Issuer Guide
German Laender 2022

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ISSUER GUIDE
German Laender 2022

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Foreword

As was previously the case, the 16 German Bundeslaender continue to represent by far the largest sub-sovereign market in Europe. The outstanding volumes and annual issuance volumes of the Laender segment in Germany are higher than at any other sub-national level. Traditionally characterised by a steady supply of new bonds and (high) relative attractiveness versus Bunds, the Laender segment has always represented an interesting alternative to sovereign bonds. As a result, this sub-segment is among the most liquid, albeit not necessarily the most complex, markets in the European segment for supranationals, sub-sovereigns and agencies (SSA). In future – and above all after the coronavirus pandemic – issuance volumes are, however, likely to decline following the (re)application of the debt brake from 2023 at the earliest. In contrast to the federal government (Bund), this essentially prohibits any net borrowing on the part of the Laender not related to an emergency situation that is also beyond the control of the public sector. The debt brake represents one of the most important changes with regard to Laender finances for quite some time, as is the case with the reform of the federal financial equalisation system. In 2020, shortly after coming into force, the debt brake was suspended for 2020, 2021 and now also 2022 – due, as is well known, to the coronavirus pandemic – after the emergency paragraphs contained in the legislation were invoked. As a result, the debt brake is now expected to be reapplied in 2023 to facilitate the supplementary budgets of the federal government (and special funds) and the 16 Laender parliaments. These supplementary budgets were adopted with a view to mitigating the consequences of the coronavirus pandemic.

Ninth edition of the Issuer Guide German Laender

The Issuer Guide German Laender, which will now be published on a yearly basis once again, is part of a series of NORD/LB Markets Strategy & Floor Research products covering individual issuers and market segments in the global bond market. Following on from the first issue in 2013 − and an unplanned break in 2019 − this publication is the ninth edition in this format, which has consistently provided an extensive overview of the largest EUR market for sub-sovereigns. The focus of this Issuer Guide has always been to provide a relative comparison of this group of issuers and to highlight their respective idiosyncrasies. With the 16 Bundeslaender and the “Gemeinschaft deutscher Laender” joint issuance vehicle, we are once again firmly of the view this year that the present publication will offer our readers an extensive insight into the German Laender segment.

Laender versus Bundeslaender: a grammatical-legal alignment

According to the federal constitutional framework, a “Land” (as per official legal terminology; often referred to as a Bundesland in common German parlance; plural version: Laender/Bundeslaender), or federal state, is a partially sovereign member state of the Federal Republic of Germany. Since 1990, the Federal Republic of Germany has consisted of 16 federal states. According to the Basic Law (Grundgesetz [GG]; effectively the constitution of the Federal Republic of Germany), the Laender together do not merely represent some loose confederation of states, but rather form a sovereign federal nation. For this reason, although we have opted to adjust the headings this year, we will continue to predominantly refer to Bundeslaender in the main body text, since we also receive international recognition for greater returns and pick-ups with our “Beyond Bundeslaender” publication series, which shines a light on sub-sovereign issuers in other countries.

Print versions of all NORD/LB Issuer Guides aligned to specific needs
This year, we have decided to make the *Issuer Guide German Laender* available exclusively in PDF format for sustainability reasons. However, sustainable action always requires consideration: If you prefer the Issuer Guide in printed form for your daily doing, we would be pleased if you would contact your NORD/LB contact with the number of copies you require and the shipping address. Alternatively, you can contact markets@nordlb.de.

New chapter: Bundeslaender and ESG
Staying on the topic of sustainability, this year we will be dealing with ESG (Environmental, Social, Governance) aspects in connection with our analysis of the German Bundeslaender. Up to now, three Laender have published their own frameworks, under which they have already placed bonds: North Rhine-Westphalia leads the way (sustainability framework), followed by Baden-Wuerttemberg and Hesse (both green frameworks).

NORD/LB publications complementing our Issuer Guides
To complement the upcoming Issuer Guide, which aims to provide as comprehensive a market overview as possible, our publication spectrum also looks at specific market developments and fundamental changes in framework conditions across the entire SSA segment and covered bond market. These regular (in some cases weekly) publications, analyses and commentaries can be found in the usual manner on our website (https://www.nordlb.com/nordlb/floor-research) as well as via the NORD/LB Research Portal with Bloomberg (RESP NRDR <GO>). Should any of our readers not yet have access to these platforms, then please contact your account manager, send an email to markets@nordlb.de, or simply click here.

Overarching changes in the segment
The principle of federal loyalty and the old federal financial equalisation system resulted in a clear convergence of the credit profiles of the individual Bundeslaender, both with respect to each other and versus the federal government. The introduction and preparatory phase of the debt brake and the monitoring of Bundeslaender finances by the Stability Council represent additional factors that have served to heighten this effect in recent years. At the same time, Laender finances continue to face huge challenges. Growing municipal debt and high implicit pension liabilities are just two factors that are already making budget management significantly more difficult and which will come into focus again over the coming years in the wake of the coronavirus crisis. The reform of the federal financial equalisation system agreed at the end of 2016 reduces the previously increased pressure from the relationships among the Laender themselves. These and other major challenges (Covid-19, influxes of refugees, war, gas and energy prices, etc.) are impeding the significant progress that the Laender have made in connection with required budget consolidation efforts: interest coverage has improved on a continuous basis over the past few years, while debt sustainability had also been recovering until the pandemic hit. Nevertheless, fundamental and significant differences continue to exist between the individual Laender, a situation which, in our opinion, necessitates a relative analysis.

Conclusion
The aim of the present *Issuer Guide German Laender 2022* is to facilitate the relative comparison of German Bundeslaender against the backdrop of the constitutional and regulatory framework conditions. In particular, we highlight the differences relating to spreads and issuance volumes in light of the fundamental development of finances and the economy in the Laender. This differentiated analysis also includes a look at the Joint Laender (Ticker: LANDER) as an issuer of jumbos with a minimum volume of EUR 1bn.

Constitutional framework
Principle of federal loyalty

Federal loyalty as unwritten constitutional law

Art. 20 of the Basic Law (Grundgesetz; GG) defines Germany as a federal republic. A structure of this type is classified under constitutional law on the basis that the federal government (Bund) and federal states (Bundeslaender), as members of the federal republic, must collaborate with the aim of forging mutually beneficial ties. In his essay entitled “Unwritten Constitutional Law in a Monarchic Federal State” (Ungeschriebenes Verfassungsrecht im monarchischen Bundesstaat) published in 1916, Rudolf Smend shaped our understanding of the German principle of a federal state. As an unwritten facet of constitutional law, the relationship between the federal government and Laender, Smend writes, is based on a spirit of cooperation instead of one of pure subordination. In its decision of 21 May 1952, the German Federal Constitutional Court (Bundesverfassungsgericht) referred to Smend's interpretation and came to the view that the principle of federalism includes “a legal obligation on the federation (Bund) and all its members to ‘conduct themselves in a way that is favourable towards the federation’” (Federal Constitutional Court Decision [BVerfGE] 1, 299). As such, the ruling gave rise to our contemporary understanding of the principle of “federal loyalty”, as it is also known.

Implementation and definition of the principle of federal loyalty: Bremen and Saarland 1992

In 1992 an "extreme" budgetary crisis was identified in the Laender of Bremen and Saarland, which was subsequently confirmed by the Federal Constitutional Court for both Laender. The Court also defined the principle of federal loyalty: "If a member of the German federal community, whether it be the federal government or one of the federal states, is in the grip of an extreme budgetary crisis, the federal principle is defined by the duty of all the other members of the German federal community to render assistance to the affected member. The objective shall be to stabilise the budget based on concerted measures" (BVerfGE 86, 148). As a result, both Bremen and Saarland received payments to help restructure their budgets in the wake of the extreme budgetary crisis in these Laender.

Extreme budgetary crisis as a prerequisite for federal loyalty to apply

The decision handed down by the Federal Constitutional Court created a prerequisite for federal loyalty to apply or for assistance to be provided by the Bund and Laender: an extreme budgetary crisis. The Federal Constitutional Court used a total of three indicators to assess the Bundeslaender budgets and to determine whether an extreme budget crisis existed. The credit financing ratio, as the ratio of net borrowing to the budgetary revenue and expenditure; the interest-tax ratio, as the ratio of payable interest to taxes received; and the primary balance, as the difference between the primary or core expenditure and the primary revenue, in which the net borrowing and other items are excluded. In the case of both Bremen and Saarland, the budgetary crisis was assessed as extreme on the basis of these indicators in comparison with the other Bundeslaender.

The case of Berlin in 2002
In 2002, the Bundesland of Berlin tested the concept of federal loyalty. Berlin's Senate identified an extreme budget crisis, whereby it was concluded that federal restructuring aid would be an unavoidable measure required to help consolidate the city state's budget. The budgetary situation was regarded by the Berlin Senate as fulfilling the requirements for entitlement to restructuring aid under constitutional law. Berlin's application for a judicial review submitted to the Federal Constitutional Court was, however, rejected. The Court regarded restructuring obligations on the part of the federal government and claims by a Bundesland in distress "as alien to the federal financial equalisation system, based on the purpose and spirit of Art. 107 (2) Sentence 3 of the Basic Law (Grundgesetz; GG). They are in conflict with the principle implying that autonomous budgetary policy must be dealt with by the Bundeslaender independently and on their own responsibility" (press release issued by the Federal Constitutional Court, No. 96/2006 of 19 October 2006). Although the Federal Constitutional Court considered the existence of a budgetary crisis to be a consequence of insufficient funding, the Court viewed it as an indication that the federal financial equalisation system needed to be overhauled in general, rather than a need for more supplementary federal grants (BEZ). The Federal Constitutional Court nevertheless emphasised that federal aid provided through restructuring funding was admissible as a last resort.

Federal aid only in extreme budget crisis
The Court added that this was only permitted and necessary if a budgetary crisis was considered extreme in relation to the budgets of the other Laender. However, this was not the case in Berlin, it concluded. Nevertheless, the Court did identify potential for additional consolidation measures. In this context, it expressly pointed to the significantly higher expenditure by Berlin in comparison with Hamburg, e.g. on "cultural affairs", among other aspects.

Comment
The principle of federal loyalty as unwritten constitutional law is a basic element of the German principle of a Bundesland. The most recent judgement of the Federal Constitutional Court once again increased the pressure on the federal government (Bund) and Laender to reform the financial equalisation system should budgetary emergencies become increasingly apparent or were they to actually arise. We nonetheless do not believe that the likelihood of support from Bund and Laender in extreme emergency situations has decreased as a result of the most recent judgement. On the contrary, the increased pressure on both Bund and Laender led to an informed debate on revisions to the financial equalisation system and ultimately to a proposal to reform it in October 2016. The tensions between contributor and recipient Laender were subsequently reduced significantly, giving the Laender budgetary certainty with regard to the debt brake applicable from 2020. From our point of view, this is certainly to be assessed positively. From now on, a new and reformed system will be in force, in which less money will be redistributed horizontally between the Laender. Instead, VAT is distributed from the outset in such a way that Laender with many structurally weak municipalities receive more – the aim here being to avoid any debate between contributors and recipients. Moreover, the federal government is to ease the burden on the Bundeslaender to the tune of EUR 10bn per annum. At the same time, the tasks assigned to the Laender were modernised in key areas and the competencies of the federal government strengthened.

Constitutional framework
The federal financial equalisation system

Federal financial relationships in Germany

With the federal financial equalisation system, Germany has at its disposal a system – similar to other federal nations – aimed at harmonising the financial power of the individual Bundeslaender, so that these are able to fulfil the tasks incumbent upon them. Furthermore, the federal financial equalisation system is intended to provide a platform for the creation and maintenance of equal living conditions across the whole of Germany. The special feature of the German system up to and including 2019 was a pronounced horizontal component of equalisation, via which money was distributed directly between the individual Laender. After the old regulations, namely the Financial Equalisation Act (Finanzausgleichsgesetz) and the Standards Act (Maßstäbegesetz, MaßstG) expired at the end of 2019, a revised version of the federal financial equalisation system within the meaning of Art. 107 GG has been in force since the beginning of 2020, in which the horizontal distribution level no longer plays such an important role. In the form applicable up to the end of 2019, the federal financial equalisation system comprised a vertical distribution component of all tax revenues at the level of federal government (Bund), Laender and municipalities, a horizontal VAT distribution component, the financial equalisation of the Laender in the actual sense of the phrase and federal supplementary grants (Bundesergänzungszuweisungen; BEZ).

Old system structured in four levels

The first level of the old federal financial equalisation system was focused on the distribution of joint taxes to the federal government, the Laender and the municipalities. The municipalities were entitled to a share of income tax and VAT. After this came the horizontal distribution of tax revenues. After allowing for marginal corrections, the principle of local tax receipts applied to income and corporation tax. A different distribution key was used for VAT, whereby up to 25% of tax receipts were initially distributed to Laender with below-average per capita tax revenues, with the aim of cutting gaps in financial strength and implementing an initial adjustment. The remaining Laender portion of VAT was distributed across all the Laender on a per capita basis. The third level of the old federal financial equalisation system comprised financial equalisation payments between the Laender themselves (closest to actual sense of the phrase in general), in which the financially stronger Laender made payments to the financially weaker Laender. As was the case with the distribution of VAT, the aim here was not to completely converge the financial power of the Laender, but rather to bring it closer to the average. To determine the payment amounts, the financial strength per capita after VAT equalisation was calculated, whereby the populations of the city states (+35%) in addition to Brandenburg, Mecklenburg-Western Pomerania and Saxony-Anhalt (+2-5%) were notionally increased to take account of the elevated funding requirements in these Laender. The underlying revenues also contained 64% of the revenues at municipality level in the respective Bundesland, reflecting the fact that providing financial assistance to the municipalities was, and remains, a task incumbent upon the Laender. Under this system, the Laender displaying below average financial strength benefited from equalisation grants paid out by the Laender whose financial strength was deemed to be above average. The ranking of the Laender in terms of their respective financial strength was not altered by this.

Fourth and final level

The fourth and final level of the old federal financial equalisation system was composed of federal supplementary grants, otherwise referred to as BEZ payments here. Generally speaking, these grants represented a form of funding that was paid to recipient Laender directly from the federal government. They can also be sub-divided into general BEZ and special-need BEZ (Sonderbedarfs-BEZ; SoBEZ). After taking into account financial equalisation payment from the Laender, every Bundesland that still had less than 99.5% of the average financial strength per capita received general BEZ grants. SoBEZ payments were intended for Laender facing extraordinary financial burdens. However, these payments were not designated for a special purpose. The main recipients of SoBEZ payments were the Bundeslaender that made up the former East Germany. These Laender were awarded such grants within the framework of Solidarity Pact II (Solidarpakt II) in order to cover any special charges resulting from the division of Germany. Moreover, Bundeslaender in which disproportionately high costs of political leadership were identified, which primarily impacts small Laender, also received SoBEZ payments, as the fixed costs of political leadership in these Laender are borne by fewer inhabitants.

Summary of the old federal financial equalisation system

The public perception of the old system of equalisation was shaped by debates about net payer and net recipients, above all among the Laender themselves. In this context, the former group tended to hold a more negative opinion of the system than the latter. Overall, it was clear that the East German Laender and Berlin received the highest funding across the period under review as a whole since 1995, the costs of which were overwhelmingly borne by Laender in the south and west of Germany. On the net payer side, Bavaria contributed the largest sum in the period under review, with Baden-Wuerttemberg taking the silver medal. East German non-city states were at all times net recipients across every segment of the federal financial equalisation system since its inception.

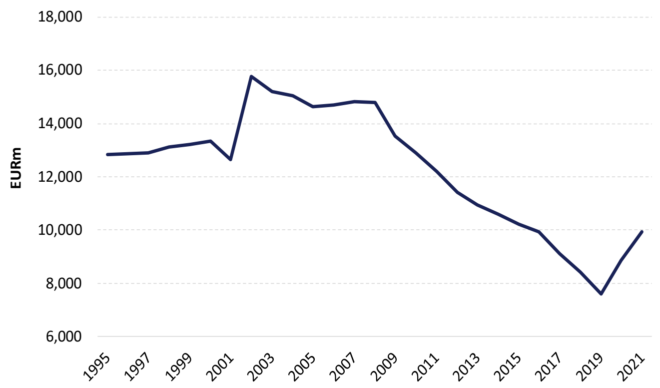
Bavaria, Baden-Wuerttemberg and Hesse by far the largest payers in the old system of financial equalisation among the Laender (LFA)...

