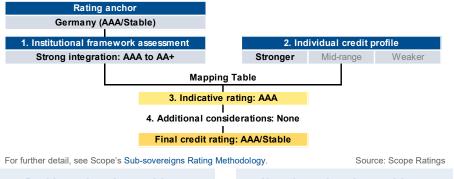
Rating rationale and Outlook:

The Free State of Bavaria's (Bavaria) AAA ratings are driven by:

- A highly integrated institutional framework, characterised by a very strong revenue equalisation system paired with the federal solidarity principle, which results in the close alignment of Länder's creditworthiness with the German federal government's AAA/Stable ratings.
- A strong individual credit profile captured by a low debt burden, excellent capital market access, ample liquidity, strong budgetary performance and a wealthy economy. In addition, sizeable federal support measures have mitigated the adverse effects of the Covid-19 crisis on the economy and on Bavaria's finances. Recently, the federal government has also taken measures to cushion the impact of the Russia-Ukraine war on the German economy and households, supporting all federal states.

Credit challenges relate to limited revenue flexibility and high pension liabilities weighing on long-term expenditure flexibility, as well as sizeable but manageable contingent liabilities. The Stable Outlook reflects our assessment that the risks Bavaria faces remain well balanced.

Figure 1: Our rating approach for the Free State of Bavaria



Positive rating-change drivers

Not applicable

Negative rating-change drivers

- Downgrade of Germany's sovereign rating, necessitating a rating review
- Changes in the framework, resulting in weaker individual credit profile
- Individual credit profile weakens significantly and structurally

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Integrated framework results in close alignment of creditworthiness

Institutional framework

Bavaria, like all German Länder¹, benefits from a mature, highly predictable and integrated institutional framework. The key elements are: i) a strongly interconnected revenue equalisation mechanism enshrined in the constitution; ii) strict fiscal rules and monitoring, iii) wide-ranging participation and veto-rights of the federal states in the national legislation; iv) equal entitlement of federal states regarding negotiations on federal reforms; and v) a solidarity principle that ensures extraordinary system support during budgetary emergencies.

The federal system under which the Länder operate is the most integrated among the European sub-sovereign systems we cover. This is driven by our assessments of 'full integration' for extraordinary support and bailout practices, ordinary budgetary support and fiscal equalisation, fiscal rules and oversight, and revenue and spending powers. We assess funding practices as 'medium integration'.

The framework assessment results in an indicative downward rating adjustment of up to one notch between the Federal Republic of Germany (AAA/Stable) and the rating of any federal state. For an overview of our framework assessment, see Appendix I.

Extraordinary support and bail-out practices

Our framework assessment acknowledges a record of extraordinary financial support. Länder have been granted exceptional financial support from the federal government in five instances: Bremen (1992, 2006), Saarland (1992, 2005) and Berlin (2002). The court approved claims on the grounds of the solidarity principle, or *Bundestreueprinzip*, under which the Länder and the federal government are required to support each other in the event of a budgetary emergency. A claim by Berlin was denied in 2006, with the court arguing that the city-state was not in an extreme budgetary situation. However, the judges noted that federal emergency support would still be possible as a last resort if the budget and/or debt situation were later assessed as extreme. We consider the Bundestreueprinzip to be an implicit bail-out rule, as it requires the provision of federal support in times of budgetary stress.

More recently, the federal government confirmed its role as a countercyclical primary shock absorber in the Covid-19 and energy crises in 2020-2023. Over these years, the federal government financed costly crisis measures, leading to federal budget deficits of an average 3.3% of GDP over 2020-2022. In response to the Russia-Ukraine war and high and volatile energy prices, the federal government will be financing gas and electricity price brakes until at least April 2024, budgeted at EUR 83.3bn in 2023, among other measures. Other recent support measures include the creation of a EUR 30bn fund equipped to support the states that were affected by floods in 2021.

Ordinary budgetary support and fiscal equalisation

The German system is shaped by a federal financial equalisation system that strongly aligns different fiscal capacities across regions. A reformed equalisation system took effect in 2020, with horizontal distribution occurring via deductions and top-ups to collected VAT, as well as vertical transfers from the federal government.

As in the previous system, Bavaria is the largest net contributor with deductions on its VAT revenue of around EUR 9.9bn in 2022, according to the national statistical office. However, the net effect of the system change is positive for all Länder as contributions from the federal government are greater under the reformed system.

Strong solidarity principle

Federal government as shock absorber during recent crises

Comprehensive fiscal equalisation system

Bavaria is largest contributor to the equalisation system

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¹ We use the term 'Land' (or collectively 'Länder') and 'state' interchangeably to refer to German federal states.



