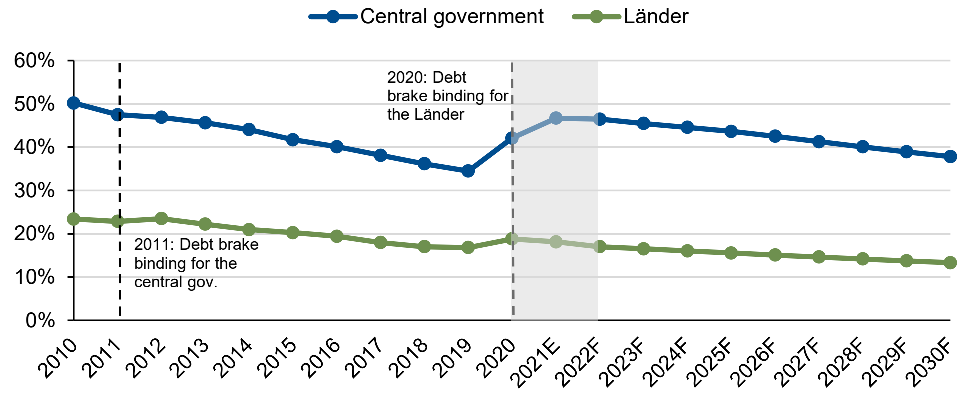
German Federal government shields Länder from pandemic debt burden supporting creditworthiness

Covid-19 response measures increased government debt in Germany (AAA/Stable) to 70% of GDP at the end of June 2021 from just under 60% in 2019. However, the fiscal burden was not shouldered equally between the central government (or the Bund) and the 16 German federal states (or Länder). Until end-2022, pandemic costs for the central government will be significantly higher than for the Länder, highlighting its role as the primary shock absorber. We project the Bund will return to pre-pandemic debt-to-GDP levels after 2030, significantly later than the Länder in aggregate, whose fiscal responses and long-term debt trajectories vary meaningfully.

The Bund and Länder reacted with forceful fiscal measures to the Covid-19 crisis. In accordance with emergency clauses of debt-brake laws, they passed amending budgets with credit authorisations to allow for extraordinary borrowing. Credit authorisations for the period 2020-22 amount to around EUR 470bn (14% of GDP) for the Bund and EUR 120bn (4% of GDP) for the Länder. However, actual take up of debt will likely be lower, as net debt issuance tailed off in 2021. For example, the Länder have used around 46% of their emergency credit authorisations as of October 2021. Nevertheless, we expect higher debt-to-GDP levels than before the crisis to persist longer term, especially at the central government level (**Figure 1**).

Figure 1: Debt to GDP ratio, 2010-2030F

Debt owed to the non-public sector, % of GDP



N.B. The shaded area covers the years the federal debt-brake's emergency clause is invoked to allow for extraordinary borrowing. For 2022, the parliamentary decision is still outstanding.

Source: Ifo Institute 2021, Schuldenbremse in der Bundesländern; Nitschke 2021, The Burden of Corona Debt - What Burdens Will Federal State Budgets Face in the Coming Years?; Ifo Institute 2019, Wachstum und Produktivität 2035 – Innovations- und Produktivitätslücken auf Ebene der Bundesländer; Federal states' budgets; Federal Ministry of Finance; Destatis; Statistical Offices of the Federal and State Governments; Scope Ratings GmbH

The main findings of our analysis of the long-term debt trajectories of the German central and Länder governments after the Covid-19 shock are:

- The central government carried most of the pandemic costs, acting as a primary shock absorber in the crisis and supporting Länder finances.
- We project a return to pre-pandemic debt-to-GDP levels for the Bund after 2030, compared to 2023 for the Länder. The aggregate Bund and Länder debt-to-GDP ratio is estimated to return to pre-crisis levels by 2030, later than projected by e.g. the IMF. This is driven by more conservative assumptions in this model.
- In aggregate, a solid economic recovery is the main driver of declining debt ratios. Debt reduction paths vary, depending on redemption plans and economic growth.
- Redemption costs will come on top of longer-term spending pressures related to adverse demographic trends and a sizeable investment backlog, further limiting Länders' expenditure flexibility.