The distributed volume of financial equalisation payments between the Laender themselves in the actual sense of the phrase (LFA) increased significantly from EUR 1.5bn to EUR 5.7bn following the integration of the new Laender in the system in 1995, which was followed by sustained growth in the distributed volume up to the point in 2021 that a peak value of EUR 17.1bn was recorded. The main payers across this period from 1995 were Bavaria (EUR 95.0bn), Bad.-Wuer. (EUR 75.9bn) and Hesse (EUR 66.2bn). Moreover, these three Laender were the only ones to always be net payers across the period under review. A glance at the statistical archives dating back to 1967 reveals that Bad.-Wuer. remains the only constant contributor, although Hesse has only switched to net recipient side on a single occasion. Under the LFA, the East German Laender are the largest beneficiaries, with Berlin taking top spot here at EUR 82.7bn, followed at some distance behind by Saxony (EUR 31.9bn). It is additionally noteworthy here that the difference between the contributions made by the largest payers and the allocation to the main recipients increased substantially over time, as was the case under the UStA, which signalled a rising economic disparity that holds true in both absolute and relative per capita amounts. In 2021, Bavaria paid a total of EUR 647 per capita, while Bremen received EUR 1,230, equating to a difference of EUR 1,877. In 2010, this value totalled EUR 1,127 (payer Hesse: EUR 289; recipient Berlin: EUR 838), while back in 1995 when the new Laender were first integrated in the LFA, the equivalent figure stood at EUR 805. It is also worth noting that Bavaria had been a recipient under the LFA up to the mid-1980s before achieving its status as the largest net payer. In contrast, NRW definitively switched to the recipient side of the system from 2010 onwards (sole exception over this period: 2020), having largely been a net payer before this time.

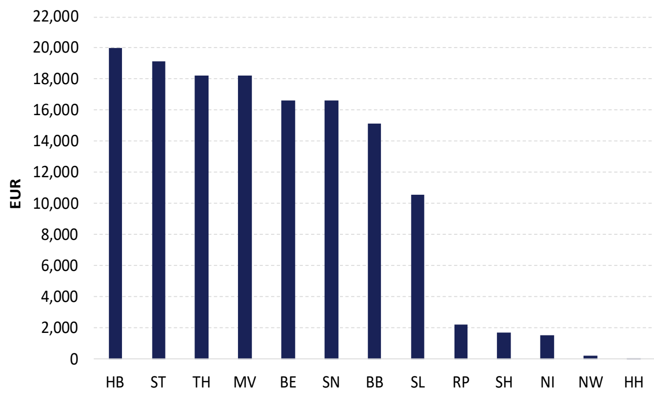
...and do not qualify for federal supplementary grants

As federal supplementary grants (BEZ) are intended for Bundeslaender with below-average financial strength in the reformed system too, it should come as little surprise that the economically powerful payer Laender under the LFA – Bavaria, Baden-Wuerttemberg and Hesse – receive no funding from this pot. The "new" Laender and Berlin have primarily benefited to the greatest extent from the payments made under Solidarity Pact II, which are contained within BEZ. The "new" Laender and the city state of Berlin account for roughly two thirds of the volume of EUR 331.4bn. In the overall calculation, Saxony is the largest recipient, banking a volume of EUR 67.7bn. In West Germany, Bremen and Lower Saxony benefit to the greatest extent from BEZ payments (EUR 13.7bn and EUR 12.2bn respectively). If we look at the overall volume of BEZ received in relation to number of inhabitants in 2021, Bremen is the largest beneficiary at EUR 20,015 per capita, followed by the new Laender and Berlin. Since 2009, the annual volume of BEZ payments had been on the slide, although the volume then rose sharply again in 2020 on account of the new federal financial equalisation system. In view of the greater role now incumbent upon the Bund, this trend is likely to continue over the years to come.

Annual BEZ volume



BEZ received per capita 1995–2021



Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

Consolidation and restructuring aid

Apart from the above-mentioned mechanisms, the instrument of consolidation aid also existed up to 2019. Through this, the Laender of Berlin, Bremen, Saarland, Saxony-Anhalt and Schleswig-Holstein received additional funds from the federal budget to enable them to comply with the stipulations of Art. 109 (3) of the Basic Law (Schuldenbremse; referred to as the debt brake in English), which was applicable from the start of 2020 onwards. In total, Bremen received EUR 300m per annum, while Saarland was entitled to a sum of EUR 260m on an annual basis. Berlin, Saxony-Anhalt and Schleswig-Holstein each received EUR 80m annually, with two-thirds of the payments being made in the budget year in question and the remaining third following 12 months later. The Stability Council was responsible for monitoring compliance with consolidation obligations, including the complete dismantling of the structural financing deficit by 2020. Since 2020, Bremen and Saarland continued to receive additional aid of EUR 400m each from the Bund. This is known as restructuring aid and is linked to certain conditions with regard to debt reduction and budget consolidation as well as measures to be implemented to increase the economic and financial strength of the Laender (§2 Law on Restructuring Aid [Sanierungshilfengesetz; SanG]). In contrast to the consolidation aid, it is the Federal Ministry of Finance (BMF) that is responsible for the assessment is this instance.

Restructuring aid payments case study: Bremen

In this short case study, we shall take Bremen as an example to explain how the city state must comply with the restructuring obligations set out in the Law on Restructuring Aid (Sanierungshilfengesetz; SanG) and defined in the administrative agreement in order to qualify for restructuring aid from the federal government. The administrative agreement predominantly specifies the concept of budgetary repayments as well as regulating Bremen's reporting and disclosure obligations to the Federal Ministry of Finance (BMF). Bremen must submit a yearly report by 30 April of each year (first such deadline: 30 April 2021). This allows the budgetary repayments for the respective reporting year to be determined, while the report also comments on the measures implemented with the aim of reducing excessive debt and strengthening the economic/financial position of the city state. The BMF also audits this report with a view to verifying whether or not the conditions for awarding restructuring aid have been met. As such, the BMF can, at the request of Bremen, permit deviations from the ordinarily prescribed budgetary repayments in justified exceptional cases. As we set out in the previous paragraph, this should not be confused with the consolidation procedures that expired at the end of 2020 for the Laender of Berlin, Bremen, Saarland, Saxony-Anhalt and Schleswig-Holstein. A structurally balanced budget was planned for 2020. In 2021, the Stability Council determined that Berlin and Schleswig-Holstein had complied with this requirement. Due to the exceptionally high strain on Laender finances caused by the pandemic, the Stability Council identified that a specific emergency situation had occurred and therefore deemed the lack of a balanced budget in Bremen, Saarland and Saxony-Anhalt to be permissible.

Criticism of financial equalisation and the 2020 reform

Criticism has been directed at the federal financial equalisation system: for example, one argument cited was that by seeking to strongly align the financial strength of the Laender, there would be insufficient incentives for all parties involved to improve the economic situation in the respective Bundesland, but especially for the recipient Laender. In 2013, Bavaria and Hesse initiated legal proceedings with the Federal Constitutional Court in order to verify the constitutional conformity of the LFA. However, these Laender subsequently withdrew their claim in 2017 when the revised form of the federal financial equalisation system began to take shape. Since 2020, new rules have been in force governing federal financial relationships that provide additional money to the Laender but simultaneously award greater powers to the federal government. The convergence of financial strength is now handled by way of VAT distribution payments, with the scope of federal supplementary grants (BEZ) expanded too. Under the reformed system, the advance VAT equalisation component and LFA have been merged into what is now known as Financial Power Equalisation (Finanzkraftausgleich; FKA). As the financially strong Laender now give up a portion of VAT revenues but, in return, no longer make payments out from their own budgets, the concept of the Laender being categorised as either “payers” or “recipients” is now obsolete. Another result of merging the UStA and LFA components is that North Rhine-Westphalia (NRW) has assumed a new role as an economically strong Bundesland. Under the former arrangements, NRW received payments from the LFA between 2010 and 2019, while it posted payment outflows within the framework of the UStA. The distribution of VAT is conducted on the basis of number of inhabitants and financial power, with the share of municipal revenues taken into account upped to 75% and a larger portion of VAT going to the Laender overall. The notional population increases, the aim of which is to take into consideration the “structurally induced increased needs” of certain Laender, have, as was previously the case, been retained. Furthermore, as part of BEZ payments, federal government grants to the municipalities have been introduced in an effort to address differences in financial power.

The result

During the process of reworking the federal financial equalisation system, the top priority was to ensure that no Bundesland should be worse off than under the old framework. Under the revised version of the federal financial equalisation system, the Laender receive an additional sum of around EUR 10bn per year overall. If we take into consideration the fact that the Solidarity Pact II also expired at the end of 2019 and that no more payments will be made under this framework, the increase in funding paid out to the Laender actually amounts to just EUR 4bn. However, the request of the Laender to link this sum to dynamically increasing VAT receipts has not been fully met. Instead, a compromise was agreed in which a partial amount (EUR 1.42bn) is to be dynamically linked. In return for the additional financing for Laender and municipalities, the federal government has had additional powers at its disposal since 2020.

Additional powers for the federal government

The additional powers for the federal government (Bund) essentially involve:

1. *Management of motorways at Bund level*

   In contrast to the previous arrangement, in which the Laender were responsible for managing motorways on behalf of the federal government, the Bund will in future be solely responsible for the construction and maintenance of major roads through the formation of an infrastructure company under private law (motorway administration).

2. *Digitisation through a central citizen portal set up by the Bund*

   A new citizen portal will lead to more uniform standards for online administration applications. The aim here is to make administrative procedures more efficient.

3. *Investment assistance from the Bund "in areas of importance for the overall interest of the state"*

   In future, it is to become easier for the federal government to participate in financing for local authority projects. In particular, extended co-financing capabilities in relation to the education infrastructure of financially weak local authorities are planned.

4. *Monitoring and control rights for the Stability Council and Federal Court of Auditors*

   Additional powers to monitor the use of funds at Laender level.

5. *Strengthening tax administration powers at Bund level*

   Strengthening of tax administration powers, particularly in the area of information technology.

New “municipal financial power allocation” for local authorities

In the case of general BEZ, the thresholds and tariffs for the equalisation payments have been raised. For local authorities, the implementation of a "municipal financial power allocation", which is to be used to cover gaps in financial power at municipal level, is likely to be of primary interest. The previous special-need BEZ grants, which were mainly of benefit to the eastern German Bundeslaender, were discontinued at the end of 2019, while the former horizontal equalisation between financially strong and financially weak Laender has been diluted. At the same time, the Bund will assume greater financial responsibility for the Laender by way of increased verticality in the system, while the dependency of the Laender on the federal government will also rise as a result of this.

Local authorities better off…

From a purely financial viewpoint, the impact on municipalities of reorganising Bund-Laender finances is certainly to be welcomed. The higher weighting of the financial situation of a Bundesland's municipalities within the scope of VAT allocation, as well as the structuring of BEZ based on the financial strength of the municipalities, will lead to greater account being taken of municipal financial power in the federal financial equalisation system and will lead – at least in theory – to the conclusion that the local authorities will have more solid finances following the new system taking effect. In practice, however, they only stand to benefit if the Laender actually forward the higher revenues on to the local authorities. This is assured in the Laender in which a combined rate or a uniformity principle has been established. There is, however, no generally applicable statutory allocation practice at municipality-Laender level. There is therefore a risk that only some of the extra funds will be forwarded to the municipalities and instead will end up in the general budget of the respective Bundesland. In addition, the municipalities stand to directly benefit from the additional federal funds for educational infrastructure. This is where the dependency on the federal government also increases. Added to this is the fact that linking the federal investment to the financial weakness of the municipalities acts as a disincentive for the Laender to provide their local authorities with sufficient financial resources off their own back.

…at the expense of increased dependency on the federal government

This additional federal assistance in the field of education, however, also means that the Laender bear rather less responsibility in one of their core areas: cultural policy. In future, this could result in local authorities not only being more directly dependent on the Bund, but also to a greater extent as well. With the introduction of a nationwide citizen portal, critics also pointed to the potential risk of interference in the administrative capacities of local authorities.

Greater convergence fails to materialise

As a whole, the Laender will benefit from the reorganisation of Bund-Laender finances and the resultant additional revenue to be provided by the federal government. For example, general BEZ payments alone rose from EUR 6.6bn in 2020 to a total of EUR 7.7bn in 2021. Added to this was a sum of EUR 1.24bn from the new BEZ in connection with efforts to compensate for low municipal fiscal capacity and average-oriented research funding equalization payments of EUR 128m. However, there was little to indicate greater convergence on a Laender basis over the course of 2021, with the gap between the highest and lowest levels of financial strength as measured by FKA and BEZ actually widening again versus 2020. In this context, those Laender deemed to be particularly weak in terms of financial strength have continued to benefit to an above-average extent, although the rearranged system has also led to savings for the financially strong Laender too.

Bundestag approves comprehensive federal government-Laender financial reform

Before the new regulations could be implemented, the Basic Law had to be amended in 13 sections. For this, a two-thirds majority in both chambers of the German parliament, the Bundestag and the Bundesrat, was required. The agreement on the sections to be reformed and the need to restructure the financial equalisation system made it highly likely in advance that the required majority would be comfortably achieved. In principle, the revised version is designed to apply for an unlimited period, unless at least three Laender and the federal government request a further reform after 2030. This gives the federal government a vetoing minority. The reform of the financial equalisation system was approved on 1 June 2017.

All change for the federal financial equalisation system?

The first two years of the new federal financial equalisation system have been impacted by a series of special effects connected to the coronavirus pandemic. However, as these have left their mark across all Laender, some insights can already be gained and conclusions drawn from these skewed first couple of years. As outlined previously at the beginning of this section, the changes made to the federal financial equalisation system will primarily lead to the Bund assuming a more prominent role as well as to a slight improvement in the financially strong and particularly financially weak Laender. With North Rhine-Westphalia again switching then back to the collection of financially weaker Laender, this group once again constitutes the majority of the German population (56%). As such, a minority of the German population is now once again responsible for equalisation payments granted to the financially weaker majority. The abolition of the concept of Laender being categorised as either "net recipients" or "net payers" is more of a political detail and does not signify any erosion of solidarity between the Laender themselves. Under the new federal financial equalisation system, Bavaria and Baden-Wuerttemberg are again foregoing their entitlement to a sum of just under EUR 13bn. As calculated in advance, expenditure at federal government (Bund) level was far higher than under the old system. For example, at EUR 7.7bn in 2021, general BEZ payments were well in excess of the equivalent value recorded in 2019 (EUR 4.5bn). At this juncture, it is worth covering the new BEZ payments again: in this context, the new equalisation payment for low municipal fiscal capacity is, in particular, responsible for some unorthodox configurations. Take Saarland as an example: in 2021, this Bundesland received an additional sum of just under EUR 19m, despite the fact that after financial equalisation and general BEZ payments are taken into account, it boasts greater financial strength than Bremen, which came away empty handed. The new supplements also harbour the potential to drastically alter the order of financial strength among the Laender. For example, after factoring in FKA payments, although before BEZ payments are taken into account, the relative financial strength of Mecklenburg-Western Pomerania stood at a score of 90.4 points (Lower Saxony: 97.2 points). However, this subsequently shot up to 99.6 points following BEZ payments of EUR 759m in total – of which EUR 143m was intended to offset particularly weak municipal fiscal capacity. In contrast, Lower Saxony received BEZ payments of EUR 879m but no equalisation payments to offset the fiscal power of its municipalities, and scored 99.2 points for its financial strength. With Mecklenburg-Western Pomerania having received equalisation payments to offset the low fiscal power of its municipalities, this Bundesland was able to rank higher in the financial power league table than Lower Saxony. Regarding the average-oriented research funding equalisation payments, it should first and foremost be noted that these are uncommitted funds, which can therefore be used by the recipients to cross-subsidise other budget items. In view of their low volume (EUR 128m), however, these payments currently have little impact on Laender budgets.

Comment

The task of the federal financial equalisation system is to provide a platform for the creation and maintenance of equal living conditions across the whole of Germany. Despite the fact that the distributed volumes of UStA (VAT equalisation) and LFA (horizontal financial equalisation between the Laender) have risen steadily in the past, it is clear that there are still significant financial discrepancies, in particular between West German and East German Bundeslaender, despite the fact that reunification took place more than 30 years ago now. However, there are some discrepancies among the West German Laender, as the majority of equalisation payments come from just three Bundeslaender. Nevertheless, it can be argued that the revised system offers greater incentives for the Laender to strive to improve their respective financial and economic situations.