Autonomous borrowing, access to shared liquidity

Debt brake laws anchor borrowing; stability council conducts oversight

Shared tax authority with the federal government

Federal reforms strengthen political coherence

Special role of Bavaria with regional party

Funding practices

Länder governments have broad autonomy in their funding choices. There is no use of sovereign on-lending, and Länder can decide autonomously on their borrowing programmes within the framework of the debt brake. Short-term liquidity is available via access to shared liquidity among the Länder and the federal government, essentially eliminating liquidity risk. Basel III risk-weights for Länder debt securities are aligned at 0% with the central government. The Länder have a history of joint bond issuance, having issued such instruments on 62 occasions in the past, though not all of the 16 Länder participated.

Fiscal rules and oversight

Since 2020, the Länder have to comply with debt brakes under which they cannot run structural financing deficits unless, for example, hit by a severe economic downturn or a natural disaster.² The debt brake also caps the structural annual deficit of the central government at 0.35% of GDP. The German parliament used the emergency clause of the debt brake in 2020-2022 in response to the Covid-19 and energy crises. Separately, Bavaria invoked the safeguard clause of its debt brake for 2020-2022 to implement support measures and credit authorisations to mitigate the impact of Covid-19. Borrowing under safeguard clauses comes with mandatory redemption rules.

The finances of the Länder and their compliance with debt limits are monitored by the Stability Council, established in 2010 to monitor restructuring programmes and compliance with budgetary targets. The Council comprises the finance ministers of each Land and the federal ministers of finance and economic affairs. If the Stability Council determines that a Land is threatened with a budgetary emergency, it agrees on a restructuring programme with the affected authority.

Revenue and spending powers

The Länder and the federal government share a taxation authority and jointly decide on rates and revenue distribution for high-revenue common taxes (income and VAT). The latest reform of federal financial relations (in 2017) took effect in 2020 and resulted in a higher share of VAT revenue being distributed among the Länder. The VAT distribution fully compensates for the variation in taxing powers, replacing the previous process of horizontal payments between the Länder. Alongside common taxes, the central government and the Länder have separate taxation authorities for lower revenue-generating taxes.

Under the reform agreed in 2017, the Länder have assigned limited executive and legislative rights to the central government in certain policy areas, including physical and digital infrastructure and the higher education system, in return for higher payments from the equalisation system. In line with earlier reforms (Föderalismusreformen II), we observe that the higher the share of common national legislation (konkurrierende Gesetzgebung), the more integrated the system becomes.

Political coherence and multi-level governance

The German federal system is very predictable and supportive. Major reforms are discussed and agreed upon well in advance and in consultation with the Länder, which can directly influence national policymaking via the upper house of parliament.

Bavaria has a unique role in the political landscape. It is the only federal state with a

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² The debt brake is a legal framework that prohibits structural deficits for the Länder from 2020 onwards; article 109 (3) of the Basic Law stipulates that the Länder may incur deficits in a case of, for example, a recession or a natural disaster provided they pass respective legislation at the state level.

separate party: the Christian Social Union (CSU). The CSU has been in power since 1957 under different coalitions but usually as a one-party government, and it has always appointed the state's prime minister. The party also has a long-standing agreement with the Christian Democrats to cooperate in federal and regional elections.

Individual credit profile

Bavaria is the second most populous federal state with about 13m residents (16% of the German total), and it has the country's second largest regional economy (19% of the total). Bavaria's main responsibilities include healthcare and education, which are financed predominantly via shared taxes and transfers.

We assess Bavaria's individual credit profile as 'stronger' among German Länder. This reflects Bavaria's: i) low debt, ample liquidity, and excellent capital market access; ii) strong budgetary performance and above-average expenditure flexibility; iii) a wealthy and highly competitive economy; and iv) high quality of governance and strong commitment to fiscal prudence at the regional level.

Credit challenges relate to limited revenue flexibility and high pension liabilities weighing on long-term expenditure flexibility, as well as sizeable, yet manageable, contingent liabilities. In addition, the Covid-19 crisis has led to higher debt levels and a temporary budgetary deterioration due to additional expenditure in 2020-2021, as well as tax revenue shortfalls in 2020. At the same time, budgetary reserves and prudent financial management compensate for the shock over the medium term.

Debt burden and liquidity profile

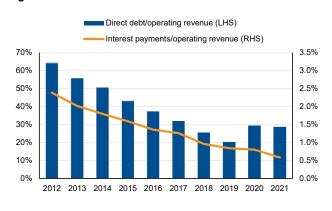
Bavaria's credit profile benefits from a low debt burden in a national and international context. Before Covid-19, debt had declined significantly from 64% of operating revenue in 2012 to 20% at end-2019 (Figure 2). By end-2021, due to pandemic-related borrowing, debt had increased to 29% of operating revenue (EUR 19.9bn). Based on figures from Destatis, this had declined to EUR 19bn as of Q3 2022. We expect an increase in revenue to result in a further reduction of the debt/operating revenue ratio in 2022. In line with previous years, Bavaria used cash to service its debt in 2021 and increased its postponed credit authorisations by EUR 825m to EUR 17.1bn³.