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Germany's large fiscal response to Covid-19

Germany's sizeable fiscal response to Covid-19 rests predominantly on the central government…

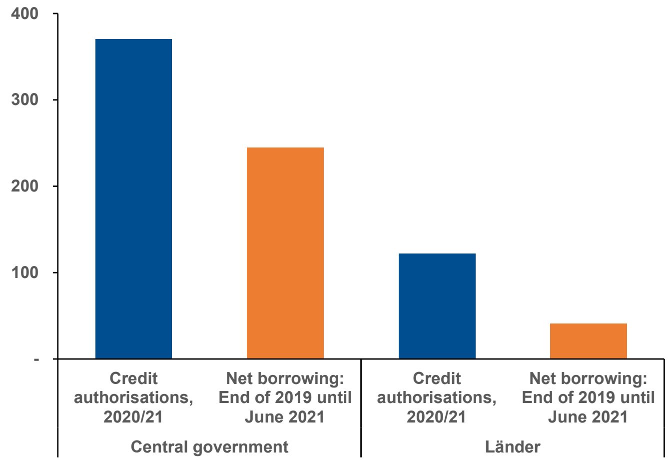
Since the spring of 2020, the outgoing German federal government and the German Länder implemented various measures to fight the public health and economic consequences of Covid-19. In aggregate, the fiscal response was sizeable, also when compared to other advanced economies. Bruegel estimates that direct fiscal measures in 2020 in Germany were worth 8.3% of GDP versus 4.4% in France, 3.4% in Italy and 4.3% in Spain[1]. In 2021, the fiscal stance remained accommodative, with the German central government carrying the bulk of fiscal costs. With net borrowing to the end of 2021 estimated at EUR 370bn (11% of GDP) the Bund acts as the primary shock absorber in the crisis, supporting Länder finances and their credit profiles (**Figure 2**).

…through costly measures such as the short-time work scheme.

The costliest measures such as the federal short-time work scheme, grants to businesses and discretionary stimulus spending, like last year's VAT cut, were shouldered by the Bund. As a consequence, the increase in debt at the central government level was much more pronounced than for the Länder. Over the 18 months since end-2019, cumulative net borrowing for the Bund amounted to EUR 245bn (7% of GDP) versus EUR 41bn for the 16 Länder (**Figure 2**).

Figure 2: Credit authorisations and net borrowing

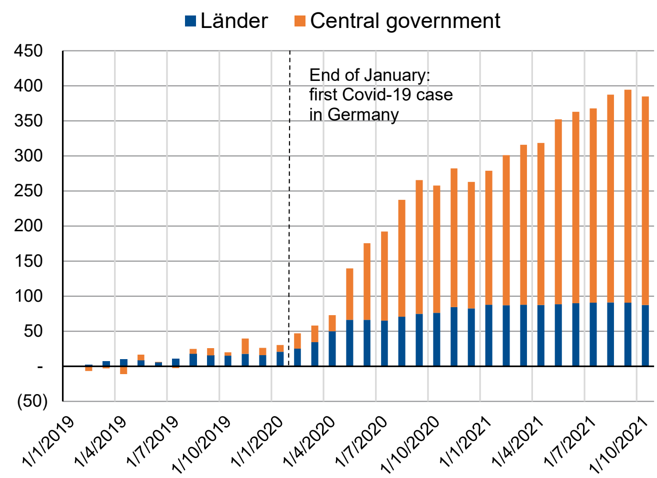
EUR bn



N.B. Net borrowing refers to 'Nettokreditaufahme'. Source: Ifo Institute 2021, Nitschke 2021, federal states' budgets, Federal Ministry of Finance, Scope Ratings GmbH

Figure 3: Cumulative net debt issuance

EUR bn, Gross capital market issuance net of redemptions



Source: Bloomberg Finance L.P., Bundesrepublik Deutschland Finanzagentur GmbH, Scope Ratings GmbH

The Länders' fiscal packages focus on mitigating direct pandemic effects, e.g. weaker tax revenues.

The Länder governments mostly resorted to borrowing to counteract adverse cyclical effects on their budgets, such as weaker tax revenues and higher transfers to municipalities to cover their tax revenue shortfalls, and direct pandemic costs. In a previous study, we conservatively estimated tax shortfalls for the Länder to be milder than in the aftermath of the Great Financial Crisis, but still to amount to EUR 100bn over the period from 2020 to 2025. However, the latest tax figures by the Federal Ministry of Finance show a stronger than expected recovery, with aggregate tax revenues in Germany from January to September 2021 standing 9% higher than in the same period last year.

The Länder in aggregate budgeted EUR120bn for the crisis but utilisation has been much lower so far.

In addition, some Länder also implemented their own Covid-19 fiscal programmes, which are modest in size though when compared to the Bund, and vary significantly. In total, Länder governments passed credit authorisations of around EUR 120bn, 4% of GDP.

[1] Bruegel 2020, The fiscal response to the economic fallout from the coronavirus.

Actual borrowing has been lower, however, highlighting conservative budgeting especially in early 2020, with large uncertainties around the pandemic trajectory prevalent (**Figure 2**).