Challenges for Laender finances
Debt brake and monitoring by the Stability Council

Debt brake to bring Laender net borrowing to an end in future
As far back as the signing of the Treaty of Rome, officially referred to as the Treaty establishing the European Economic Community (or EEC Treaty for short), subsequently renamed the "Treaty on the Functioning of the European Union" in 2009, the signatory countries agreed to keep a limit on public deficits. This requirement was implemented in German law in the form of Art. 109 of the Basic Law (Grundgesetz; GG) in 2009. The federal government (Bund) is therefore barred from generating any structural deficits that exceed 0.35% of nominal GDP, which it adhered to between 2012 and 2019. For the German Bundeslaender, the debt brake obliges them to manage without any structural deficits and the associated net borrowing. Aside from cyclical additional expenditure, exceptions are only permitted for natural disasters and exceptional emergency situations. The aim of these provisions is to maintain budgetary discipline as intended for the Stability and Growth Pact and to adhere to the Maastricht criteria on structural deficits and sovereign debt. An emergency situation as indicated above materialised with the onset of the coronavirus pandemic, giving the Bund cause to agree supplementary budgets in both the March and June of 2020. The Bundestag, the German federal parliament, then also approved two supplementary budgets for 2021. As a result, it was again necessary to suspend the debt brake at the level of both Bund and Laender up to and including 2022. After all, in this context, the Laender are also planning for additional expenditure. For example, the Bavarian Landtag (regional parliament) approved a total of around EUR 20bn in several steps to combat the consequences of the crisis (repayment to begin from the 2024 budget year onwards), with North Rhine-Westphalia also adopting two supplementary budgets in 2020 (overall total here roughly EUR 25bn). The budget for 2021 provides for the continuation of the rescue package, which is why the funds totalling EUR 25bn are still available for 2022 as well. At Bund level, a transitional period in which existing structural deficits were to be dismantled ran between 2011 and 2016. The Laender also found themselves in a transitional phase in which they had to align their budgets in such a way that compliance with the debt brake would have been possible under normal circumstances from 2020 onwards. The legal basis for this transitional period was provided by Art. 143d GG.

Precise wording
The debt brake is enshrined in Art. 109 (3) of the Basic Law (GG) as follows: "The budgets of the Federation and the Laender shall in principle be balanced without revenue from credits. The Federation and Laender may introduce rules intended to take into account, symmetrically in times of upswing and downswing, the effects of market developments that deviate from normal conditions, as well as exceptions for natural disasters or unusual emergency situations beyond governmental control and substantially harmful to the state's financial capacity. For such exceptional regimes, a corresponding amortisation plan must be adopted. Details for the budget of the Federation shall be governed by Article 115, with the proviso that the first sentence shall be deemed to be satisfied if revenue from credits does not exceed 0.35 per cent in relation to the nominal gross domestic product. The Laender themselves shall regulate details for the budgets within the framework of their constitutional powers, the proviso being that the first sentence shall only be deemed to be satisfied if no revenue from credits is admitted."

Implementation by the Laender

Since 2010, the Stability Council has been monitoring the financial situations of the Bund and Laender. The committee meets every six months and has the power, for example, to prescribe restructuring programmes should any anomalies be determined in respect of the budgetary situations at either Bund or Laender level. The Laender had already been taking the debt brake into account in their respective budgetary planning processes in the years preceding its application (at the start of 2020). According to disclosures from the 25th meeting of the Council, the significant increase in revenues of +12.1% (EUR +112.0bn) was the key factor behind the improvement in the budget balance. The Stability Council is of the opinion that an extraordinary emergency situation as set out in Article 109 (3) Sentence 2 GG can still be identified for 2022 on a Laender-specific basis. In addition, however, the Stability Council also anticipates that the upper limit for the structural general government fiscal deficit will be exceeded for the years 2022 through to 2025. Compliance with the budgetary target of 0.5% of GDP is accordingly only expected from 2026 onwards (at its 23rd meeting in 2021, the Stability Council had originally anticipated a return to the consolidation path from as early as 2024). At this point in time, the Stability Council is refraining from recommending measures to reduce the excessive financing deficit.

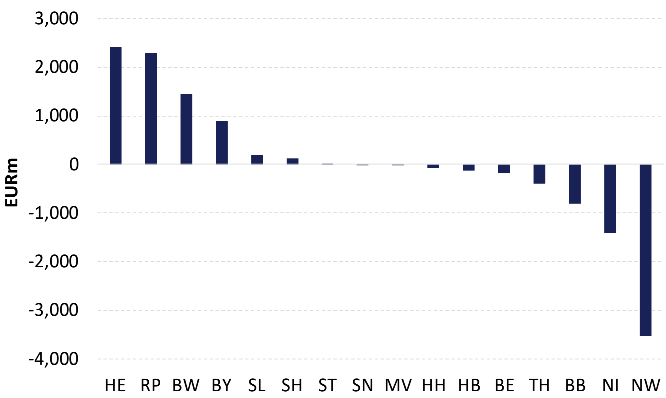
Results of the most recent Stability Council meeting

At the 25th meeting of the Stability Council, there was a report on the results of the audit examining an impending budgetary crisis, as defined in Section 4 (2) of the Stability Council Act, in Bremen. Accordingly, there are signs of an imminent budgetary emergency in the Free Hanseatic City of Bremen after it was found to have exceeded the threshold values for the majority of the key metrics and the medium-term budgetary development projections. After no anomalies were identified in June 2021 when the recovery plan has been completed, the picture started to change again as early as autumn 2021. In this context, anomalies in the metrics have been found for the financial planning period. The Stability Council expressly points out that this indication can, however, be invalidated by some powerful arguments. Nevertheless, the Stability Council also points out that, taking into account the lack of comparability of data from the pandemic years 2020 and 2021, it is not possible to conclusively assess the extent to which the anomalies indicate a genuine budgetary emergency. Against this background, the Stability Council is sitting on the proverbial fence, having concluded at the present time that the existence of an impending budgetary emergency can neither be determined nor refuted with sufficient certainty. The Evaluation Committee has therefore been instructed to continue its examination once more up-to-date data is available. The results of this latest audit are expected to be presented by the Evaluation Committee at the 26th meeting of the Stability Council in December 2022. The development of key budget metrics is also reflected in the number of anomalies identified by the Stability Council. A key budget metric (structural financial deficit per capita, credit financing ratio, debt level per capita and interest-tax ratio) is generally regarded as non-compliant when the value exceeds or falls short of a specific, defined threshold over several years. From 2011 (former peak of identified anomalies: 29) up to 2019 (historical low: 16), the number of anomalies had fallen significantly in the run up to the pandemic. After a new peak total of 32 anomalies was identified in 2021, the number should start to decline again in 2022, according to the financial planning data. Further insights into the half-yearly Stability Council meetings can be found in our weekly publication: the Covered Bond & SSA View. Prior to the onset of the coronavirus pandemic, none of the 16 Bundeslaender had planned a budget balance for the coming year that fell below the threshold values defined by the Stability Council. Based on the financial planning released by the Laender, it is worth noting that the debt brake could probably have been adhered to under normal circumstances.

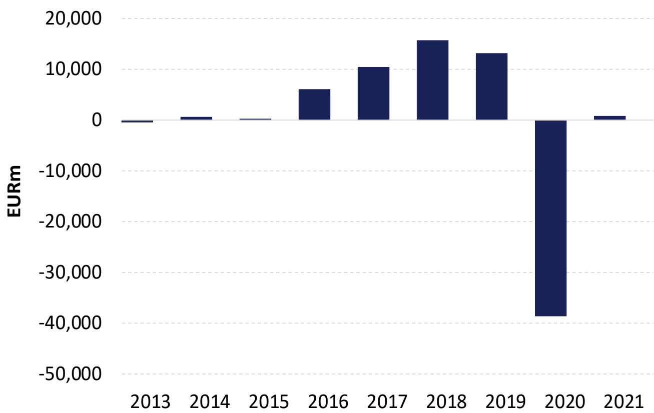
Economic framework conditions

The historically low interest rates, which are now gradually being raised again, as well as ongoing high employment rates have really boosted efforts aimed at consolidating public budgets over the last few years, which has been reflected both on the income as well as the expenditure side. In addition, price-adjusted economic growth in the decade prior to 2020 was consistently positive, which has also been favourable for public budgets. According to the most recent calculations from the Federal Statistical Office (Destatis), the gross domestic product (GDP) of Germany grew by +2.6% year on year in 2021. As a result, the positive trend observed in the years prior to the Covid-19 pandemic has been resumed (in 2020, GDP collapsed by -4.6% year on year due to the pandemic). Despite the fact that new infections reached new peaks following the emergence of the Omicron variant at the end of 2021 and into the new year, the economic impacts of this wave of the pandemic became increasingly less severe. In contrast, however, Putin's war of aggression against Ukraine and the resultant sanctions against Russia have seen supply chains impacted further. With the supply side already struggling with bottlenecks, sustained high levels of demand are leading to increased inflationary pressures. There also continues to be a certain degree of dependency on Russian energy providers, meaning that there is the risk of reduced economic output or, in a worst-case scenario, a genuine recession. The Council of Experts for the Economy forecasts GDP growth of +1.8% in Germany for 2022, and growth of +3.6% for 2023. The flip side of the coin, however, is that inflation is expected to reach 6.1% for 2022 and 3.4% for 2023 (consumer price index). Moreover, developments in the China-Taiwan conflict will have to continue to be monitored as well.

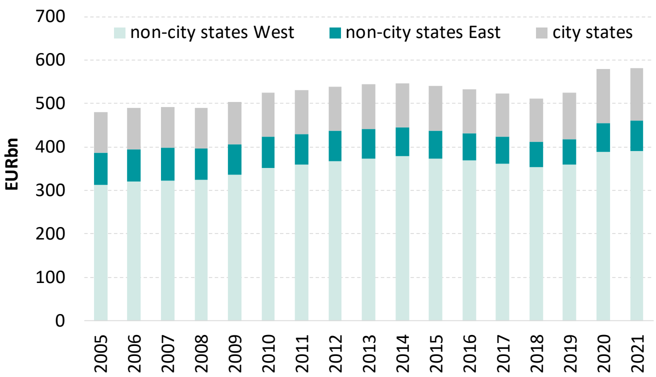
Budget balances of individual Laender



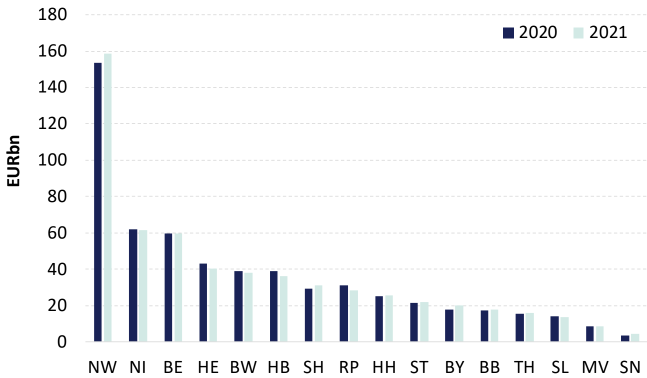
Budget balances of the Laender as a whole



Trend in overall debt level of the Laender



Debt level of individual Laender

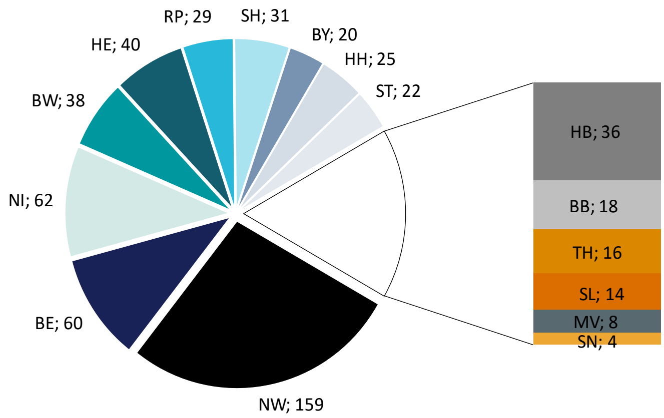


BW = Baden-Württemberg, BY = Bavaria, BE = Berlin, BB = Brandenburg, HB = Bremen, HH = Hamburg, HE = Hesse, MV = Mecklenburg-Western Pomerania, NI = Lower Saxony, NW = North Rhine-Westphalia, RP = Rhineland-Palatinate, SL = Saarland, SN = Saxony, ST = Saxony-Anhalt, SH = Schleswig-Holstein, TH = Thuringia.
Source: German Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

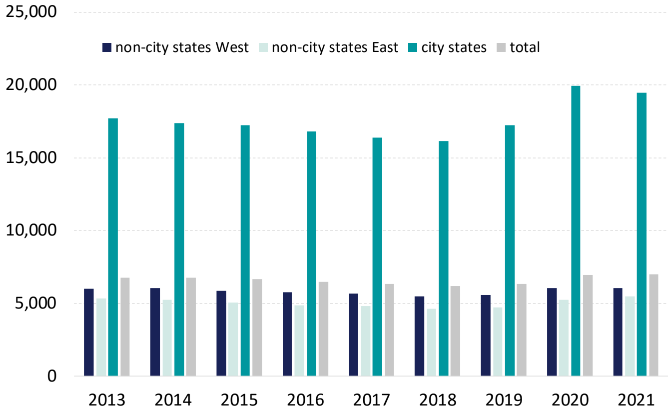
Laender debt trend – an overview

A look at the trend in debt level at Bundeslaender level reveals two strong increases: the first was at the start of the new millennium (at which point Germany was the "sick man of Europe"), with the other coming in connection with the global financial crisis. In the wake of the coronavirus pandemic in 2020, a third significant rise in the debt level can now be added to the previous two. With an increase of +0.4% in total debt, new debt was at a low level in 2021. Of course, the largest share of this fresh debt was incurred by the most heavily populated Bundesland, NRW, where outstanding liabilities rose by +3.1% to EUR 158.6bn to account for 27.3% of overall Laender debt. However, the largest increase in new debt was attributable to the city state of Free State of Saxony, at 20.7%, followed by Bavaria (11.5%) and Schleswig-Holstein (6.6%). As a result, the highest growth compared with the previous year is to be found in Laender where absolute debt is at a low level overall. In comparison with 2020, a total of six Bundeslaender were able to reduce their debt. Bremen tops this list with a reduction of -7.9%. The other Laender were: Rhineland-Palatinate (-7.6%), Hesse (-6.1%), Saarland (-2.7%), Baden-Württemberg (-2.2%) and Lower Saxony (-0.2%). If we take a look at the respective debt levels on a per capita basis, the first thing we notice is that the city states register hugely above-average debt levels. The nationwide average had been relatively stable at between EUR 6,000 and EUR 7,000 for many years, although East German non-city states do present lower debt levels than their West German counterparts on a per capita basis. In 2020, however, the nationwide average in Germany rose to approximately EUR 7,000 per capita and remained at this level in 2021 as well. Nevertheless, in the midst of the recent sharp increases in new debt, it should not be forgotten that the aggregated debt level declined in 2016, 2017 and 2018, which led to the expectation of compliance with the debt brake.

The Laender and overall debt level (EURbn)



Development of debt per capita



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Source: German Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

Comment
Only a few months after entering into force, the debt brake had to be suspended after the onset of the coronavirus crisis activated an emergency situation clause. In this context, resolutions were prepared in NRW, Bavaria, Baden-Württemberg, Lower Saxony and Mecklenburg-Western Pomerania, among other Laender, to adopt a second supplementary budget in 2020, following the example of the Bund. Nevertheless, the Laender had to some extent already unleashed braking power in the past, with the result that some Laender had already started to repay their debts in advance, helping to curb the rise in the Laender debt level in the process. This was also supported by the economic conditions, which have clearly improved after a difficult start to the current millennium. Ensuring the sustainability of public-sector budgets, as is the overarching aim of the debt brake, is fundamentally to be regarded as a positive, especially during stress situations such as the one we are currently facing. However, criticism can be directed at the fact that, due to the ban on net borrowing, the leeway in monetary policy negotiations, for example with regard to investments, is restricted for the Laender. The ECB, for example, repeatedly called for higher investments from public budgets before the economic stimulus packages in the context of the coronavirus pandemic. At its 21st meeting on 22 June 2020, the Stability Council stated: "The Stability Council is of the view that the Covid-19 pandemic is a natural disaster/extraordinary emergency situation as set out in Article 109 (3) Sentence 2 GG which is beyond the state's control and is having a major impact on the state's financial situation. The debt brake envisages exemptions in such an event, which can and will allow an appropriate response to the crisis". At its 25th and most recent meeting on 28 April 2022, the Stability Council concluded this extraordinary emergency situation continues to exist. However, the debt brake could be re-applied from as soon as 2023 – provided, of course, that the Stability Council does not deduce that the soaring costs of raw materials and/or fears in connection with energy shortages on account of the war in Ukraine constitute another extraordinary emergency situation.