Strongest individual credit

profile among peers

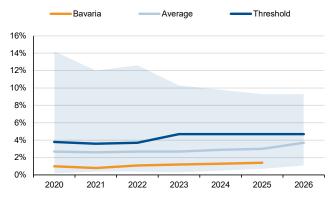
Low debt burden

Figure 2: Debt and interest burden



Source: Bayerisches Staatsministerium der Finanzen und für Heimat, Destatis, Scope Ratings

Figure 3: Interest-to-adjusted-tax ratio



Note: Bavaria 2025 latest figures. Source: Stability Council, Scope Ratings

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³ In view of Bavaria's high own cash holdings combined with the low interest rate environment, a major instrument for reducing cash holdings is the postponement of credit authorisations. This means that authorisations to accept debt for the repayment of due loans are unused and due loans are settled using existing cash holdings.



Low interest-payment burden

Pre-pandemic debt reductions also contributed to a fall in Bavaria's interest payments relative to operating revenue, to 0.6% in 2021 from 2.4% in 2012, further bolstering its fiscal position. Based on recent Stability Council assessments, Bavaria will continue to outperform most German Länder in terms of fiscal indicators. This view is also supported by Bavaria's very low interest-to-adjusted-tax ratio (Figure 3) relative to peers.

Significantly increased but still low debt following the pandemic

In response to the Covid-19 crisis, Bavaria passed legislation to invoke the safeguard clause of its debt brake and adopted budgetary measures and credit authorisations of up to EUR 20bn of new debt in 2020, up to EUR 11.6bn in 2021 and EUR 5.8bn in 2022. In the 2023 draft budget, no new credit authorisations are included and a decrease in debt of EUR 50m has been budgeted.

Unused credit authorisations are transferable to subsequent years under certain conditions, supporting the Land's financing flexibility. Pandemic-related funds are collected under a dedicated account (chapter 13 19 Sonderfonds Corona-Pandemie) in the Land's core budget created in 2020 to address the Covid-19 crisis.

Bavaria's debt take-up has been significantly lower than credit authorisations over 2020-2022, and the volume of the 2020 authorisation of EUR 20bn was sufficient to cover funding over these three years, in line with the authorities' plans. At end-2022, debt taken up under chapter 13 19 amounted to EUR 10.21bn, significantly below the EUR 37.4bn authorised over 2020-2022.

Debt service to rise modestly due to Covid debt repayment

Credit authorisations under the debt brake emergency clause come with a pre-defined redemption plan. Bavaria will amortise debt taken on under chapter 13 19 in annual instalments of 5% of the total amount incurred under the 2020 credit authorisation from 2024, from 2025 for debt incurred under the 2021 credit authorisation, and from 2026 for debt incurred under the 2022 credit authorisation. Conservatively, a utilisation of EUR 20bn for the years 2020-22 would lead to additional debt service costs annually of EUR 1bn from 2026, somewhat reducing expenditure flexibility. However, as actual take-up of debt was substantially lower than budgeted, mandatory redemptions should stay well below EUR 1bn per year. Thanks to favourable financing rates, we expect interest payments to stay below 1% of operating revenue.

Sound debt management; excellent market access

As for all German Länder, we assess Bavaria's access to capital markets as excellent. This was observed during the Covid-19 crisis. Bavaria re-entered the bond markets for the first time since end-2014 in 2020, issuing EUR 7.2bn mostly at near-zero coupons. In 2021, Bavaria issued another EUR 3.4bn of debt. In 2022, Bavaria issued promissory notes amounting to EUR 338.5m, but did not tap public debt markets, indicating limited financing needs and reflecting volatile public capital markets as the ECB tightened monetary policy considerably. Bavaria employs a conservative debt-management strategy with no foreign currency exposure and limited interest rate risks. Going forward, Bavaria's debt management strategy envisions: i) the issuance of fixed-rate debt only; and ii) the exclusion of new derivatives to minimise risks and maintain low administrative costs in debt management.

High own cash reserves

Bavaria benefits from ample liquidity. It has sizeable cash holdings compared to national peers, stemming from its sound budgetary and financial management. Bavaria's cash holdings comfortably cover debt service through to 2024.

Solid cash flow profile and conservative liquidity planning

Bavaria also benefits from highly predictable cash flow and prudent budgetary assumptions for liquidity planning. The state's cash flows, especially inflows, are prone to seasonal variations driven by the tax calendar. Like other Länder (excluding city-states), Bavaria's cash reserves tend to increase over the year, with peaks in mid-July and mid-October followed by significant outflows at the end of October and November. Moreover, the federal state accumulates the Bavarian municipalities' shares of taxes before

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Excellent access to external liquidity

Contractual guarantees exhibit low risks, very modest take-up of Covid-19 guarantees

Materialisation of contingent liabilities in the financial sector unlikely

Solid management of major holdings

Strong budgetary performance and flexibility

distributing them to the municipalities every quarter. These factors partly explain the state's excess liquidity during the year.