Flexibility in federal and state debt-brake laws allows for extraordinary borrowing…

Under debt-brake laws, spending funded by emergency authorisations[2] needs to have a clear link to fighting the pandemic and its consequences, and for funds borrowed, a binding redemption plan has to be set up. The state governments have autonomy over certain aspects of their debt-brake laws, including the length of the redemption period for emergency borrowings. As a consequence, these vary widely, from three years in Saxony-Anhalt to up to 50 years in North-Rhine Westphalia.

… leading to unprecedented government issuance activity in capital markets.

Following legislation to allow for extraordinary borrowing, debt issuance activity by the central and state governments accelerated markedly in early 2020 (**Figure 3**, previous page). Debt issued in the capital markets (net of redemptions) since early 2020 has amounted to around EUR 350bn to mid-October 2021. While the Länders' net debt issuance has tailed off in 2021 and remains stable at around EUR 70bn, the Bund has remained very active in capital markets in 2021 to finance ongoing measures.

Funding activity was concentrated on the Bund.

We view the concentration of funding activity on the central government as an effective way to distribute the Covid-19 costs, as the Bund as a benchmark issuer benefits from larger issuance volumes and better financing conditions compared to some of the smaller states. However, larger Länder such as North-Rhine Westphalia, Lower Saxony, Berlin (AAA/Stable) and Bavaria (AAA/Stable) also tapped capital markets with significant volumes over the course of the crisis.

Favourable financing conditions support debt sustainability.

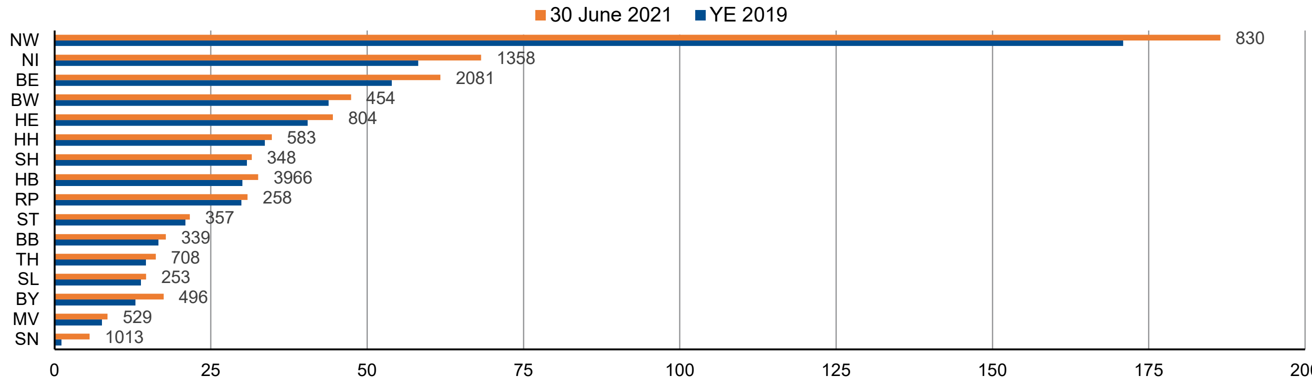
Both the Bund and the states have maintained excellent financing conditions, with the 10-year yield consistently in negative territory for the Bund since early 2020. This mitigates risks associated with a higher debt stock post-crisis. We expect interest costs to stay very low for the broader German general government over the coming years. However, a higher debt stock increases sensitivity to future shocks, underpinning the need for a prudent balance between closing the investment gap while supporting a debt-reduction path.

German Länders' fiscal packages vary significantly.

Taking a closer look at the individual Länder's response to the crisis, a mixed picture emerges. While most Länder made use of sizeable credit authorisations and debt issuance, others resorted to using reserves to finance tax revenue shortfalls and other expenditures. As a consequence, the change of debt owed to the non-public sector varied for the 16 Länder between the end of 2019 and June 2021 (**Figure 4**).

Figure 4: Länder debt owed to the non-public sector

EUR bn, labels: change in per-capita levels



Source: Destatis, Scope Ratings GmbH

[2] The central and Länder governments were able to respond to the crisis with debt-financed measures due to flexibility granted in their debt-brake laws. Since 2011, the federal debt brake has limited structural deficits to 0.35% of GDP for the central government. Debt-brake legislation for the Länder, which became binding in 2020, forbids structural deficits altogether. However, both the Bund and the Länder utilised emergency clauses in their debt-brake laws, allowing for credit authorisations in response to the pandemic emergency.