Challenges for Laender finances
The Stability Council

The Stability Council – monitoring body for the federal government and Laender
The Stability Council was created in 2010 to meet the challenge of complying with the debt brake and to prevent budgetary crises, as had occurred in Bremen and Saarland in 1992. It is a joint body operated by the federal government and the Bundeslaender. The establishment of the Stability Council can be traced back to Federalism Reform II (Foederalismusreform II), since which time its existence has been governed by Art. 109a of the Basic Law (GG). The purpose of the Stability Council is to regularly monitor the budgets of the Bund (federal government) and Laender, with the aim of identifying and/or preventing any impending budgetary crises ahead of time. As a result the Stability Council is an important body for examining the budgets at the level of both Bund and Laender, particularly with respect to their sustainability in relation to compliance with debt limits. The body is managed by the federal government. Its members are the Federal Minister of Finance, the finance ministers of the Bundeslaender and the Federal Minister for Economic Affairs and Climate Action. The Stability Council meets twice a year (usually in June and December). The first session was held on 28 April 2010. Since the beginning of 2020, its remit has included monitoring compliance with the debt brake, which is based on European requirements and procedures.

The “Aufbau Ost” project
To offset below-average municipal financial strength and ease infrastructural backlogs, the states of Berlin, Brandenburg, Mecklenburg-Western Pomerania, Saxony and Saxony-Anhalt received annual payments from 2005 to 2019 as part of the Solidarity Pact II. The aim here was to empower these Laender to counteract their special charges. The funds earmarked for this came in on budget at EUR 156.7bn and were split into two separate “baskets”. Basket 1 contained special need federal supplementary (SoBEZ) payments amounting to EUR 105.3bn, which were put directly towards improving financial strength and infrastructure. Basket 2 totalled EUR 51.4bn and was invested in broader policy fields, including the economy, promotion of innovation, research and development, education, transport, housing and urban development, EU structural funds, the elimination of ecological contaminations/site restoration and sport. With regard to progress made in the relevant areas, a final report was presented for the last time on 15 September 2020 and discussed in the statement covering the 22nd meeting of the Stability Council. The eastern German Laender bore responsibility for ensuring that the funds received were used for the prescribed purposes. In order to verify this, three criteria were defined in collaboration with the Bund, via which the appropriate use of funds was to be achieved, with the aim of then closing the gap between the Laender. The first criterion focused on the SoBEZ share, which was to be used to finance infrastructure investments and to offset below-average financial strength. The second criterion related to the SoBEZ share, which aimed to rectify the situation regarding disproportionately self-financed infrastructure investments compared to the reference Laender. The third criterion concerned closing the infrastructure gap through disproportionate total investment expenditure compared with the reference Laender. The financially weak Laender of Lower Saxony, Rhineland-Palatinate, Saarland and Schleswig-Holstein were taken as a reference for the east German non-city states, while Hamburg was selected as the reference point for Berlin.

Balance sheet data

As planned, the Solidarity Pact II programme expired at the end of 2019. When the programme was first launched, a volume of EUR 105.3bn was planned for Basket 1. Thereafter, payments were supposed to fall over time so that a final instalment of EUR 2.1bn would be paid in 2019 before the programme came to an end. At this point, we should point out that the payments were not evenly distributed among the Laender. For example, Saxony received the largest share of the cumulative payments, at EUR 26.1bn (27%), followed by Berlin (EUR 19.0bn; 20.0%) and Saxony-Anhalt (EUR 15.7bn; 16.6%). Thereafter came Brandenburg with EUR 14.3bn (15.1%) and Mecklenburg-Western Pomerania with EUR 10.5bn (11.1%). While the payments from Basket 1 came in on budget, the payments made under Basket 2 of EUR 56.3bn were actually well above the original target value of EUR 51.4bn. Due to the fact that the volume of payments from Basket 2 was upped by just under 10%, the total volume of grants under the programme as a whole came in at EUR 161.7bn. The promotion of innovation as well as research and development accounted for the largest shares of this additional expenditure, followed by the categories of economy and housing and urban development. With this support, the federal government laid the foundations for overcoming infrastructure deficits caused by the former division of Germany, increasing the quality of life for German citizens and improving the country's economic situation. However, after Solidarity Pact II expired, the Laender were not simply left to their own devices. In this context, grants continue to be made via the redefined federal financial equalisation system as well as the national German support system for structurally weak regions. However, it is not possible to reliably or accurately assess the precise extent to which the coronavirus pandemic will impact differences in living standards that continue to exist between the Laender at the present moment in time.

Restructuring programmes

If a critical budgetary situation is identified in the case of the national government or a Bundesland, the Stability Council agrees restructuring programmes with the administrative unit affected. In general, they extend over five years and contain guidelines to eliminate new annual debt as well as other consolidation measures. If the national government or a Bundesland neither sticks to the guidelines nor presents satisfactory suggestions for restructuring concepts, a request is made for increased budgetary consolidation. If an impending budgetary crisis is still identified even after complete implementation of the restructuring measures, an agreement is reached on a further consolidation programme. Impending budgetary crises were identified in Berlin, Bremen, Saarland and Schleswig-Holstein at the second meeting held on 15 October 2010. Restructuring programmes were agreed as a consequence. Compliance with these programmes and their progress is reviewed at each half-yearly meeting of the Stability Council. The supervisory body also monitored compliance with the requirements incumbent on the affected Laender for them to receive consolidation aid up to 2019. At the end of 2016, it was announced that Berlin and Schleswig-Holstein had completed their respective recovery plans. In contrast, however, Bremen and Saarland were unable to achieve the requirements placed upon them with regard to the requisite key metric values in this period. Moreover, since 2020 both Bremen and Saarland have each been receiving restructuring aid to the tune of EUR 400m per year.

Monitoring of four key budget indicators over two assessment periods
The Stability Council uses four key indicators to assess whether a budgetary crisis is impending. The development of these indicators is monitored in the current budgetary situation and financial planning. The current situation includes the actual figures for the last two budget years as well as the target figure for the current year. In the second assessment period, the key financial indicators in the budgetary and financial planning for subsequent years are analysed.

Structural financial deficit per capita
The structural financial deficit is defined by the Stability Council as the financial deficit adjusted to allow for financial transactions and economic influences. It is calculated in EUR per capita. If the threshold value is not reached, this is reported as an anomaly (non-compliance). For the term of the current budgetary situation of the Laender, the critical value is calculated as the Bundeslaender average minus EUR 200 per inhabitant, whereas for financial planning, the threshold value defined for the current financial year is used as the tolerance threshold. In order to factor in economic slowdowns, a surcharge of EUR 50 per inhabitant is generally included.

Credit financing ratio
The Stability Council also examines the credit financing ratio, which reflects the relation of new debt to adjusted expenditure. For the current budgetary situation, the body defines a threshold value comprising the Bundeslaender average plus three percentage points. In the financial planning, an unacceptable deviation from the critical value is identified if the threshold value for the current budgetary year is exceeded by two percentage points.

Interest-tax ratio
As a third key indicator, the Stability Council analyses the interest-tax ratio, defined as the ratio of interest expenditure to tax revenue. In the case of tax revenues, an adjustment is made for payment flows related to the financial equalisation among the Bundeslaender, general purpose BEZ, promotional levies and vehicle tax compensation. The limit for this key indicator during the period of the current budgetary situation is also based on a relative comparison of the Bundeslaender. The critical value for non-city states is defined as 140% (150% for the city states) of the Bundeslaender average. For the duration of the financial planning, the tolerance value of the current budgetary year plus one percentage point applies as the limit.

Debt per capita
The last key indicator reflects the debt level on the credit market as at 31 December of each year in relation to the number of inhabitants. For the current budgetary situation, a limit violation is determined in cases where the key indicator exceeds 130% of the Bundeslaender average for non-city states (220% in the case of city states). For the duration of the financial planning, a limit amounting to the threshold value for the current budgetary year plus EUR 100 per citizen and year is used as a basis. A key indicator is generally regarded as non-compliant for a specific period if at least two critical values have been exceeded. By contrast, a time period is regarded as non-compliant if at least three out of four key indicators exceed their specified limits. If a time period is identified as non-compliant, an evaluation of the regional authority in question is carried out by the Stability Council.

Monitoring system of the Stability Council

	Actual		Target	Limit violations	Financial planning				Limit violations
	2019	**2020**	**2021**		**2022**	**2023**	**2024**	**2025**	
Financial balance in EUR per capita									
Threshold value	-37	-692	-703	**Yes / No**	-753	-753	-753	-753	**Yes / No**
Bundeslaender average	163	-492	-503						
Credit financing ratio in %									
Threshold value	1.8	15.9	14.4	**Yes / No**	16.4	16.4	16.4	16.4	**Yes / No**
Bundeslaender average	-1.2	12.9	11.4						
Interest/tax ratio in %									
Threshold value (non-city states)	4.5	3.8	4.7	**Yes / No**	5.7	5.7	5.7	5.7	**Yes / No**
Threshold value (city states)	4.8	4.1	5.1		6.1	6.1	6.1	6.1	
Bundeslaender average	3.2	2.7	3.4						
Total debt in EUR per capita									
Threshold value (non-city states)	8,696	9,690	10,558	**Yes / No**	10,658	10,758	10,858	10,958	**Yes / No**
Threshold value (city states)	14,715	16,398	17,868		17,968	18,068	18,168	18,268	
Bundeslaender average	6,689	7,454	8,122						
Violations in the period			**Yes / No**				**Yes / No**		

Source: Stability Council, NORD/LB Markets Strategy & Floor Research

Stability Council offers many advantages…

The transparent method of working and presentation of the results enables the situation in each Bundesland budget to be easily assessed. The credit financing ratio and interest-tax ratio provide two additional indicators for the Stability Council. They were also used by the Federal Constitutional Court when assessing the budgetary situation for the Laender of Bremen and Saarland in 1992 and Berlin in 2002. The mechanistic definition of critical values avoids any political interpretation of the respective budgetary situation, providing a clear advantage. The agreement of recovery plans and the transparent monitoring of compliance with them should also be interpreted as positive aspects, since this applies constant pressure to those Laender obliged to follow a restructuring programme. Aligning the threshold values to the Bundeslaender average also allows special circumstances such as economic downturns to be taken into account dynamically. The review of financial planning enables negative tendencies or even budgetary crises to be identified at an early stage.

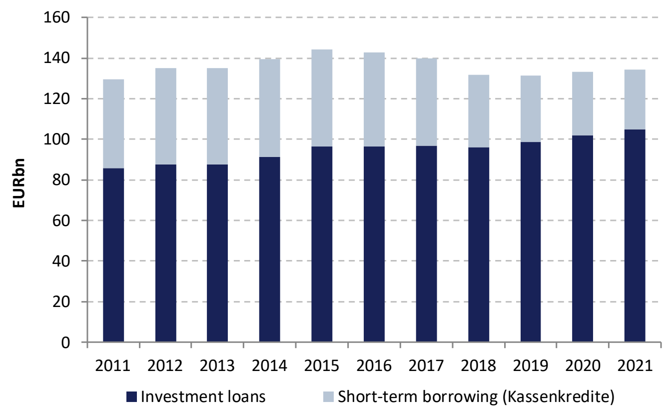
...and some disadvantages
Nevertheless, it should be noted that the financial planning of a Bundesland does not constitute any definitive or specific plan and consequently it does not have to be compiled with binding effect. The informative value of the figures for financial planning is, to a certain extent, accordingly low. Aligning the threshold value to the Bundeslaender average entails the risk that negative tendencies or potential budgetary crises are not identified if a majority of the Laender generate poorer budget figures and the Bundeslaender average consequently falls. We also consider the choice of indicators to be worthy of discussion. Although the four indicators provide an insight into Bundeslaender budgets, major structural budgetary problems such as significantly above-average personnel expenses or pension commitments, for example, are not recorded. The definition of the critical values and the calculation of key indicators are also subject to (adjustment) methods that are not especially transparent. In our view, however, the biggest disadvantage of the Stability Council in its current legal framework is the absence of a mechanism for imposing sanctions. If a Bundesland does not comply with the restructuring plans, for example, it is only requested to comply with them and, in extreme cases, a new restructuring programme is defined. However, no effective means are in place, such as cutting BEZ grants.

Comment
Despite these disadvantages, we believe that the Stability Council is a worthwhile committee for monitoring budgets at both federal government and Bundeslaender level. Due in particular to the introduction of the debt brake, which we see as a major challenge especially for financially weaker Laender, we regard the supervisory body as a suitable method of budget control at Bund and Laender level. From an investor viewpoint, too, we consider the Stability Council and especially its reports published every six months to be important, since they provide up-to-date and transparent information on the budgetary situation of all Laender. Although we believe it to be a significant disadvantage that the Stability Council currently does not possess serious mechanisms for imposing sanctions, given the positive budget performance up to the end of 2019, this has not posed major problems. However, it shall remain to be seen what consequences this lack of adequate pressure might have in the years following the coronavirus pandemic.

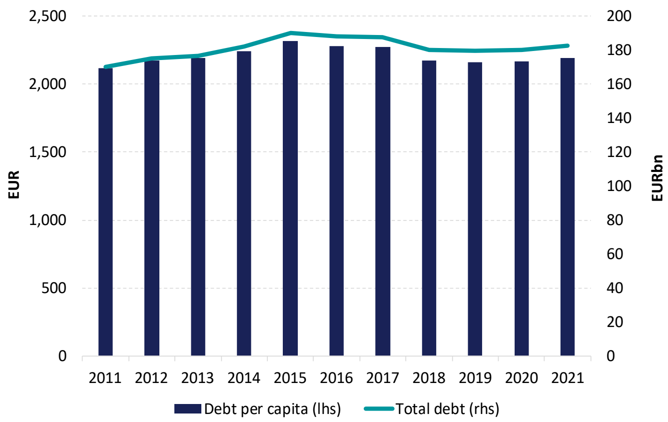
Challenges for Laender finances
Municipal budget situation as stress factor

Latest data set: municipalities generate another surplus in 2021
In 2021, municipalities and municipal associations were able to continue the positive trend seen over recent years with regard to their budget balances, generating a surplus of EUR 4.6bn (core and supplementary budgets). As a result, the surplus increased EUR +2.6bn versus the previous year. In the wake of the Covid-19 pandemic, the municipalities relied on support from the federal government (Bund) and Laender via the "Municipal Solidarity Package 2020". After having recorded a budget surplus of EUR 2.7bn in 2020, a surplus of EUR 3.0bn was posted in the core budgets in 2021. The rise in local business tax revenues, which increased by +34.6% to EUR 50.7bn, should be highlighted in particular here. As such, local business tax revenues came in EUR 8.0bn above the level registered in 2019. With an increase of +70.6% year on year, Rhineland-Palatinate stands out in particular. In the same period, municipal expenditure rose by +3.5% to total EUR 303.4bn. Personnel expenses are particularly noteworthy here, rising by +4.5% to EUR 79.7bn. This growth was largely due to wages paid to employees under collective agreements, which also included special Covid-19 payments. In contrast, payments in connection with the Asylum Seekers Benefits Act (Asylbewerberleistungsgesetz; AsylbLG) were down by -3.6% to EUR 2.5bn. In this context, the current peak value of EUR 6.1bn was recorded in 2016. In terms of the municipal debt level, 2021 saw the second overall increase in a row. The sum total of liabilities increased in 2021 by +1.4% to EUR 182.6bn, which equates to 59.5% of revenue. This value was well below the Laender average, where the debt-to-revenue ratio amounted to 165.3%.