Bavaria has excellent access to external funding, which strengthens its resilience to shocks. External liquidity, if required, is available at short notice via credit facilities from various major financial institutions. German Länder lend excess liquidity to each other via commercial cash transactions, generating another source of liquidity. Combined with Bavaria's own sizeable reserves, this makes the risk of a liquidity shortfall negligible.

Finally, contractual guarantees issued by Bavaria stood at EUR 10.8bn in 2021, up from about EUR 8.5bn in 2019, and remain overall moderate. The increase was mostly due to EUR 1.1bn in guarantees provided to Bavaria's regional development bank, LfA Förderbank Bayern (AAA/Stable), to facilitate lending to businesses hit by the Covid-19 crisis, with a maximum envelope of EUR 12bn. The guarantee has now been extended to cover LfA's activities as a result of the war in Ukraine. A guarantee envelope of EUR 26bn (from 2022 reduced to EUR 6.5bn) for the *BayemFonds*, which was set up in 2020 to issue guarantees itself (or inject capital) to medium-sized Bavarian companies hit by the pandemic, remained unutilised until the fund was closed in June 2022.

Other guarantees were issued mostly for social housing (EUR 2.8bn), as well as for individual authorisations (EUR 7.6bn) covering various areas, such as a local transport project in Munich. High property values make it less likely that Bavaria will need to honour guarantees relating to real estate transactions. In addition, guarantees for debt incurred by social housing associations are not relevant to the budget, because of the associations' stable rental income.

Bavaria's 75% shareholding in BayernLB (total assets of EUR 303bn as of September 2022) gives rise to some contingent liability risk, however much reduced after BayernLB repaid its state aid in full in 2017⁴. The repayment of Bavaria's capital contribution led to an early conclusion of related EU proceedings. The bank's balance sheet is strong with i) a solid capital base, reflected by a CET1 capital ratio of 16.1% in September 2022, well in excess of the regulatory requirement (8.6% minimum for 2022); and ii) a low NPL ratio of 0.6%.

Bavaria's strong management of its major shareholdings is reflected in its robust financial performance, indicating a low risk of related contingent liabilities materialising. The total debt of entities in which Bavaria holds a majority share (excluding financial institutions) increased to around EUR 2.6bn in 2021. The Covid-19 crisis hindered the profitability of several holdings in 2020 and 2021, with Bavaria providing support via loans or capital injections. However, the reduction of pandemic restrictions should substantially improve performance in these sectors.

Budgetary performance and flexibility

Bavaria displays a strong budgetary performance, with historically high operating surpluses averaging 12.9% of operating revenue in 2015-2019 (Figure 4). Bavaria's strong historical performance has been underpinned by strong growth in tax revenue, continuous cost control and conservative budgetary management, which have supported a substantial reduction in debt and a build up of cash reserves.

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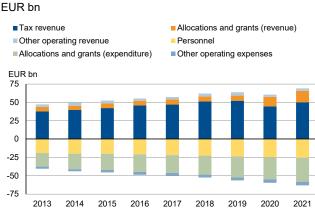
⁴ In 2008/2009, Bavaria injected EUR 10bn of capital into the bank and issued EUR 4.8bn in guarantees for Bayern LB's structured finance portfolio. Under the EU state-aid proceedings, the European Commission scheduled a repayment of EUR 4.96bn until 31 December 2019 at the latest. With the repayment of EUR 1bn as of 30 June 2017, BayernLB has fully met the repayment obligation. The guarantees for the structured credit portfolio were terminated in 2014.

Figure 4: Budgetary performance



Source: Bayerisches Staatsministerium der Finanzen und für Heimat, Scope

Figure 5: Components of operating balance



Source: Bayerisches Staatsministerium der Finanzen und für Heimat, Scope Ratings

Bavaria's budgets impacted by the Covid-19 crisis

After years of budgetary surpluses and net debt reduction, budgetary results in 2020 and 2021 were driven by the Covid-19 pandemic. Due to greater uncertainty and efforts to increase operational flexibility, Bavaria passed one-year budgets for 2021 and 2022, instead of the usual two years. Bavaria's financial results worsened from a surplus of around EUR 1.2bn in 2019, or 2% of total revenue, to deficits of 10.3% in 2020 and 1.7% in 2021. Outcomes were driven by pandemic-related expenditure of around EUR 8.8bn in 2020 and EUR 11.2bn in 2021, which were only partially covered by federal transfers, and a shortfall in tax revenue relative to budgeted levels for 2020.