In absolute terms, debt increased the most for the largest issuers, such as North-Rhine Westphalia (+EUR 15.5bn), Lower Saxony (+EUR 10bn) and Berlin (+EUR 7.8bn). On a per-capita basis, the increase in debt owed to the non-public sector averaged EUR 900, where Bremen, Berlin, Lower-Saxony and Saxony saw the largest changes (see labels on **Figure 4** on the previous page).

How quickly will German government debt return to pre-pandemic levels?

To analyse the post-pandemic trajectory of German government debt, we apply a simplified debt sustainability analysis (DSA) model with projections until 2030. The analysis reveals that due to the larger costs shouldered by the central government, it will return much later to pre-crisis debt-to-GDP levels (after 2030) than the Länder in aggregate (by 2023). The Bund and Länder aggregate debt-to-GDP ratio is estimated to return to its 2019 level by 2030. This is significantly later than in the latest IMF projections for general government debt in the October 2021 World Economic Outlook, which is driven by relatively more conservative assumptions on GDP growth and the fiscal balance in this model[3].

A solid economic recovery and limited scarring drive the post-pandemic debt reduction trend.

The most important driver for a reduction in debt ratios is the expected economic recovery from 2021. However, a recent downward revision to 2021 growth projections by the Federal Ministry for Economic Affairs and Energy highlights the risk of a weaker than expected recovery due to supply chain bottlenecks and higher energy prices.

Redemption plans for the pandemic debt burden vary.

In addition, redemption plans for debt taken on via emergency clauses also play an important role and vary significantly, especially among the Länder. Redemption effects are especially pronounced for Saxony, Thuringia and Saxony-Anhalt, which have very short time spans for pandemic debt redemption of between three and eight years. Conversely, North-Rhine Westphalia has allowed for a redemption as long as 50 years. As a benchmark, the central government will redeem pandemic debt over 17-20 years.

Both very short and very long redemption time spans narrow Länders' budgetary flexibility. Very fast redemption limits expenditure flexibility over the crisis recovery phase, and very long time spans increase the sensitivity of a higher debt stock to shocks.

The key inputs for the DSA model are:
1: The initial pandemic shock to debt ratios and redemption plans.

Our DSA model uses several inputs and assumptions:

Pandemic-related shock to debt levels and debt redemption plans

First, we estimate the initial shock to debt levels caused by Covid-19. For the Bund, the overall cost of Covid-19 measures is estimated at EUR 470bn to the end of 2022. This takes into account EUR 130bn of net borrowing in 2020, and estimates for net borrowing of EUR 240bn in 2021 and EUR 100bn in 2022.

For the individual Länder, in our baseline scenario, we assume that nominal debt levels will stay at their June 2021 levels. This is supported by the fact that issuance tailed off in 2021 and that many Länder have already filled reserves with funds raised for emergency use.

Another input for the model is the redemption of debt incurred under the emergency clauses of debt-brake laws. The start and speed of pandemic debt redemption vary significantly both between central and state governments and among the Länder, see **Annex I**.

2. GDP growth projections.

GDP growth

For 2021 and 2022 we use the government's latest growth projections. These have recently been revised to real GDP growth of 2.6% in 2021 from 3.5%, while growth in 2022 has been revised slightly upwards to 4.1% in 2022, versus an earlier estimate of 3.6%.

[3] For this DSA model, we use data from Destatis on debt owed to the non-public sector for the central and Länder governments. These figures are not directly comparable to the definition of general government debt used by international institutions such as the IMF and the definition under Maastricht rules.

As supply shortages on German manufacturing are expected to ease in 2022, along with a broadly normalised pandemic situation, we assume a more uninterrupted recovery from 2023 with real GDP growing at its potential rate. Here, we use estimates by the Ifo Institute[4] for real GDP trend growth rates for the Länder out to 2030. These vary significantly, explained by regional demographic and productivity trends. See **Annex II** for an overview. Inflation is expected to be 2% over the long-term, in line with the ECB's target.

3. Projections on the federal and states' budget balances.

The budget balance

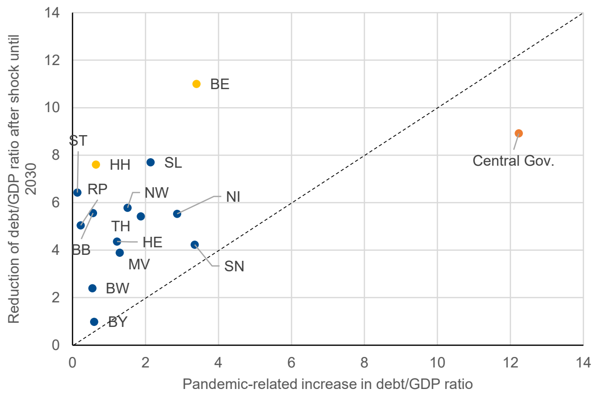
To assess the degree of borrowing necessary to finance deficits, we project budget balances to 2030 for the central and state governments. For the central government, we use the latest official budgetary forecasts to 2025. These suggest that the debt-brake law will be binding in unchanged form again in 2023. From 2023, the Bund will also start redeeming debt incurred under the emergency clause, which will increase expenditure within the 0.35% of GDP structural deficit but also reduce the debt burden directly. In the medium-term we project the cyclical component of the federal debt brake at close to zero and that the federal budget thus runs deficits at the structural debt-brake limit.