Development of municipal debt level in the non-public sector



Municipal debt level



Source: Federal Statistical Office, NORD/LB Markets Strategy & Floor Research

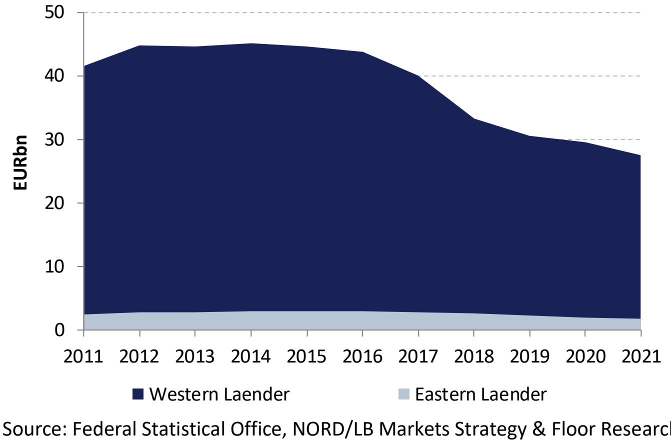
Steady investment loan volume in the recent past

Investment loans account for a significant portion of municipal debt. These are backed by direct assets, whereby the interest expenses can potentially be covered by the return on investments. The respective shares of investment loans in total municipal debt differ significantly from case to case. At 79%, the highest share of investment loans in overall municipal debt is attributable to municipalities in Schleswig-Holstein, while Baden-Wuerttemberg has the lowest value in this regard, at 41% (national average: 57%). Since 2009, the national average of investment loans in total municipal debt had been in a corridor between 49% and 55%, before rising to 57% in 2021.

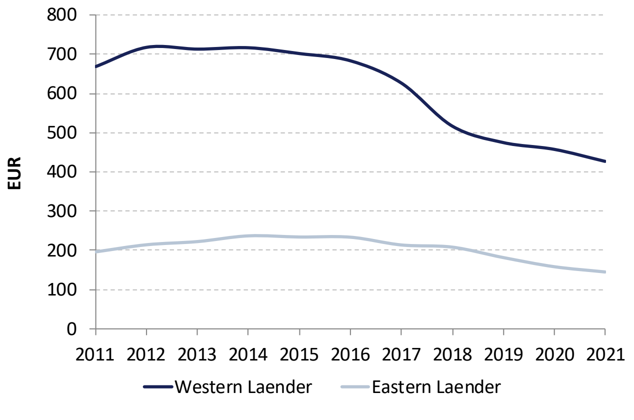
Turning point in Kassenkredite loan portfolios

From 2005 to 2014, the volume of Kassenkredite municipal loans more than doubled on a nationwide basis. Kassenkredite were originally intended to cover short-term cash flow problems arising from timing mismatches in revenue and expenditure. For instance, if higher personnel costs are incurred at the start of a calendar year, while regular tax revenue has not yet been received, Kassenkredite could be used to bridge this time gap. As at the end of 2016, however, 25.2% of the overall municipal debt was attributable to Kassenkredite. We can therefore say that these loans were not (exclusively) used for bridging purposes. Back in 1995, this figure came in at just 3.1%. A higher proportion of Kassenkredite liabilities brings with it an increased risk of changes to the interest rate environment. For this reason, we take a critical view of a high level of Kassenkredite debt, as the previous low interest rate environment is now very much a thing of the past and this veritable risk is moving from the periphery to take centre stage. After Kassenkredite loan portfolios remained relatively constant between 2012 and 2016, sharper declines in the volumes of Kassenkredite were, however, again in evidence between 2016 and 2019. This is certainly a development which we welcome. At EUR 32.9bn, Kassenkredite municipal loans accounted for 18.3% of total municipal debt in 2019. In 2020 and 2021, Kassenkredite portfolios were scaled back further still – albeit to only a rather limited extent. The figures available for 2021 so far imply that this trend has been continued in spite of the coronavirus crisis. A striking aspect here remains that West German Laender have much higher Kassenkredite liabilities than their East German counterparts. However, it should also be noted that Kassenkredite debt levels have converged on a per capita basis.

Municipal cash boosting loans



Municipal cash boosting loans per capita



Source: Federal Statistical Office, NORD/LB Markets Strategy & Floor Research

2021: Kassenkredite volumes in decline in seven of 13 non-city states
A breakdown by Bundesland of the Kassenkredite burden on municipalities reveals major differences: the share of Kassenkredite in overall municipal debt ranges from 0.5% in Hesse and Thuringia to 37.3% in Saxony-Anhalt, where in actual fact the Kassenkredite debt level even exceeded the volume of investment loans for a brief period in 2018. However, one aspect to highlight here is that in 2020 eight of the 13 non-city state Laender were able to reduce their Kassenkredite debt level, with seven of the 13 repeating this development in 2021. The extent of the declines in Kassenkredite also varied across the individual Laender to a significant extent. The most significant reduction was posted by Hesse, at -74.3%. Saxony-Anhalt (37%) and Saarland (34%) display the highest shares of Kassenkredite municipal loans in their overall debt levels. It is also fundamentally striking that the declines were smaller in Laender with high volumes of Kassenkredite in their loan portfolios than in those where the volumes are already lower. For example, Saxony-Anhalt, Rhineland-Palatinate and Saarland, Laender in which Kassenkredite portfolios account for shares of between just over 30% to nearly 40% in their respective overall debt levels, only registered below-average declines here, while the declines in Saxony and Brandenburg, for example, were higher (74% and 33%) despite the fact that their shares were much lower (0.5% and 12%). In percentage terms, the largest increase in Kassenkredite loans was recorded by Bavaria, at +66.7%. Nevertheless, the volume of short-term liabilities still remains at a low overall level that should be manageable.

Growing challenges, growing debt?
Municipal budgets are also facing a variety of challenges: with interest rates now on the rise, for example, credit financing costs will increase in step, which in turn will place the strain on budgets. In particular, any rise in money market rates could put pressure on municipalities with higher Kassenkredite debt levels. Despite the fact that the ECB is now more likely to increase interest rates at a more moderate pace on the back of significant hikes earlier in the year, municipalities will now be forced to take heed of these circumstances to a greater extent in their financial planning. In addition, significant effects on municipal financing are expected from regulatory changes. Due to the introduction of the leverage ratio by Basel III, municipal financing is likely to become increasingly unattractive for privately organised banks. The key indicator stipulates a minimum ratio of regulatory capital to the exposure of a bank, in which the risk of the exposure is irrelevant. Low-margin segments, and this includes municipal financing, are therefore likely to see a declining credit offer from private banks. The banking crisis has also already led to a shift within the market for municipal finance: specifically, regional promotional banks have experienced significant growth in this respect for years. In North Rhine-Westphalia, the municipal lending business of NRW.BANK has posted strong growth over recent years. After a new record of EUR 7.6bn was registered in 2020 (EUR 3.7bn for municipal financing), NRW.BANK generated a volume of new financing commitments of EUR 4.4bn (-42%) in the business area of Municipalities/Infrastructure in 2021. The reason for this is a decline in demand for coronavirus aid. With a new commitment volume of EUR 672.4m, the NRW.BANK Energy Infrastructure was additionally subject to heightened demand in comparison with 2020 (+36%). Other regional development banks such as BayernLabo have also been experiencing growth in the municipal lending business over a period of several years. In contrast, KfW is already restricting its municipal lending to a maximum of EUR 750 per inhabitant. As a result, the focus is increasingly turning towards alternative funding options such as Schuldscheindarlehen (SSD) and bonds, some of which are issued in a joint format together with other municipalities, for example under the NRWGK and DEUSTD tickers.

Laender support local authorities with bailout funds

In recent years, several Bundeslaender have implemented consolidation aid or debt relief funds with the aim of supporting municipalities. With reference to the self-governance of municipalities, these programmes are usually voluntary and highly varied in their structure. The programmes were generally established in response to the difficult municipal budget situation: in 2019, a survey of 300 municipalities conducted by a consulting firm indicated that 17% of the municipalities still considered themselves unable to repay their debts from their own resources. Although this suggests de facto insolvency, no insolvency proceedings can be initiated against municipalities, at least according to Section 12 of the Insolvency Code. In order to support the municipalities most affected by high Kassenkredite debt levels, Olaf Scholz, the former Minister of Finance, called for a full haircut, whereby the Bund (federal government) would assume liability for all municipal debt. However, this plan was highly controversial even within the Grand Coalition (the fourth Merkel cabinet; Germany's coalition government comprising the CDU/CSU and the SPD based in Berlin that governed until December 2021). However, the fact that the Laender support municipalities through various debt relief programmes can be justified, among other aspects, in that, in the event of a payment default, it would be necessary to clarify whether the respective Bundesland followed the Konnexitätsprinzip (the principle of related actions, i.e. a commitment that any allocation of tasks to regional and local authorities must be accompanied by the financial resources needed to carry them out). It would then be necessary to check whether the Bundesland had made the necessary funding available to the municipality for the tasks transferred to it. The Laender constitutions also include corresponding articles that require the respective Bundesland to comply with a maintenance obligation, i.e. to ensure financial backing for performance of the tasks (e.g. Art. 58 of the Constitution of Lower Saxony).

Bailout funds reveal significant differences

The consolidation aid and debt relief funds that are provided already deal with this and, depending on the specific sub-sovereign, reveal some significant differences. In most cases, the repayment of loans or direct deficit coverage is the focal point. The corresponding cash inflows are often linked to the financial equalisation at municipal level. In 2012, for example, the Bundesland of Rhineland-Palatinate set up a municipal debt relief fund totalling EUR 3.8bn, in which more than 800 local authorities currently participate. The objective of the fund is to repay two-thirds of the municipal cash boosting loans (Kassenverstärkungs-kredite) that were taken out up to 2009. This is also intended to reduce the interest burden. Over a period of 15 years, an annual amount of EUR 255m is available for this purpose. Initially, however, this was only able to counteract a further increase in Kassenkredite debt. A significant reduction was made in 2015 for the first time, followed by further reductions in the following years. Up to year-end 2018, Kassenkredite debt had been cut by -12.5%, with a level of EUR 5.2bn maintained since then. Mecklenburg-Western Pomerania has adopted a different approach: in this case, a consolidation fund was set up to provide financial assistance for unavoidable deficits. In contrast, Hesse set up a programme that is unique throughout Germany. Known as "Hessenkasse", its objective is to take over the Kassenkredite of municipalities and to arrange debt relief via WIBank, the promotional bank of the Bundesland of Hesse. Overall, a repayment amount of EUR 4.9bn was achieved, which equated to roughly 93% of the municipal Kassenkredite debt level in 2017. Agreement on consolidation plans and, in some cases, the merging of existing municipalities with the aim of stabilising the budgets on a sustainable basis, represent aspects that all programmes share in common.

Clear differences in programme ratios

There are also differences in the scope of the programmes in relation to the total debt of the municipalities at the time of launching the programmes. In Rhineland-Palatinate, the absolute volumes available until 2026 stand at 28.0% of municipal debt in 2012. Saxony-Anhalt (16.2%), Hesse (12.8%), Lower Saxony (11.8%) and Schleswig-Holstein (10.7%) also have above-average programme ratios. This is different in the case of Saarland: although per capita municipal debt in Saarland is the highest in a comparison of Laender (ahead of Rhineland-Palatinate and North Rhine-Westphalia), the original programme volume amounts to only 4.3% in Saarland, while the average of all the programmes stands at 9.6%. The Saarland Pact, which was agreed at the end of 2019 before coming into force at the start of 2020, is designed to counteract this situation. An annual amount of EUR 30m up to 2065 should gradually remove the burden of nearly half the outstanding Kassenkredite from the municipalities, while an extra EUR 20m should go towards municipal investment projects. Although municipalities in North Rhine-Westphalia have the highest absolute and third-highest per capita debt, at 9.9%, the programme volume is only slightly above the average. In Brandenburg (5.9%) and Mecklenburg-Western Pomerania (5.4% before and 9.5% after inclusion of special aid), the absolute programme volume is also below average, but this applies equally to the per capita municipal debt level.

Overview of municipal bailout packages (excluding Covid-19 bailout funds)

	Term	Volume (EURm)	Comment	Repayment of		Interest relief	Deficit coverage
				Kassen-kredite	Credit market liabilities		
BY	2007-2012	10	Annual				x
BB	2020-2022	40	Annual				x
HE	2012-2020	3,200	Municipal rescue package suspended in 2020, debt relief programme now processed via HESSENKASSE	x	x	x	
MV	2018-	25*	Annual; plus one-off sum of EUR 100m				x
NI	2012-2041	70**	Annual	x		x	
NW	2011-2020	5,850**	Overall			x	x
RP	2012-2026	255	Annual	x		x	
SL	2013-2024 2020-2065	17** 50	Annual	x	x		
ST	2011-2027	736	Overall	x	x	x	
SH	2012-2018	60	Annual				x

* Excluding special aid for budgetary consolidation and debt reduction in the amount of EUR 40m per annum in the period 2014-2017 outside the Financial Equalisation Act Mecklenburg-Western Pomerania (FAG-MV).
** Figures include participation of local authorities.
*** Gradually lower since 2020
BY = Bavaria, BB = Brandenburg, HE = Hesse, MV = Mecklenburg-Western Pomerania, NI = Lower Saxony, NW = North Rhine-Westphalia, RP = Rhineland-Palatinate, SL = Saarland, ST = Saxony-Anhalt, SH = Schleswig-Holstein.
Source: Relevant Bundesland legislation, NORD/LB Markets Strategy & Floor Research

Bailout packages in the context of Covid-19

Municipalities face significant problems in the wake of the Covid-19 pandemic. While the economic impacts of the pandemic years 2020 and 2021 are noticeably fading away, municipalities were exposed to new budgetary strains and, in part, collapsing revenues. For the municipalities, the most significant revenue shortfall came from local business taxes. The deficit here for 2020 was estimated at around EUR 13bn. Income tax losses resulted in a shortfall of approximately -20% versus the revenues recorded under this balance sheet item in 2019. In total, the loss of revenues totalled around EUR 16bn. As the allocations to the municipalities are additionally calculated on the basis of tax revenues, this revenue source was likewise well down. For this reason, it was clear as early as March 2020 that many municipalities were fearful of long-term negative consequences in connection with the coronavirus crisis. The Laender reacted by offering short-term financial assistance, which was subsequently followed by bailout and rescue packages. For the most part, these were designed to supplement the economic measures implemented by the federal government, ultimately doubling the financial relief provided to the municipalities. Each Bundesland has supported its municipalities, in part with further relief measures. While some Laender such as Mecklenburg-Western Pomerania initially pledged financial assistance only for 2020 and 2021, others including Rhineland-Palatinate and Hesse went much further by guaranteeing support through to 2022 and 2023 respectively. The aid packages have often also included an element to compensate for the loss of income from local public transport.

Comment

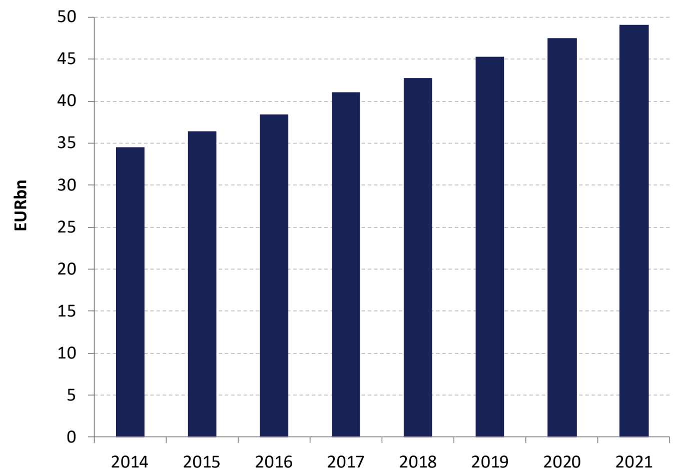
We regard the performance of municipal finances as one of the major challenges for Laender finances. In our view, a difficult budgetary situation at municipal level indirectly impacts the budgetary situation, which has been shaken by the impact of the coronavirus crisis, of the respective Bundesland. From our perspective, the fact that numerous Laender have sought to counteract this scenario with defined programmes can only be evaluated positively. However, there are some negatives in terms of the individual configuration of the Laender municipal programmes. In Rhineland-Palatinate, for example, we believe that the programme volume in relation to municipal debt is appropriate, while we would take a more critical view in the case of Saarland. The programme volume here is much lower in relation to the municipal debt level compared with the other Laender, although in this regard, the newly implemented Saarland Pact could provide an element of support to some extent. Added to this is the fact that many municipalities continue to pin their hopes on the Bund clearing their debts. The positive trend on the revenue side, last seen in 2019, in conjunction with declining interest charges had, prior to the pandemic, already contributed to a stabilisation of finances in this respect. Here too, however, the coronavirus crisis and the (partially) associated loss of income continue to represent major sources of uncertainty, meaning that municipal debt is set to rise again as a result. The Laender programmes in connection with the economic package aimed at supporting municipalities will have a stabilising effect. Nevertheless, there are still a great number of question marks about the future, while the war in Ukraine continues to be a cause for concern for the Laender and municipalities.