2022 expected budgetary recovery

For 2022, we expect a surplus after capital accounts of around 4% of total revenue on the back of a strong recovery of tax revenue, which increased to EUR 55bn from EUR 50bn in 2021, according to Destatis, as well as lower expected spending on Covid-19-related items.

2023 budget expected to be balanced; increasing spending pressures

In its 2023 draft budget, Bavaria is planning no new net borrowing and to reduce net debt by EUR 50m. Bavaria should be able to absorb the adverse budgetary effects of the pandemic over the medium-term thanks to its: i) conservative budget management; ii) track record of commitment to fiscal consolidation; iii) ability to adjust budgets in view of the high investment levels; and iv) economic and demographic outperformance of national peers. At the same time, the inflationary environment in Germany will add to spending pressures for the Land, along with costs relating to housing refugees, especially recent inflows from Ukraine. For example, the Land's civil servants will enter wage negotiations in late 2023, likely asking for a substantial pay rise.

Financial planning: high investment and no net borrowing

Bavaria's financial plan for 2022-2026 aims to keep investments at a record-high of around 15% of total expenditure and no net borrowing. This will entail significant consolidation efforts via an economic recovery and some expenditure adjustments. Policy priorities are demographic developments and greenhouse gas reduction, as well as economic stimulus in response to the Covid-19 and energy crises. The following measures are in place: i) the technology initiatives Hightech Agenda Bayern, to which EUR 2bn is allocated until the end of the legislative period in 2023, the ii) Hightech Agenda Plus, a supplement to the former in response to the Covid-19 crisis to provide additional growth stimulus of EUR 900m for 2021 and 2022, iii) a EUR 1.5bn Covid-19 investment programme in 2022 and iv) a EUR 1.7bn Bavarian Hardship Fund in 2023 to finance transfers to financially weak households as well as businesses to buffer the energy shock, on top of measures financed by the federal government.

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Moderate revenue flexibility

Above-average expenditure flexibility

Pension payments weigh on long-term budgetary flexibility...

... but provisions and annual contributions serve as buffers.

Key economic region in Germany

Robust economic growth and highly competitive economy

Robust recovery from Covid-19, but Russia-Ukraine war weighs on growth

In line with other Länder, we assess Bavaria's revenue flexibility as moderate. Operating revenue is mostly comprised of taxes (Figure 5), most of which are shared taxes (personal income taxes, VAT and corporate taxes). Shared tax revenue is initially collected by Bavarian tax offices but later redistributed at the federal level in accordance with revenue-sharing agreements and additional transfer mechanisms. This weakens the link between the state's tax revenue and its economic performance.

Relative to other Länder, Bavaria displays above-average expenditure flexibility, as it spends a relatively high share of total expenditure on investments (11.5% on average over 2017-2021) and displays limited administrative costs (6.7%). Bavaria further has a record of fiscal consolidation and implementing cost cuts during economic downturns to offset budgetary shocks, which will be relevant after the Covid-19 and energy shocks. At the same time, Bavaria's operating expenditure structure is rigid, with large items relating to transfers and grants (45% of total expenditure in 2021) and personnel costs (36%), of which around 60% is spent on education, science, research and culture, and 20% on security and legal protection.

Finally, pension expenditure will take up a growing share of Bavaria's budget. The number of eligible pensioners is set to rise to 185,000 in 2040 (up 29% from 2019), weighing on the state's long-term expenditure flexibility. According to Bavaria's report on future pension expenditure, which includes alternative assumptions on pension adjustments between 2.5%-3.5% yearly, the share of pension expenditure will rise steadily from 9.1% in 2018 to peak at: i) 11.1% in 2027 and then decline to 9.4% in 2050 (with a moderate growth rate of 2.5% p.a.); ii) 11.7% during 2033-36 (with a growth rate of 3% p.a.); or iii) 12.6% during 2037-42 (with a historically unlikely yearly growth rate of 3.5%).

To ease the rising pressure from pension obligations, Bavaria has: i) implemented cost-saving measures; ii) pursued prudent fiscal policy and iii) created a pension fund. The capital stock of the pension fund stood at EUR 3.8bn at end-2021. In addition to the statutory annual fund inflows of EUR 110m until 2030, Bavaria contributes collected pension allowances (EUR 29.7m in 2021). Overall, the combined measures, including anticipated savings, will result in a moderate share of pension expenditure with a peak of 10%-12%, broadly in line with levels in 2018. For 2023, pay-outs from the fund were possible for the first time, but were not taken given the pay-out plan from 11 October 2022.

Economy and social profile

Bavaria has a favourable socio-economic profile underpinned by a large, wealthy, well-diversified and highly competitive economy, resulting in a high regional growth potential and a strong ability to generate its own long-term revenue. Bavaria is a key economic regions in Germany, contributing 19% of national GDP. The state is also one of the wealthiest regions in Europe, with a GDP per capita 17% above the German average and 40% above the euro area average.