For the Länder, we expect that debt-brake laws will generally bind again from 2022, not allowing any structural deficits going forward. Further, and given the large unused portion of pandemic credit authorisations, we are not factoring into our baseline a further increase in emergency or cyclical credit authorisations. We assume balanced budgets for the Länder governments to 2030, and thus no new net borrowing. While this assumption is rather simplistic and does not capture the divergence of budgetary performance among the Länder and their ability to meet spending and investment needs in the coming years, it allows us to isolate economic growth and debt redemption effects on the debt trajectory.

Two key findings emerge from the DSA: #1 Bund will return to pre-pandemic debt levels well after the Länder.

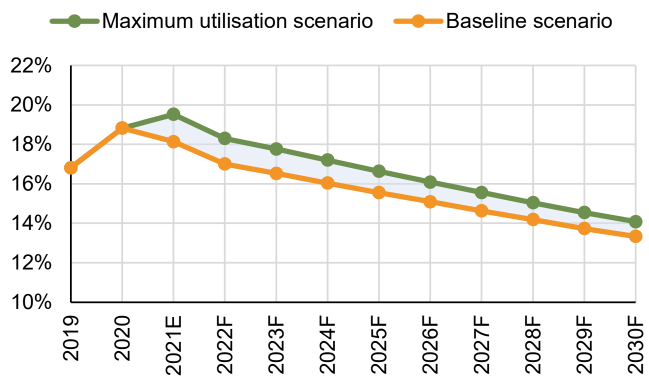
The DSA model reveals two main results. First, the central government is expected to return to pre-crisis debt-to-GDP levels much later than the Länder in aggregate, mostly due to the large volume of new debt incurred between 2020 and 2022, while the speed of the debt-ratio reduction to 2030 is broadly comparable to the Länder in aggregate. Overall, the pandemic shock will not be fully reversed by 2030 for the central government, while the Länder should return to pre-pandemic debt-to-GDP levels over the next years (**Figure 5**).

Figure 5: Pandemic debt: Size of shock and recovery
pp of GDP



N.B. Excluding Bremen (x=2.5, y=22) for better readability.

Figure 6: Debt to GDP projections for Länder
% of GDP



Source: Ifo Institute 2021, Nitschke 2021, Ifo Institute 2019, federal states' budgets, Federal Ministry of Finance, Destatis; Statistical Offices of the Federal and State Governments, Scope Ratings GmbH

[4] Ifo Institute 2019, Wachstum und Produktivität 2035 – Innovations- und Produktivitätslücken auf Ebene der Bundesländer.

#2: Significant divergence among Länder debt ratio trends.

Second, there is a significant degree of divergence between the Länder in both the size of the initial response to the crisis and thus the initial shock to the debt-to-GDP ratio, and the longer-term debt trajectory. The latter is driven by varying long-term economic growth prospects and debt redemption effects. For an overview of the DSA model results per Land, see Annex III.

Certain Länder's debt ratio paths differ significantly from the aggregate Länder benchmark. First, as a result of a very short redemption time horizon and a very low level of debt-to-GDP before the crisis, Saxony will return to having almost no debt before 2030. The state's debt-brake law only allows for an eight-year redemption duration, which reduces expenditure flexibility over the short-term and in the crisis recovery phase with still larger-than usual uncertainty. Pandemic debt redemption costs for Saxony are estimated to amount to around EUR 650m from 2023, or 4% of 2019 operating expenditure.

Berlin, as Germany's capital and one of three city-states, has made ample use of its emergency credit authorisations to fill a pandemic reserve to fund current and future expenditure related to the crisis. The increase in debt for the Land was significant, and it made full use of its emergency credit authorisation. Looking at the debt trajectory, Berlin is expected to return to a pre-crisis debt ratio relatively quickly despite the large debt shock due to very favourable long-term growth expectations. The city-state has seen real GDP growth exceeding the German average since 2014 and surpassed the German GDP per capita in 2019 for the first time since 2001. Further, its long-term prospects with 1.1% annual real GDP growth compare favourably to the German average of 0.7%.