Challenges for Laender finances
Pension obligations as a strain

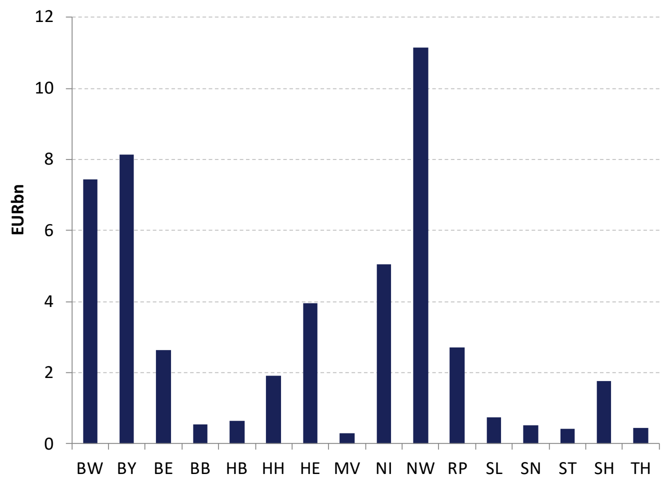
Pension obligations represent an increasing challenge for Laender finances
In view of demographic change and longer life expectancy, pension expenditure is an increasingly prominent element of the budgetary planning at Laender level. In contrast to the pay-as-you-go-financed pension system, which applies in the case of salaried employees, pension expenditure for government employees forms part of personnel costs and is paid from the ongoing budget. It is only since 1999 that the federal government and the Laender began to create pension reserves as stipulated in Section 14a (1) of the Federal Civil Service Remuneration Act (BBesG). From 2017 onwards, these are expected to be dissolved (in line with Section 7 of the Pension Reserves Act [VersRücklG]) due to the highest expected charges in the subsequent 15 years (commonly referred to as the "pension avalanche"). These reserves may differ with regard to the investment types for the assets and in relation to the reserve policy. For example, some Laender have already been setting aside payments to a pension reserve since 2003, while others use their pension funds concurrently as lenders for their own budgetary purposes. While we consider these to be examples of a lack of pension provision, or provision that is only sustainable to a limited extent, other Laender rely on the additional creation of reserves through the Bundesland's own pension or retirement funds, extending above and beyond the reserves required by law. In our opinion, the differing methods for creating reserves pose major challenges, and in some cases such provisions are totally absent. These challenges are particularly relevant with regard to the debt brake, which is anticipated to be reinstated in 2023 at the earliest.

Pension and allowance expenses represent significant items of expenditure
In comparison with 2014, the pension and allowance expenses of the Laender have grown by +40.3% up to 2021. In the past budget year alone, a rise of +3.4% (previous year: +4.8%) was posted. In 2021, the Laender spent a cumulative total of EUR 48.4bn on this budget item (2020: EUR 46.8bn). This equates to 10.1% of total expenditure and is therefore more or less on a par with the level seen in 2012. However, pension payments accounted for a greater proportion of Laender budgets than investments (9.5%). This budgetary strain is likely to continue to rise in the future, with the majority of the baby boomer generation born between 1955 and 1969 now gradually starting to draw their pensions.

Development of pension and allowance expenses



Pension and allowance expenses in 2021



Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

Low(er) level of pension provisions in East Germany

At 15.7%, the share of pension provisions in relation to total expenditure was highest in Saarland, as has been the case in previous years. However, Rhineland-Palatinate, Baden-Wuerttemberg and Lower Saxony also register values in excess of 12% for this item. In addition, it is striking that pension payments account for a far smaller proportion of expenses in the Laender that make up the former East Germany. The value for 2021 was just 3.2%, having been 3.9% in the previous year. Looking at pension provisions in relation to the number of inhabitants, the city states of Hamburg and Bremen traditionally posted the highest expenses in this regard. At EUR 1,036 per capita, the value in Hamburg is more than eight times higher that of Saxony (EUR 129). This relatively high expenditure is justified by the function and structure as city states, as reflected both in above-average personnel costs and an elevated assumed number of inhabitants in the calculation used under the current system of financial equalisation among the Laender.

Comment

For years, the pension liabilities of the Laender have represented substantial items of expenditure. Especially in the west of Germany, they significantly impair budget flexibility. Moving forwards, these charges are likely to continue rising. We believe that eastern German Laender have a clear advantage in this respect, because the resulting challenges are less severe. Nonetheless, this advantage will gradually ebb away over the years, with further convergence of the proportion of pension payments in the budget to the west German level anticipated as a result. In the coming years, we expect these payments to rise further. As a result, we believe that revenues will either need to be consistently strengthened or expenditure must be cut, so that at least there is no deterioration in budget balances. However, rising interest rates could alleviate this issue, at least to some extent.

NORD/LB

Regulatory framework
Risk weighting of outstanding claims against German Laender

Relevant regulatory framework: Regulation (EU) No. 575/2013 (CRR)
On the basis of the risk weightings that were defined by Basel II, the EU initially specified the provisions in Directive 2006/48/EC, before these definitions for risk weightings were subsequently replaced by the CRR (Regulation (EU) No 575/2013) in mid-2013. In 2019, this was expanded by the inclusion of elements under Basel III by Regulation (EU) 2019/876 (CRR II).

Risk weighting of EU states using standard approach: 0%
The risk weighting for exposures to central governments or central banks is derived from Art. 114 of the CRR. In accordance with Paragraphs 3 and 4, this means a risk weighting of 0% for risk positions held against EU Member States or the ECB. If the exposure is denominated in the domestic currency of the respective country, this shall apply without any time limit. For exposures in a currency which is not the respective country's domestic currency, but nevertheless the currency of another member state, a 0% risk weighting applied only until 31 December 2017. This was revised yet again in the wake of the Covid-19 pandemic: pursuant to Art. 500A (1) a total of 0% of the determined risk position is applied until 31 December 2022. From 2023 onwards, this is to be gradually increased until, in 2025, the risk weighting to be applied shall be based fully on Art. 114 (2) again.

Risk weighting of regional and local authorities
The risk weighting of regional and local authorities is equated with that of the relevant state in accordance with Art. 115 (2) CRR, subject to two provisos: they have the power to levy taxes and, based on the existence of specific institutional precautions for reducing the risk of default, there is no risk-related difference with risk positions held against the central government of the state in question. The risk weighting for other sub-sovereigns of member states is 20%, assuming the exposure is denominated in the respective country's domestic currency. For other sub-sovereigns, the risk weighting is the same as in the case of institutions, provided the sub-sovereign is from a country on the list of third countries that are equivalent from a legal and supervisory viewpoint.

EBA maintains database of risk weightings of regional and local authorities
As this definition is open to interpretation, the EBA maintains a public database containing all regional governments and local authorities in the EU where competent authorities treat risk exposures as exposures to their respective central government. Accordingly, outstanding claims against the following levels are assigned a risk weighting of 0% in Germany:

- Bundeslaender and their legally dependent special funds
- Municipalities and municipal associations

Bundeslaender assigned 0% risk weighting
It follows from this that exposure to German Laender can be assigned a risk weighting of 0%, i.e. benefiting from the same regulatory advantages as, for example, German government bonds (Bunds).

Regulatory framework
Implications of the Liquidity Coverage Ratio

Implementation of the LCR with major implications for SSAs and in particular agencies
During the financial crisis, the liquidity position of credit institutions increasingly became the focus of attention. Consequently, in December 2010 the Basel Committee on Banking Supervision (BCBS) announced a Liquidity Coverage Ratio (LCR) and a Net Stable Funding Ratio (NSFR). Following a transitional phase since 2015, full compliance with the LCR has been mandated since 2018. In the EU, the corresponding regulations were defined in European law in Regulation (EU) No 575/2013 and Directive 2013/36/EU (CRD IV). The definition of the means used to calculate the LCR presents major implications for SSAs.

Objective of the LCR: reduction in liquidity risks for credit institutions
The objective of the LCR is to control the liquidity risk of a credit institution in such a way that sufficient High-Quality Liquid Assets (HQLA) are available at all times in order to survive a significant stress scenario lasting 30 days. It comprises the minimum liquidity buffer, which is required in order to bridge liquidity mismatches of one month in crisis situations. Specifically, the LCR is calculated from the ratio of HQLA to the net payment outflows in the 30-day stress scenario, whereby this ratio must be at least 100%.

10 October 2014: European Commission publishes LCR Regulation
After there had been a lack of clarity for a long time about the precise definition of HQLA, as well as the EBA recommendation published at the end of 2013 only leading to further uncertainty in particular, the Liquidity Coverage Requirement Delegated Act was finally published on 10 October 2014. This LCR legal act specified in particular which assets are to be treated as HQLA in future A revised version of the LCR Regulation first published in July 2018 took effect from 30 April 2020. This governs the regulation concerning assets from third countries, repo transactions, CIU shares and stocks.

Categorisation in different liquidity levels
Under the HQLA definition, the legislation, as proposed by the BCBS, divides HQLA into different liquidity levels. Depending on the assigned level, this results in upper and lower limits for certain levels and the application of possible haircuts. On the following two pages we provide a brief overview of asset classification and allocation, before analysing the implications for the Laender. Brief note from us: in market practice, however, a distinction is occasionally made within Level 1 between Level 1A and Level 1B assets (Level 1 covered bonds due to obligatory haircut), even if such a linguistic distinction appears neither in the CRR nor the LCR Regulation.

Liquidity levels – an overview

Level 1 assets (Art. 10 LCR)

- ≥ 60% of the liquidity buffer; no haircut

So-called “Level 1B” assets (Art. 10 (1)(f) LCR; certain covered bonds)

- < 70% of the liquidity buffer; haircut of at least 7%

Level 2A assets (Art. 11 LCR)

- < 40% of the liquidity buffer; haircut of at least 15%

Level 2B assets (Art. 12 & 13 LCR)

- ≤ 15% of the liquidity buffer; haircut of at least 25-50%

Source: LCR-R, NORD/LB Markets Strategy & Floor Research

Classification overview

			Minimum haircut (for shares or units in CIUs)
	Level 1 assets (minimum of 60% of liquidity buffer; min. 30% excluding (f) – covered bonds)		
(a)	Coins and bank notes		- (-)
(b)	Following exposures to central banks:		- (-)
	(i)	Assets representing claims on or guaranteed by the ECB or an EEA member state’s central bank	
	(ii)	Assets representing claims on or guaranteed by central banks of third countries, provided that these have an ECAI rating of CQS 1.	
	(iii)	Reserves held by the credit institution in a central bank referred to in i) and ii) provided that the credit institution is permitted to withdraw such reserves at any time during stress periods and the conditions for such withdrawals have been specified in an agreement between the relevant competent authority and the ECB or the central bank	
(c)	Assets representing claims on or guaranteed by the following central governments, regional governments, local authorities or public sector entities (PSEs):		- (5%)
	(i)	Central government of an EEA member state	
	(ii)	Central government of a third country, provided that it has an ECAI rating of CQS 1.	
	(iii)	Regional governments or local authorities or public sector entities (PSEs) in an EEA member state, provided that they are treated as exposures to the central government of the respective EEA member state (i.e., risk weighting of 0%)	
	(iv)	Regional governments or local authorities in a third country of the type referred to in ii), provided that they are treated as exposures to the central government of the third country (i.e., same risk weighting as the central government [0%])	
	(v)	PSEs provided that they are treated as exposures to the central government of an EEA member state or to one of the regional governments or local authorities referred to in iii) (i.e., same risk weighting of 0%)	
(d)	Assets representing claims on or guaranteed by the central government or the central bank of a third country, which has not been allocated a rating of CQS 1 (rating below AA-), and certain reserves		- (5%)
(e)	Assets issued by credit institutions which meet at least one of the following requirements:		- (5%)
	(i)	Incorporated in, or established by the central government of, an EEA member state or the regional government or local authority in an EEA member state, the government or local authority is under the legal obligation to protect the economic basis of the credit institution and maintain its financial viability throughout its lifetime and any exposure to that regional government or local authority, if applicable, is treated as an exposure to the central government of the EEA member state (i.e., risk weighting of 0%);	
	(ii)	The credit institution is a promotional lender as defined in Art. 10(1)(e)(ii)	
(f)	Qualifying EEA covered bonds that fulfil all of the following criteria:		7% (12%)
	(i)	Covered bonds as defined in Art. 3 No. 1 CBD, or which were issued prior to 08 July 2022 and fulfil the requirements of Art. 52 (4) of the UCITS Directive at the time of issuance, so that they qualify for preferential treatment as covered bonds through to maturity	
	(ii)	Risk positions against banks in the cover pool in line with Art. 129 (1) (c) and 129 (1a) CRR	
	(iii)	deleted	
	(iv)	issue volume of at least EUR 500m or equivalent in domestic currency	
	(v)	Rating: CQS 1 from ECAI; no rating: risk weighting of 10% pursuant to Art. 129 (5) CRR	
	(vi)	Overcollateralisation of at least 2%	
(g)	Assets representing claims on or guaranteed by the multilateral development banks and the international organisations referred to in Art. 117 (2) and Art. 118 CRR		- (5%)

NB: CQS = Credit Quality Step (rating class) as defined in CSA
Source: LCR-R, NORD/LB Markets Strategy & Floor Research

Classification overview (continued)