Before the Covid-19 crisis, economic expansion was strong, although it already had slowed down in 2019. Average real GDP growth was 2.6% in 2010-2019, outperforming the German average of 2% (Figure 6).

Bavaria's real GDP declined by 4.3% in 2020 due to the Covid-19 shock, slightly less than the German average of 4.6%. The economic recovery in 2021 was robust with 3% real GDP growth, however new supply chain disruptions slowed growth markedly towards the end of the year. In 2022, high energy prices and other economic effects of the Russian invasion of Ukraine substantially weighed on the growth outlook, though very adverse scenarios centred around gas rationing over the winter have not materialised.

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The Bavarian export-oriented automotive industry further benefitted from an easing in pandemic supply chain disruptions and recovering external demand. The German economy grew by 1.8% in 2022, and we expect a similar figure for the Bavarian economy.

Lowest unemployment in Germany

Bavaria enjoys favourable labour market characteristics, even though the Covid-19 shock caused the unemployment rate to increase to a high of 4.2% in February 2021, from 2.8% in December 2019. In February 2023, the unemployment rate stood at 3.6%, 0.4 pp above its 2019 level. Robust labour market outcomes over the course of the pandemic and energy shocks also reflect the federal government's large discretionary support, e.g. in the form of a national furlough scheme, or *Kurzarbeit*. Bavaria has the lowest unemployment rate among all German Länder (Figure 7).

Figure 6: Real GDP growth

% YoY

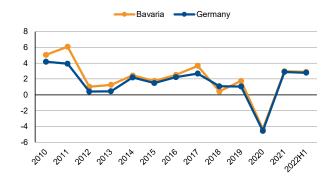


Figure 7: Unemployment ratio

% of total labour force, year-end



Source: Volkswirtschaftliche Gesamtrechnung der Länder, Scope Ratings

Source: Federal Statistical Office, Scope Ratings

Favourable demographic profile

Bavaria enjoys positive demographics compared to other Länder, supporting Bavaria's long-term growth and tax revenue potential. Bavaria's statistical office projects a 3.9% increase in total population from 2022 to 2040. At the same time, ageing will lead to an increase in the proportion of people aged 65 and over versus those aged 20-64, from 34.6% in 2021 to around 45.2% in 2041.

Quality of governance

Stable political environment

We assess Bavaria's quality of governance and financial management as strong. This is supported by the state's: i) record of nominal debt reduction; ii) regular fulfilment of policy objectives defined in strategic plans; and iii) ability to weather economic downturns by cutting costs to compensate for adverse budgetary developments.

Governing coalition of CSU/Free Voters

After losing its electoral majority in 2018, the CSU reached a coalition agreement with the smaller, conservative Free Voters party. The CSU won 37.2% of the vote in the regional election, its lowest result since 1950. CSU's Markus Söder is the region's president, while the Free Voters run three ministries: economy, environment and culture. The next elections are scheduled to take place in October 2023.

Borrowing due to the pandemic; delay in debt reduction plans

The fiscal objective of continuously reducing Bavaria's debt is legally enshrined in the Bavarian budgetary laws (*Bayerische Haushaltordnung*). According to the coalition agreement, strategic priorities for the 2018-2023 administrative term include: i) balanced budgets without recourse to new debt; ii) compliance with the debt brake mechanism from 2020; iii) a strong commitment to becoming debt-free in the long run; and iv) a continued build-up of reserves. Bavaria has reacted quickly in 2020 with a sizeable policy package to support businesses and provide direct healthcare spending through the

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pandemic and energy shocks. While Bavaria has not made full use of credit authorisations, the crisis has materially delayed debt reduction plans.

Environmental and social considerations

Plan to become climate neutral by 2040

Bavaria has recognised the challenges related to climate change and has put in place a climate plan to reduce greenhouse gas emissions by 65% per inhabitant by 2030 and become climate neutral by 2040 at the latest. The Bavarian Climate Protection Act (BayKlimaG), which makes the basic targets legally binding and includes around 150 concrete measures adopted by the state government, accompany the protection programme to achieve the CO2 reduction targets. While physical risks from climate change are relatively low, Bavaria was also affected by the large floodings in July 2021, although to a much lesser extent than North Rhine-Westphalia or Rhineland-Palatinate. With the establishment of a national Reconstruction Assistance fund (Aufbauhilfe 2021), the federal government made up to EUR 30bn available to support reconstruction in the affected areas; Bavaria received 1% of the fund.

Strong educational attainments vis-à-vis peers

Bavaria outperforms peers in terms of education attainment as reflected by a higher-than-average share of graduates (33.5% versus 30.9% national average) and a lower share of young people neither in employment nor in education training (6.1% against the national average of 7.5%). In terms of health and demographic indicators, Bavaria similarly outperforms peers with an old-age dependency ratio of 31.7% versus 34.2% (national average). Bavaria's life expectancy is the second highest in Germany after Baden-Wurttemberg.