Finally, some Länder have made very little use of emergency borrowing in the crisis, e.g. by drawing on existing budgetary reserves. Examples for these Länder include Saxony-Anhalt, Thuringia, Bremen and Hamburg. The budgets of these Länder will naturally not be exposed to sizeable redemption costs and their debt trajectories mainly depend economic growth effects.

The presented results are based on our baseline scenario, where the Länder will not utilise any more credit authorisations to increase borrowings beyond their June 2021 level. This is supported by a relatively low utilisation level of emergency credit authorisations at EUR 49bn, or 46%, as reported by the Bundesbank as of October 2021[5], and a broadly stable net debt issuance level in 2021 so far. Our adverse scenario with full utilisation of the remaining credit authorisations is shown in **Figure 6** on the previous page. Even in the adverse scenario, the Länder would return to pre-crisis levels by 2025, still well before the Bund.

Overall, the Bund will shoulder the pandemic debt burden longer-term, supporting Länder finances and credit profiles.

Overall, our findings support the view that the Bund will continue to carry the pandemic burden over the long-term, shielding Länder finances. This in turn allows for stricter Länder debt-brake rules to be met, which would only be achievable with significant expenditure cuts absent the observed level of federal support.

[5] Bundesbank 2021, Länderfinanzen 2020: Defizit aufgrund temporärer Pandemieeinflüsse, Ausnahmeklauseln auch für Reservebildung genutzt.

Annex I: Covid-19-related credit authorisations

EUR m	Credit authorisation (emergency clause)	Credit authorisation (cyclical component)	Total	Total, % of 2020 GDP*	Total, % of 2019 operating expenditure
Baden-Württemberg	7,200	6,400	13,600	3%	29%
Bavaria	20,000	0	20,000	3%	36%
Berlin	7,300	0	7,300	5%	29%
Brandenburg	4,401	255	4,656	6%	43%
Bremen	900	0	900	3%	19%
Hamburg	3,000	0	3,000	3%	22%
Hesse	12,000	816	12,816	5%	50%
Mecklenburg-Vorpommern	2,850	0	2,850	6%	42%
Lower Saxony	7,361	2,545	9,906	3%	33%
North-Rhine Westphalia	25,000	0	25,000	4%	38%
Rhineland-Palatinate	3,453	1,267	4,720	3%	30%
Saarland	1,395	653	2,048	6%	56%
Saxony	6,000	0	6,000	5%	37%
Saxony-Anhalt	259	0	259	0%	3%
Schleswig-Holstein	5,532	1,461	6,993	7%	63%
Thuringia	695	862	1,557	3%	19%
Länder	**107,346**	**14,259**	**121,605**	**4%**	**35%**
Central government	**356,666**	**113,764**	**470,430**	**14%**	**N/A**
Total	**N/A**	**N/A**	**591,805**	**18%**	**N/A**

N.B. * Regional nominal GDP for the Länder, German nominal GDP for Länder total and central government.

Source: Ifo Institute 2021, Nitschke 2021, federal states' budgets, Federal Ministry of Finance, Destatis, Statistical Offices of the Federal and State Governments, Scope Ratings GmbH

Annex II: Statistical overview

	Debt				Economy	
	Change in debt since end-2019*		Start of redemption of pandemic debt**	Redemption in years**	Real GDP change in 2020 (%, yoy)	Long-term real GDP growth (%, yoy)***
	EUR m	%-change				
Baden-Württemberg	3,609	8%	2024	25	-5.5%	0.9%
Bavaria	4,514	35%	2024	20	-5.5%	1.1%
Berlin	7,768	14%	2023	27	-3.3%	1.1%
Brandenburg	1,168	7%	2022	30	-3.2%	0.5%
Bremen	2,535	8%	2024	30	-7.0%	0.5%
Hamburg	1,113	3%	2025	20	-5.8%	0.9%
Hesse	4,050	10%	2021	30	-5.6%	0.7%
Mecklenburg-Vorpommern	941	12%	2025	20	-3.2%	-0.1%
Lower Saxony	10,062	17%	2024	25	-4.9%	0.7%
North-Rhine Westphalia	15,532	9%	2024	Max. 50	-4.4%	0.3%
Rhineland-Palatinate	1,045	4%	2024	Max. 25	-4.5%	0.6%
Saarland	804	6%	2025	30	-6.7%	-0.2%
Saxony	4,469	393%	2023	6	-4.4%	0.7%
Saxony-Anhalt	755	4%	2022	3	-3.9%	-0.2%
Schleswig-Holstein	781	3%	2024	39	-3.4%	0.5%
Thuringia	1,597	11%	2022	8	-4.6%	0.3%
Länder	**60,743**	**10%**	**N/A**	**N/A**		
Central government	**288,388**	**24%**	**2024**	**20**		
Total	**349,131**	**20%**	**N/A**	**N/A**	**-4.9%**	**0.7%**

N.B. * Debt owed to the non-public sector, end of June 2021 versus end of 2019. Source: Destatis.