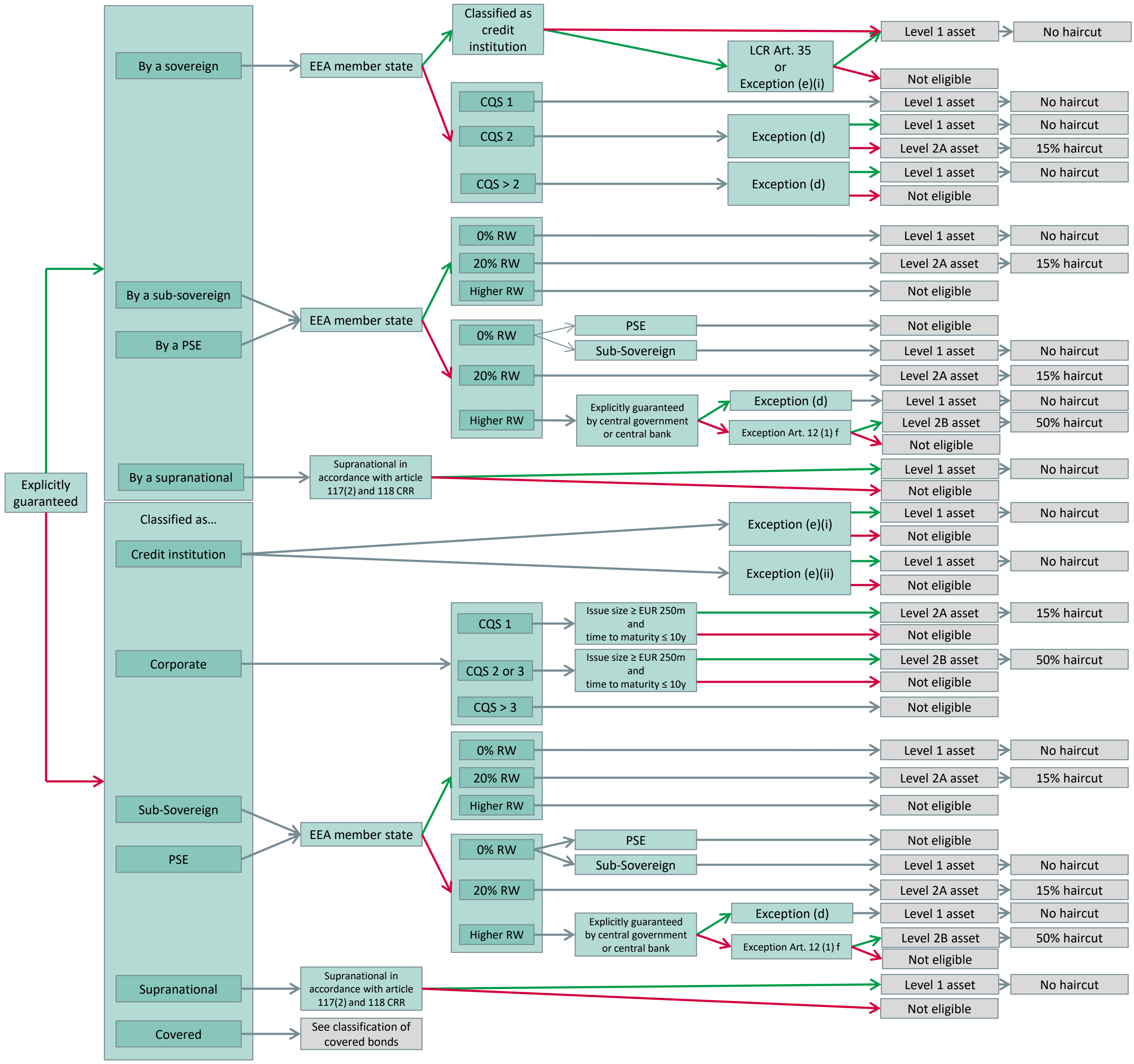
	Level 2A assets (maximum of 40% of liquidity buffer)	Minimum haircut (for shares or units in CIUs)
(a)	Assets representing claims on or guaranteed by regional governments, local authorities or PSEs in an EEA member state, where exposures to them are assigned a risk weighting of 20% pursuant to Art. 115 (1) (5) and Art. 116 (1) (2) (3) CRR	15% (20%)
(b)	Assets representing claims on or guaranteed by the central government or the central bank of a third country or by a regional government, local authority or PSE in a third country, where exposures to them are assigned a risk weighting of 20% pursuant to Art. 114 (2) and Art. 115 or Art. 116 CRR	15% (20%)
(c)	Qualifying EEA covered bonds that do no not reach so-called "Level 1B"	15% (20%)
(d)	Qualifying covered bonds issued by credit institutions in third countries (supervisory requirements must be examined in each particular case: Regulation 2016/2358/EU does not apply)	15% (20%)
(e)	Corporate debt securities which meet all of the following requirements: (i) CQS1 (minimum rating of at least AA- or equivalent in event of a short-term credit assessment) (ii) issue size of at least EUR 250m or equivalent in domestic currency (iii) maximum time to maturity of the securities at the time of issuance is 10 years	15% (20%)
	Level 2B assets (maximum of 15% of liquidity buffer)	**Minimum haircut (for shares or units in CIUs)**
(a)	Exposures in the form of ABS under certain conditions (pursuant to Art. 13 of the LCR Regulation)	25-35% (30-40%)
(b)	Corporate debt securities which meet all of the following requirements: (i) CQS ≤ 3 (ii) issue size of at least EUR 250m or equivalent in domestic currency (iii) maximum time to maturity of the securities at the time of issuance is 10 years	50% (55%)
(c)	Shares, provided that they meet certain conditions	50% (55%)
(d)	Restricted-use committed liquidity facilities provided by the ECB, the central bank of an EEA member state or a third country, under certain conditions	-
(e)	Qualifying EEA covered bonds (no rating restriction)	30% (35%)
(f)	Only for religiously observant credit institutions: certain non-interest-bearing assets	50% (55%)

NB: CQS = Credit Quality Step (rating class) as defined in CSA
Source: LCR-R, NORD/LB Markets Strategy & Floor Research

Classification of PSEs and sub-sovereigns

The classification of PSEs and sub-sovereigns (regional governments and local authorities; RGLA for short) is almost identical. If an explicit guarantee is given for a bond or an issuer by a central government, classification is the same as for sovereigns. If no explicit guarantee is given, classification is carried out primarily on the basis of the issuer's risk weighting. If, in regulatory terms, PSE and sub-sovereign bonds may be treated as exposures to the respective central government and a risk weighting of 0% can be applied, these issuers can accordingly be classified as Level 1. Theoretically, exceptions to this are issuers from outside the EEA where a risk weighting of 0% can be applied but there is no explicit guarantee in place. If it involves a PSE, classification is not possible. Sub-sovereigns can be classified as a Level 1 asset. Institutions where a risk weighting of 20% can be applied are classified as Level 2A issuers. Institutions with higher risk weightings that are based outside the EAA and have an explicit guarantee from a central bank or government can be classified as Level 1 issuers using the conditions of Exemption (d) (see classification of sovereigns). If an explicit guarantee is not specified, a Level 2B classification as defined in Art. 12 (1) (f) LCR Regulation remains an option. This refers to institutions which, due to their religious beliefs, are not permitted to hold interest-bearing assets. Bonds of other PSEs and sub-sovereigns for which the risk weighting is higher than 20% under the standardised credit risk approach cannot be classified as liquid assets.

LCR classification of assets (Articles 10 – 12 LCR Regulation)



Comments: stated haircuts do not apply to shares or units in CIUs; PSE = Public Sector Entity; CQS = Credit Quality Step (rating class) as defined in CSA; green = condition met; red = condition not met; grey = tbc
Source: LCR-R, NORD/LB Markets Strategy & Floor Research

0% risk weighting enables Level 1 classification for Bundeslaender bonds

Since exposure to Bundeslaender can be assigned a risk weighting of 0% under the CRR standardised approach (see previous chapter), this consequently results in Level 1 classification for German Laender bonds. In the case of the LCR, too, from a regulatory viewpoint this results in equal treatment of exposures to both the Bund (federal government) and German Bundeslaender.

Regulatory framework
Impacts of the Net Stable Funding Ratio

Introduction of the NSFR aims to reduce funding risks

In December 2010, the Basel Committee on Banking Supervision (BCBS) announced the introduction of a net stable funding ratio (NSFR) which, similar to the LCR, is aimed at increasing the stability of financial institutions. The aim of the LCR is to prevent liquidity bottlenecks in a 30-day stress scenario, whereas the NSFR focuses on reducing funding risks across a 12-months time frame. The objective is to limit a bank's susceptibility to disruptions in the usual funding channels, to counteract potential liquidity disruptions and thereby prevent a systemic stress scenario. In particular, the NSFR is designed to limit over-reliance on short-term funding. In October 2014, the BCBS published the final NSFR framework.

EU implementation of the NSFR

In Article 413 (1), the CRR already includes an initial requirement for institutions to structure their long-term liabilities in such a way that they can be adequately funded under both normal and stressed conditions. Moreover, institutions are already subject to requirements to report to the competent authorities. However, detailed criteria and weighting factors for the NSFR were only included in Articles 428a et seq. of the CRR with the banking package of 20 May 2019. The new rules came into force on 28 June 2021. In future, simplified NSFR calculations will apply to "small and non-complex institutions" (in accordance with Article 4 (1) No. 145 of the CRR). However, the regulator has also introduced some deviations from the Basel framework in its implementation into European law. For example, the definition and the weighting of liquid assets have been taken from the LCR. There are also differences in relation to calibration and individual instruments. The aim of these differences and subsequent introduction at a later date (currently only the reporting obligation applies) is to make it easier for institutions at European level to introduce the Basel framework, which is regarded as quite conservative. The simplified requirements for small and non-complex institutions are also a European feature.

Definition of the NSFR

The NSFR is defined as the available amount of stable funding (ASF) relative to the required amount of stable funding (RSF). A value of 100% should be maintained as a minimum value here.

Stable funding considerations

The idea behind the NSFR is to ensure that the available stable funding (ASF) fully covers the required stable funding (RSF) for a time horizon of one year. The maturity, quality and liquidity of an asset are the main factors used to calculate how much stable funding the respective asset requires. The stability of the liabilities is mainly defined by their maturity and their availability in relation to the probability of outflows.

Calculation of the NSFR
The NSFR is calculated using the formula below and expressed as a percentage (Art. 428b and 428c of the CRR):

$$\text{NSFR} = \frac{\text{Available Stable Funding (ASF)}}{\text{Required Stable Funding (RSF)}} \geq 100\%$$

The calculation is carried out in the reporting currency. Institutions are required to apply the appropriate factors to the book value of assets, liabilities and off-balance-sheet items as outlined in the following.

Calculation of the RSF
The RSF is calculated by multiplying the totality of all assets and off-balance-sheet exposures in accordance with Articles 428r-428ah of the CRR by the appropriate weighting factors (Required Stable Funding Factor, RSFF). As a rule, in the context of the calculation of the RSF, it can be assumed that assets with a longer residual maturity will be assigned a higher RSF weight factor. At the same time, better quality and liquidity make for a lower RSF weight. In the event that funding routes should be disrupted, the expectation is that high quality liquid assets (HQLA) would be easy to sell and therefore could help counteract any liquidity bottleneck. The funding risk of assets with longer residual maturities tends to be higher. Consequently, such assets call for larger amounts of stable funding.

Calculation of the ASF
Ideally, an institution should have ASF to cover at least 100% of the RSF amount calculated in the first instance. ASF is derived from the totality of all liabilities pursuant to Articles 428k to 428o of the CRR, multiplied by the respective risk weight factors (Available Stable Funding Factor, ASFF). The allocation of ASF weight factors to the respective liabilities is initially based on the maturity of the liability. Accordingly, a longer residual maturity results in a higher allocation of the instrument to the ASF. Consequently, all liabilities with a residual maturity of at least one year, in other words, a maturity date outside the period assessed by the NSFR, are given a weight factor of 100%. These liabilities are regarded as stable funding in full, as there is no funding risk within a year. Alongside maturity, the respective counter-party of the liabilities plays a role. Liabilities against retail customers or small and medium-sized enterprises (SMEs) are deemed to be more stable.

Weighting factors could change again
As previously mentioned, the NSFR entered into force on 28 June 2021, although the EBA has already been tasked with reviewing this by way of Article 510 CRR after the CRR came into force in June 2019. The particular focus is on derivative contracts (Art. 428s [2] and Art. 428at [2]). In this regard, netting sets of derivative contracts are therefore taken into account in both the NSFR and the simplified calculation of the NSFR at 5% of the required stable funding.

Bundeslaender enjoy preferential regulatory treatment pursuant to CRR
From our perspective, the effect of the NSFR on the Bundeslaender will be positive. Since LCR-eligible assets only need to be backed by less stable funding due to their lower RSF factor, they are given preferential treatment. The LCR level of 1 for German Laender produces an NSFR classification of 0% pursuant to Art. 428r CRR.

Regulatory framework
Classification of SSAs under Solvency II

Solvency II with major implications for SSAs and Bundeslaender in particular
On 10 October 2014, the European Commission published the delegated act implementing Solvency II. To calculate the solvency capital requirements for insurance companies, the regulation calls for a variety of risk modules to be taken into account, with the market risk module entailing significant implications. In addition to interest rate, equity, real estate and exchange rate risks as well as market risk concentrations, it shows how the spread risk is calculated. As is the case for the risk weighting in banking regulations, there are also exemptions here, which significantly enhance the relative attractiveness of selected groups of issuers.

Art. 180 (2) gives preferred status to selected issuers
The criteria for the preferred regulatory treatment of exposure arise, in particular, from Art. 180 (2) Solvency II. Exposures that meet certain criteria (see below) may be allocated a stress factor of 0%, whereby no capital backing is required for these items to support spread risk. According to Art. 180 (9), a stress factor of 0% also applies in the case of credit derivatives where the underlying financial instrument is a bond or a loan to any exposure listed in Art. 180 (2). Furthermore, according to Art. 199 (8), a probability of default of 0% can be assumed for exposures to counterparties referred to in points (a) to (d) of Article 180 (2), while, in addition, according to Art. 187 (3), a risk factor of 0% is assigned for market risk concentration. Overall, very positive implications therefore arise from this preferred treatment, which, in our opinion, applies to a large number of SSAs.

Art. 180 (2) regulates RGLA exposures for the first time
In the European Commission's delegated regulation (EU) 2019/981 dated 8 March 2019, guarantees from RGLAs were finally included. Exposure to RGLAs has also now been defined. Fundamentally, guarantee recipients must have preferred status in terms of the guarantees from RGLAs and exposure to these. However, two restrictions must be taken into account: first, RGLAs must be regarded as identical exposure to the respective central government ((EU) 2015/2011; Article 116), and second, the conditions laid down in Article 215 of the Regulation (EU) 2015/35 must be satisfied. RGLAs that are not equal to a central government as per Article 116 are automatically considered to have a stress$_{i}$ risk factor in line with CQS 2. This also applies to bonds/issuers guaranteed by these RGLAs. According to our understanding, this means that international regions of non-member states can never benefit from preferred status.

Criteria for preferred status within the scope of Solvency II

Art. 180 (2): Specific exposures

Exposures in the form of bonds and loans to the following shall be assigned a *stress*$_i$ risk factor of 0%:

a) the European Central Bank (ECB);
b) Member States' central governments and central banks denominated and funded in the domestic currency of that central government and central bank;
c) multilateral development banks referred to in Art. 117 (2) CRR;
d) international organisations referred to in Art. 118 CRR.

Exposures in the form of bonds and loans that are fully, unconditionally and irrevocably guaranteed by one of the counterparties mentioned in points (a) to (d), where the guarantee meets the requirements set out in Art. 215, shall also be assigned a risk factor *stress*$_i$ of 0%. For the purposes of sub-paragraph 1 b, risk exposures in the form of bonds and loans that are fully, unconditionally and irrevocably guaranteed by one of the RGLAs mentioned in Article 1 of the European Commission Implementing Regulation (EU) 2015/2011 (1), are to be regarded as risk exposures against the central government, provided that the guarantee satisfies the requirements laid down in Article 215.

Art. 215: Guarantees

In the calculation of the Basic Solvency Capital Requirement, guarantees shall only be recognised where explicitly referred to in this Chapter, and where in addition to the qualitative criteria in Articles 209 and 210, all of the following criteria are met:

a) the credit protection provided by the guarantee is direct;
b) the extent of the credit protection is clearly defined and incontrovertible;
c) the guarantee does not contain any clause, the fulfilment of which is outside the direct control of the lender, that
    i) would allow the protection provider to cancel the protection unilaterally;
    ii) would increase the effective cost of protection as a result of a deterioration in the credit quality of the protected exposure;
    iii) could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original obligor fails to make any payments due;
    iv) could allow the maturity of the credit protection to be reduced by the protection provider;
d) on the default, insolvency or bankruptcy or other credit event of the counterparty, the insurance or reinsurance undertaking has the right to pursue, in a timely manner, the guarantor for any monies due under the claim in respect of which the protection is provided and the payment by the guarantor shall not be subject to the insurance or reinsurance undertaking first having to pursue the obligor;
e) the guarantee is an explicitly documented obligation assumed by the guarantor;
f) the guarantee fully covers all types of regular payments the obligor is expected to make in respect of the claim.

Source: Solvency II, NORD/LB Markets Strategy & Floor Research

Equal treatment of central government exposure and exposure with an explicit state guarantee

From a regulatory perspective, the effect of Art. 180 (2) is therefore equal treatment of central government exposure and exposures which benefit from an explicit central government guarantee. Promotional banks guaranteed by RGLAs have now been newly and explicitly included. These institutions now also have preferred status. However, unlike the rules under CRD IV for banks, in conjunction with Art. 215, this Article defines minimum requirements for guarantees, which we understand are met by most explicit guarantees.

Bundeslaender benefit from 0% stress factor

At the beginning of July 2015, the European Insurance and Occupational Pensions Authority (EIOPA) published a Final Report on the basis of a consultation paper produced at the end of November 2014, which defined a list of regional and local governments that meet the requirements of Art. 85 and can therefore be assigned a stress factor of 0%. The most important issuers to benefit from a 0% stress factor here are the German Laender. As with the risk weighting under Basel III, under Solvency II, the Spanish regions are, for example, given preferential treatment as per the EIOPA list, while the absence of Italian regions, for instance, implies that a $stress_i$ risk factor of 0% cannot be assigned here. The table below summarises the regional and local authorities that can be assigned a stress factor of 0%. In Directive (EU) 2015/2011 of 11 November 2015, this Final Report was approved with the result that the proposed classification became effective.