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Appendix I: Institutional Framework Assessment

100 > x ≥ 90

0-1

Institutional framework score
Indicative rating range

To assess the institutional framework, we apply a Qualitative Scorecard (QS1) centred around six components. We assess each analytical component on a five-point scale ranging from a score of 0 for 'low' integration to 100 for 'full' integration. The institutional framework score, ranging from 0 to 100, is calculated as a simple average of these assessments. The score is then used to determine a rating range from the rating anchor level, within which the sub-sovereign's rating can be positioned.

Our assessment of intergovernmental integration between the German federal states, or Länder, and the Federal Republic of Germany (AAA/Stable) results in an indicative downward rating range of one notch from the German sovereign, within which the Länder can be positioned according to their individual credit strengths.

Institutional Framework scorecard (QS1)

Analytical components	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)	
Extraordinary support and bailout practices	•	0	0	0	0	
Ordinary budgetary support and fiscal equalisation	•	0	0	0	0	
Funding practices	0	0	•	0	0	
Fiscal rules and oversight	•	0	0	0	0	
Revenue and spending powers	•	0	0	0	0	
Political coherence and multi-level governance	•	0	0	0	0	
Integration score Downward rating range	92 0-1]				

 $90 > x \ge 80$ $80 > x \ge 70$ $70 > x \ge 60$ $60 > x \ge 50$ $50 > x \ge 40$ $40 > x \ge 30$ $30 > x \ge 20$ $20 > x \ge 10$ $10 > x \ge 0$

0-10

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Appendix II: Individual Credit Profile (ICP)

To assess the ICP, we apply a Qualitative Scorecard 2 (QS2), centred around 10 components underpinned by peer benchmarking. We assess each analytical component on a three-point scale by benchmarking a sub-sovereign's performance and risk exposures to that of peers. Scores are 0 for 'weaker', 50 for 'mid-range', and 100 for 'stronger' for each component. The individual credit profile score, ranging from 0 to 100, is calculated as a simple average of these assessments. In addition, we make two additional assessments for environmental factors and resilience and social factors and resilience, which can lead to adjustments of the ICP score by up to +/- 10 points.

We assess the individual credit profile of the Free State of Bavaria as stronger vis-à-vis peers, with an ICP score of 90 out of 100.

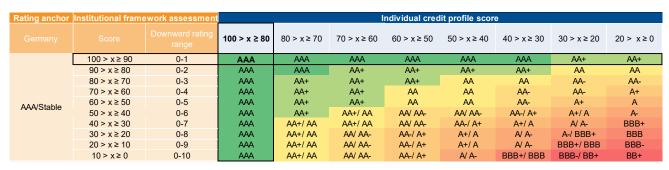
Individual Credit Profile scorecard (QS2)

Risk pillar	Analytical components	Stronger (100)	Mid-range (50)	Weaker (0)	
	Debt burden & trajectory	•	0	0	
Debt and %	Debt profile & affordability	•	0	0	
	Contingent liabilities	0	•	0	
	Liquidity position & funding flexibility	•	0	0	
	Budgetary performance & outlook	•	0	0	
Budget %	Revenue flexibility	•	0	0	
	Expenditure flexibility	0	•	0	
Economy 02	Wealth levels & economic resilience	•	0	0	
Economy 0	Economic sustainability	•	0	0	
Governance %	Governance & financial management quality	•	0	0	
Additio	nal environmental and social factors	No impact (0)	Negative impact (-5)		
Environmental factors and resilience		0	•	0	
Social factors and resilience		0	•	0	
	100	90			
	ICP score Indicative notching				
	maicauve notering				

Appendix III: Mapping Table

We derive the indicative sub-sovereign rating by mapping the result of the institutional framework assessment (i.e. the indicative rating range) to the ICP score.

For Bavaria, this results in an indicative rating aligned with the sovereign rating of AAA. No additional considerations apply.



Note: Mapping table under section 4 of Scope's Sub-sovereigns Rating Methodology, as applied to the rating anchor's AAA-ratings.

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Appendix IV: Statistical table