** Pandemic debt is defined as debt incurred under the emergency clauses of the respective debt-brake laws.

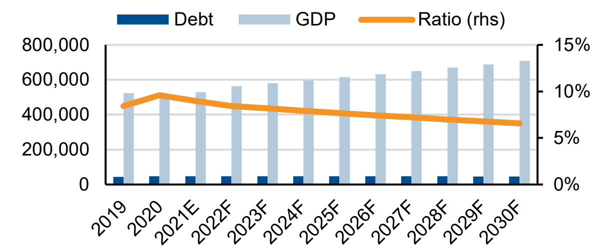
*** As estimated in Ifo Institute 2019, p. 57.

Source: Ifo Institute 2021, Nitschke 2021, Ifo Institute 2019, federal states' budgets, Federal Ministry of Finance, Destatis, Statistical Offices of the Federal and State Governments, Scope Ratings GmbH

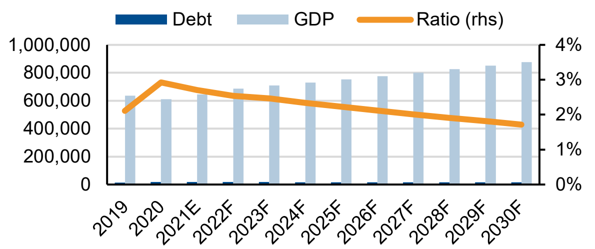
Annex III: Long-term debt to GDP projections for the German Länder

In EUR m (lhs) and % of GDP (rhs)

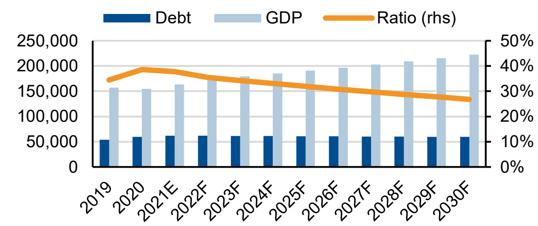
Baden-Württemberg



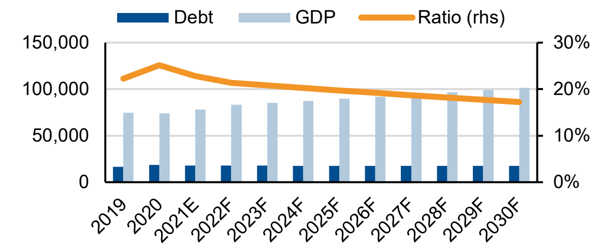
Bavaria



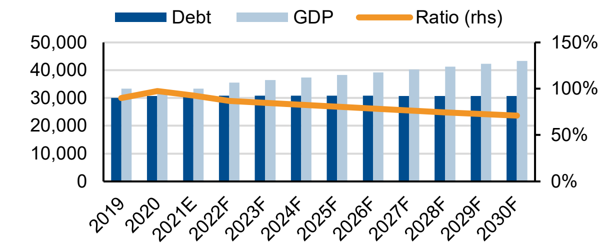
Berlin



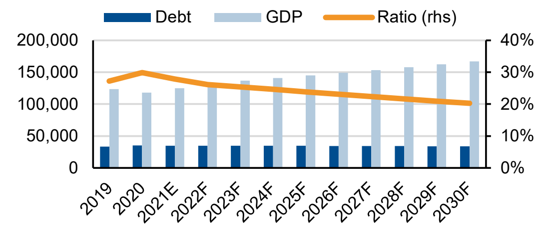
Brandenburg



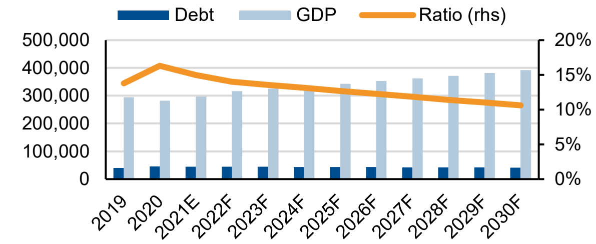
Bremen



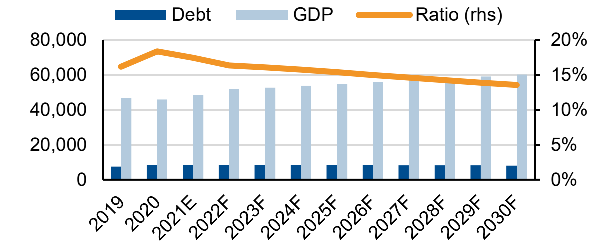
Hamburg



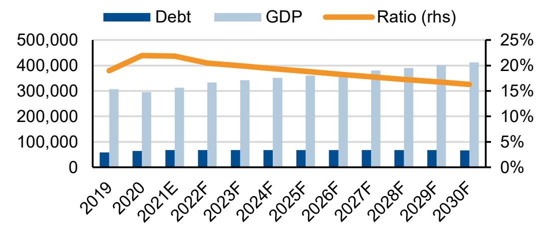
Hesse



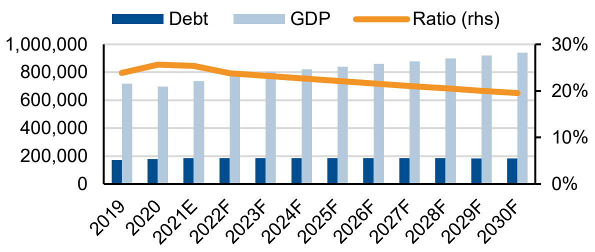
Mecklenburg-Vorpommern



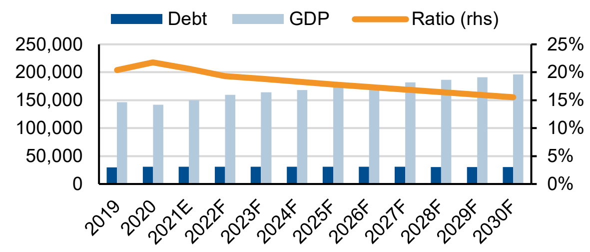
Lower Saxony



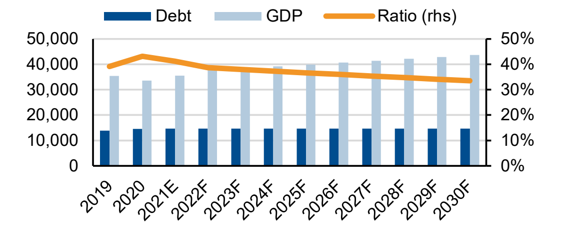
North-Rhine Westphalia



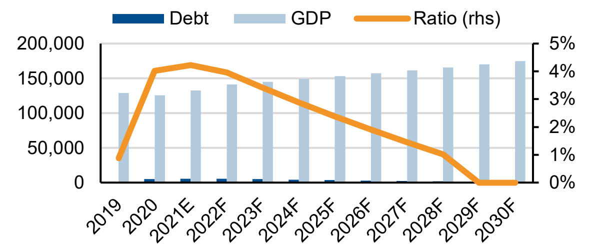
Rhineland-Palatinate



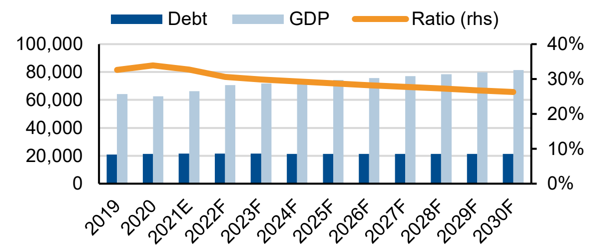
Saarland



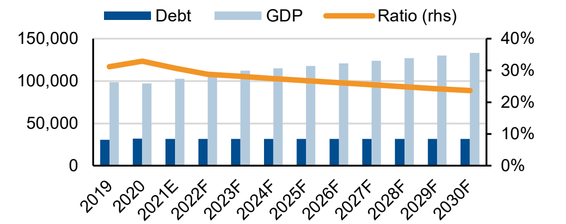
Saxony



Saxony-Anhalt



Schleswig-Holstein



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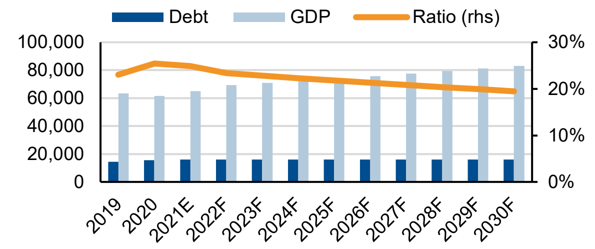

Source: Ifo Institute 2021, Nitschke 2021, Institute 2019, Federal states' budgets, Federal Ministry of Finance, Destatis, Statistical Offices of the Federal and State Governments, Scope Ratings GmbH

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