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Budget (EUR m)									
Operating revenue	47,323	49,593	52,440	55,355	57,178	61,979	63,817	60,529	69,175
Tax revenues	37,623	39,709	42,143	45,900	47,097	51,134	52,329	44,529	50,138
Allocations and grants	6,250	5,868	6,267	6,477	7,015	6,822	7,039	13,035	15,509
Other operating revenue	3,449	4,016	4,029	2,978	3,065	4,022	4,449	2,964	3,528
Current revenue	47,395	49,672	52,514	55,419	57,253	62,041	63,887	60,634	69,285
Active interests	73	79	74	63	76	62	70	105	109
Operating expenditure	40,495	43,924	45,498	48,622	50,143	52,346	56,499	59,608	63,275
Personnel	19,028	19,804	20,283	20,984	21,861	22,592	23,677	24,742	25,526
Allocations and grants	18,639	21,162	21,944	23,838	24,499	25,862	28,709	30,153	32,548
Other operating expenditure	2,829	2,958	3,271	3,800	3,783	3,892	4,113	4,714	5,201
Current expenditure	41,450	44,816	46,332	49,374	50,864	52,942	57,034	60,091	63,679
Interest payments	955	892	834	753	721	597	535	483	404
· ·	6,827	5,669	6,941	6,734	7,035	9,633	7,318	920	5,900
Operating balance	-			-					
Current balance	5,945	4,856	6,181	6,044	6,390	9,098	6,853	542	5,606
Capital expanditure	1,545	2,139	1,534	1,570	2,663	1,773	2,071	1,551	1,468
Capital expenditure	5,358	5,375	5,518	5,683	5,956	6,647	7,684	8,525	8,302
Capital balance	-3,813	-3,236	-3,984	-4,113	-3,293	-4,874	-5,613	-6,975	-6,834
Total revenue	48,941	51,811	54,047	56,989	59,917	63,814	65,958	62,184	70,752
Total expenditure	46,808	50,191	51,850	55,058	56,820	59,589	64,718	68,617	71,981
Balance before debt movement	2,132	1,620	2,197	1,931	3,096	4,225	1,240	-6,433	-1,229
Financial ratios (%)									
Balance before debt movement/total revenue, %	4.4	3.1	4.1	3.4	5.2	6.6	1.9	-10.3	-1.7
Operating balance/operating revenue, %	14.4	11.4	13.2	12.2	12.3	15.5	11.5	1.5	8.5
Interest payments/operating revenue, %	2.0	1.8	1.6	1.4	1.3	1.0	0.8	0.8	0.6
Transfers/operating revenue, %	13.2	11.8	12.0	11.7	12.3	11.0	11.0	21.5	22.4
Personnel expenditure/operating expenditure, %	47.0	45.1	44.6	43.2	43.6	43.2	41.9	41.5	40.3
Capital expenditure/total expenditure, %	11.4	10.7	10.6	10.3	10.5	11.2	11.9	12.4	11.5
Debt (EUR m)									
Budget debt	20,565	20,025	19,525	19,525	19,525	19,525	19,525	19,525	19,525
thereof, direct debt	16,413	15,100	13,876	13,106	10,958	8,985	6,883	5,428	4,833
thereof, postponed credit authorisations	4,152	4,925	5,648	6,419	8,567	10,540	12,642	14,097	14,692
Stabilisation fund	10,000	10,000	10,000	9,450	8,950	7,450	7,400	7,350	7,300
thereof, direct debt	10,000	10,000	8,752	7,622	7,412	6,942	6,064	5,192	4,912
thereof, postponed credit authorisations	0	0	1,248	1,828	1,538	508	1,337	2,158	2,388
Covid-19 pandemic fund								7,208	10,146
thereof, direct debt								7,208	10,146
thereof, postponed credit authorisations								0	0
Postponed credit authorisations	4,152	4,925	6,896	8,247	10,105	11,048	13,978	16,254	17,079
Total direct debt	26,413	25,100	22,628	20,728	18,370	15,927	12,947	17,829	19,892
Overall risk	30,565	30,025	29,525	28,975	28,475	26,975	26,925	34,083	36,971
Debt ratios (%)									
Total direct debt/operating revenue, %	55.8	50.6	43.2	37.4	32.1	25.7	20.3	29.5	28.8
Overall risk/operating revenue, %	64.6	60.5	56.3	52.3	49.8	43.5	42.2	56.3	53.4
Interest payments/total debt, %	3.6	3.6	3.7	3.6	3.9	3.7	4.1	2.7	2.0
Economy	3.0	5.0	5.1	5.0	3.3	5.1	-1.1	<u></u>	2.0
GDP at market prices, EUR m	511 042	534,066	554 600	577 717	605 752	620 100	643 366	624 402	661 541
• '	511,943		554,688	577,717	605,752	620,188	643,366	624,403	661,541
Share of German GDP, %	18.2	18.2	18.3	18.4	18.5	18.4	18.5	18.5	18.5
GDP per capita (EUR)	40,526	41,873	43,294	44,829	46,726	47,572	49,109	47,547	50,289
% of German GDP per capita	116.9	116.8	117.3	117.8	118.2	117.1	117.5	117.4	117.1
Population ('000s)	12,562	12,648	12,768	12,887	12,964	13,077	13,125	13,140	13,177
Real GDP growth, %	1.3	2.4	1.8	2.5	3.7	0.4	1.7	-4.3	3.0

Source: Bayerisches Staatsministerium der Finanzen und für Heimat, Federal Ministry of Finance, Federal Statistical Office, Scope Ratings

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