Regional and local authorities (0% stress factor possible)

Country	Regional and local governments
Austria	Laender & municipalities
Belgium	Municipalities (Communauté/Gemeenschappen), regions (Régions/Gewesten), towns (Communes, Gemeenten) & provinces (Provinces, Provincies)
Denmark	Regions (Regioner) & municipalities (Kommuner)
Finland	Municipalities (kunta/kommun), towns (kaupunki/stad), province of Åland
France	Regions (régions), municipalities (communes), "Départements" – albeit not VDP and IDF
Germany	Bundeslaender, municipalities & municipal associations
Liechtenstein	Municipalities
Luxembourg	Municipalities (communes) & municipal associations (syndicats de communes)
Lithuania	Municipalities (Savivaldybės)
The Netherlands	Provinces (Provincies), municipalities (Gemeenten) & water associations (Waterschappen)
Poland	Districts (powiat), municipalities (gmina), regions (województwo), district and municipal associations (związki międzygminne i związki powiatów) & the capital Warsaw
Portugal	Autonomous regions the Azores and Madeira
Spain	Autonomous regions (Comunidades autónomas) and local government (Gobierno local)
Sweden	Municipalities (Kommuner), councils (Landsting) & regions (Regioner)

Source: (EU) 2015/2011, NORD/LB Markets Strategy & Floor Research

Non-EEA regions not included on EIOPA list

Interestingly, EIOPA only cites EEA regional and local governments in its list, although there is no restriction to Member States under Art. 85. In contrast, the Final Report based on the consultation paper states that the scope shall be restricted initially to EEA regional and local governments. However, future extension of the scope to include regional and local governments of the relevant third countries is not ruled out. If Solvency II also follows the risk weighting according to Basel III for international sub-sovereigns when applying preferred status, we believe that Canadian regions (and the UK) would also benefit from a stress factor of 0%. If exposures to Canadian regions were to be treated in the same way as exposures to their central government, our interpretation under Art. 180 (3) based on the rating of Canada would also result in a stress factor of 0%.

Conclusion

We are of the opinion that the Solvency II Directive highlights the importance of regulation within the SSA segment. The possibility of preferential regulatory treatment or regulatory equivalence with central governments would lead to a significant increase in the relative attractiveness of selected SSAs – including for the German Laender.

Regulatory framework
ECB repo collateral rules and their implications

General framework and Temporary framework define collateral rules
Within the scope of its Statutes, access to ECB liquidity is only possible on a collateralised basis. The ECB defines the assets that are eligible as collateral in its General framework and Temporary framework. There are some significant differences in the criteria for acceptance as collateral, especially for quasi-government issuers. For this reason, we devote the following section to a more detailed look at the ECB repo rules.

Overview of collateral regulations (in accordance with General framework)

Eligibility criteria	Marketable assets	Non-marketable assets	
Type of asset	ECB debt certificates, other marketable debt instruments	Credit claims	Retail mortgage-debt instruments (RMBDs)
Credit standards	The asset must meet credit quality requirements. These are assessed using ECAF (Eurosystem credit assessment framework) rules for marketable assets.	The debtor/guarantor must meet high credit standards. Creditworthiness is assessed using ECAF rules for credit claims.	The asset must meet high credit standards. The high credit standards are assessed using ECAF rules for RMBDs.
Place of issue	European Economic Area (EEA)	-	-
Settlement/ handling procedures	Place of settlement: Eurozone. Instruments must be centrally deposited in book-entry form with national central banks (NCBs) or a securities settlement system (SSS), fulfilling the standards and assessment procedures detailed in the Eurosystem User Assessment Framework	Eurosystem procedures	Eurosystem procedures
Type of issuer/ debtor/guarantor	NCBs, public sector, private sector, International and supranational Institutions	Public sector, non-financial corporations, International and supranational Institutions	Credit institutions that are eligible counterparties
Issuer, debtor or guarantor headquarters	Issuer: EEA or G-10 countries outside the EEA; Debtors: EEA; guarantor: EEA	Eurozone	Eurozone
Admissible markets	Regulated markets, non-regulated markets accepted by the ECB	-	-
Currency	Euro	Euro	Euro

Source: ECB, NORD/LB Markets Strategy & Floor Research

Overview of collateral regulations (in accordance with General framework) (continued)

Minimum amount	-	Minimum size threshold at the time of submitting the credit claim - domestic use: choice of the NCB; - cross-border use: common threshold of EUR 0.5m.	-
Legal basis	For asset-backed securities (ABS), the acquisition of the underlying assets must be governed by the law of an EU member state. The law governing underlying credit claims must be the law of an EEA country.	Governing law for credit claim agreement and mobilisation: law of a member state of the Eurozone. The total number of different jurisdictions applicable to a) the counterparty, b) the creditor, c) the debtor, d) the guarantor (if relevant), e) the credit claim agreement, f) and the mobilisation agreement shall not exceed two in order to use the credit claims as collateral.	-
Cross-border use	Yes	Yes	Yes

Source: ECB, NORD/LB Markets Strategy & Floor Research

Precise definition of possible collateral

In accordance with Part 4, Title II, Chapter 1, Article 62 of the General Framework, the ECB accepts bonds with fixed, unconditional nominal volume as collateral (in contrast to convertible bonds, for example). The bonds must carry a coupon that could not result in negative cash flows. In addition, bonds without a coupon payment (zero coupons), with fixed or variable interest payments based on a reference interest rate, are also eligible. Bonds designed so that the coupon payment changes in line with a rating upgrade or downgrade, or inflation-linked bonds, are also eligible for use as collateral. Special rules apply to ABS with regard to the first condition (fixed, unconditional nominal volume). The ECB generally divides collateral into two groups: marketable and non-marketable assets, which differ primarily in terms of their acceptance criteria.

Temporary framework extends collateral rules

Apart from assets that meet these acceptance criteria, the Temporary Framework extends the criteria to some extent. Under certain conditions, particular bonds that are denominated in GBP, JPY or USD may be accepted for collateral purposes, while the credit threshold limits may be waived for debt securities that were issued or are guaranteed by IMF/EU programme states.

Valuation discount (haircut) for collateral is derived from allocation to a haircut category

ECB-compliant collateral (marketable) is divided into five haircut categories, which differ with regard to issuer classification and type of collateral. The haircut category is the key factor in determining haircuts to which certain debt securities are subject. The haircuts also differ on the basis of residual term to maturity and coupon structure. Haircuts for bonds with variable coupons correspond to those of fixed-interest bonds (of the respective category).

Haircut categories – an overview

Category I	Category II	Category III	Category IV	Category V
Central government debt instruments	**Regional and local authority debt instruments**	Legislative covered bonds other than jumbo covered bonds	Unsecured debt instruments issued by banks or institutions that are banks that do not fulfil the quantitative criteria defined in Annex XIIa of Directive (EU) 2015/510 (ECB/2014/60)	ABS
ECB debt certificates	Debt instruments placed by issuers (banks and non-banks) that are classified by the Eurosystem as institutions with a public development mission and that fulfil the quantitative criteria defined in Annex XIIa of Directive (EU) 2015/510 (ECB/2014/60))	Multi cédulas	Unsecured debt instruments issued by financial corporations other than banks	
Bonds issued by the national central banks in their respective Member State prior to introduction of the Euro	Debt instruments issued by multilateral development banks and international organisations	Debt instruments issued by non-financial corporates, companies active in the government sector or non-bank institutions that do not fulfil the quantitative criteria defined in Annex XIIa of Directive (EU) 2015/510 (ECB/2014/60).		
	Covered bond jumbos			

Source: ECB, NORD/LB Markets Strategy & Floor Research

Haircuts by haircut category and rating – an overview

Credit quality	Residual maturity (years)(*)	Haircut category												
		Category I			Category II			Category III			Category IV			Category V
		fixed coupon	zero coupon	floating coupon	fixed coupon	zero coupon	floating coupon	fixed coupon	zero coupon	floating coupon	fixed coupon	zero coupon	floating coupon	
AAA to A-	0-1	0.5%	0.5%	0.5%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	7.5%	7.5%	7.5%	4.0%
	1-3	1.0%	2.0%	0.5%	1.5%	2.5%	1.0%	2.0%	3.0%	1.0%	10.0%	10.5%	7.5%	4.5%
	3-5	1.5%	2.5%	0.5%	2.5%	3.5%	1.0%	3.0%	4.5%	1.0%	13.0%	13.5%	7.5%	5.0%
	5-7	2.0%	3.0%	1.0%	3.5%	4.5%	1.5%	4.5%	6.0%	2.0%	14.5%	15.5%	10.0%	9.0%
	7-10	3.0%	4.0%	1.5%	4.5%	6.5%	2.5%	6.0%	8.0%	3.0%	16.5%	18.0%	13.0%	13.0%
	>10	5.0%	7.0%	2.0%	8.0%	10.5%	3.5%	9.0%	13.0%	4.5%	20.0%	25.5%	14.5%	20.0%
BBB+ to BBB-	0-1	6.0%	6.0%	6.0%	7.0%	7.0%	7.0%	8.0%	8.0%	8.0%	13.0%	13.0%	13.0%	**Not** permissible
	1-3	7.0%	8.0%	6.0%	9.5%	13.5%	7.0%	12.0%	15.0%	8.0%	22.5%	25.0%	13.0%	
	3-5	9.0%	10.0%	6.0%	13.5%	18.5%	7.0%	16.5%	22.0%	8.0%	28.0%	32.5%	13.0%	
	5-7	10.0%	11.5%	7.0%	14.0%	20.0%	9.5%	18.5%	26.0%	12.0%	30.5%	35.0%	22.5%	
	7-10	11.5%	13.0%	9.0%	16.0%	24.5%	13.5%	19.0%	28.0%	16.5%	31.0%	37.0%	28.0%	
	>10	13.0%	16.0%	10.0%	19.0%	29.5%	14.0%	19.5%	30.0%	18.5%	31.5%	38.0%	30.5%	

(*), i.e. [0-1) residual maturity less than 1 year, [1-3] residual maturity equal to or greater than 1 year and less than 3 years, etc.
Source: ECB, NORD/LB Markets Strategy & Floor Research

ECB assigns Bundeslaender bonds to second-best haircut category

The listing of haircut categories shows that German Laender as regional governments are assigned to the same level as, for example, agencies such as the KfW that are recognised by the ECB. This means that Bundeslaender bonds receive the second-best treatment under the repo rules, after instruments issued by central governments and central banks. The ECB's definitions of collateral therefore provide for further preferential treatment of Bundeslaender from a regulatory viewpoint.

Coronavirus crisis: temporary adjustment to haircut categories extended until June 2023

On 07 April 2020, the ECB announced comprehensive temporary adjustments to the security framework that were aimed at mitigating the impact of potential liquidity tensions on the financial markets across the single currency area. Originally, the temporary adjustment envisaged a general reduction in security discounts of 20% up to September 2021 (before ultimately being extended through to June 2022). Through a resolution adopted by the ECB Governing Council on 23 March 2022, this is to be gradually ended in three steps: since 8 July 2022, there has been a general reduction in haircuts of 10%, which will be in place until June 2023. In the final step, the easing measures for central bank-eligible collateral are set to generally expire in March 2024.

Haircuts by haircut category and rating – an overview (temporary adjustment)

Credit quality	Residual maturity (years)(*)	Haircut category												
		Category I			Category II			Category III			Category IV			Category V
		fixed coupon	zero coupon	floating coupon	fixed coupon	zero coupon	floating coupon	fixed coupon	zero coupon	floating coupon	fixed coupon	zero coupon	floating coupon	
AAA to A-	0-1	0.5%	0.5%	0.5%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	6.8%	6.8%	6.8%	3.6%
	1-3	0.9%	1.8%	0.5%	1.4%	2.3%	0.9%	1.8%	2.7%	0.9%	9.0%	9.5%	6.8%	4.1%
	3-5	1.4%	2.3%	0.5%	2.3%	3.2%	0.9%	2.7%	4.1%	0.9%	11.7%	12.2%	6.8%	4.5%
	5-7	1.8%	2.7%	0.9%	3.2%	4.1%	1.4%	4.1%	5.4%	1.8%	13.1%	14.0%	9.0%	8.1%
	7-10	2.7%	3.6%	1.4%	4.1%	5.9%	2.3%	5.4%	7.2%	2.7%	14.9%	16.2%	11.7%	11.7%
	>10	4.5%	6.3%	1.8%	7.2%	9.5%	3.2%	8.1%	11.7%	4.1%	18.0%	23.0%	13.1%	18.0%
BBB+ to BBB-	0-1	5.4%	5.4%	5.4%	6.3%	6.3%	6.3%	7.2%	7.2%	7.2%	11.7%	11.7%	11.7%	**Not** permissible
	1-3	6.3%	7.2%	5.4%	8.6%	12.2%	6.3%	10.8%	13.5%	7.2%	20.3%	22.5%	11.7%	
	3-5	8.1%	9.0%	5.4%	12.2%	16.7%	6.3%	14.9%	19.8%	7.2%	25.2%	29.3%	11.7%	
	5-7	9.0%	10.4%	6.3%	12.6%	18.0%	8.6%	16.7%	23.4%	10.8%	27.5%	31.5%	20.3%	
	7-10	10.4%	11.7%	8.1%	14.4%	22.1%	12.2%	17.1%	25.2%	14.9%	27.9%	33.3%	25.2%	
	>10	11.7%	14.4%	9.0%	17.1%	26.6%	12.6%	17.6%	27.0%	16.7%	28.4%	34.2%	27.5%	

(*), i.e. [0-1) residual maturity less than 1 year, [1-3] residual maturity equal to or greater than 1 year and less than 3 years, etc.
Source: ECB, NORD/LB Markets Strategy & Floor Research

Performance and relative value
Benchmark indices for German Laender

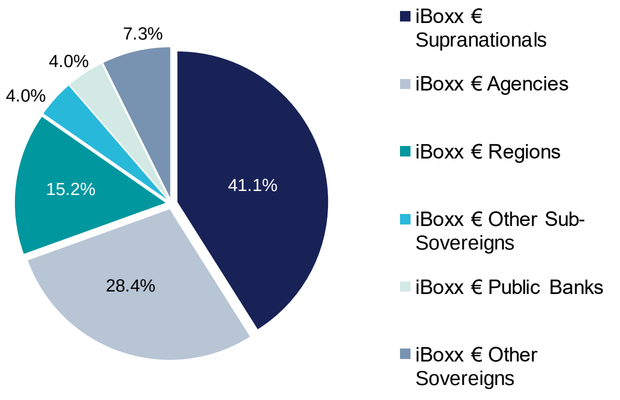
iBoxx € Regions as benchmark for German Laender?
When looking for a benchmark index for bonds issued by the German Bundeslaender, the iBoxx € Regions from data provider Markit always stands out. Containing a total of 203 bonds (composition: September 2022), the sub-index of the iBoxx € Sub-Sovereigns maps the universe of EUR-denominated bonds issued by regional authorities. With a volume weighting of 78.1% (157 bonds), German bonds dominate the index. For various reasons, however, we do not consider the index to be the ideal benchmark for bonds issued by German Laender.

Criteria for classifying issuers into iBoxx € Sub-Sovereigns sub-indices

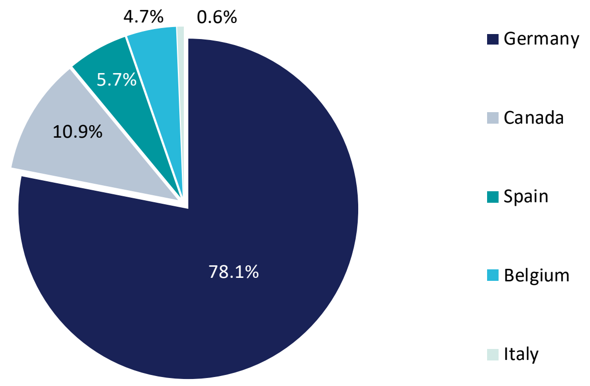
Agencies	Issuers whose main business activity is carrying out a task which is funded by a local authority and which is neutral in relation to competition (e.g. KfW).
Supranationals	Issuers owned by more than one country (e.g. EIB).
Public banks	Issuers which are publicly owned and funded but which offer commercial bank services (e.g. BNG)
Regions	*Issuers that represent regional or local governments (e.g. Bundeslaender) – with either implicit or explicit guarantee and strong relationship to or ownership by the government.*
Other sub-sovereigns	All other bonds that are regarded as sub-national. A distinction is made between three groups: 1. Non-financials: State-funded issuers from a non-financial sector such as state-owned railway companies. 2. Guaranteed financials: Private sector issuers guaranteed by regional municipalities. 3. State-guaranteed bonds by non-guaranteed institutions.

Source: Markit, NORD/LB Markets Strategy & Floor Research

Sub-indices of the iBoxx € Sub-Sovereigns by outstanding volume



Laender weighting within the iBoxx € Regions



Source: Markit, NORD/LB Markets Strategy & Floor Research

Criteria for bond selection in the iBoxx € Sub-Sovereigns sub-indices

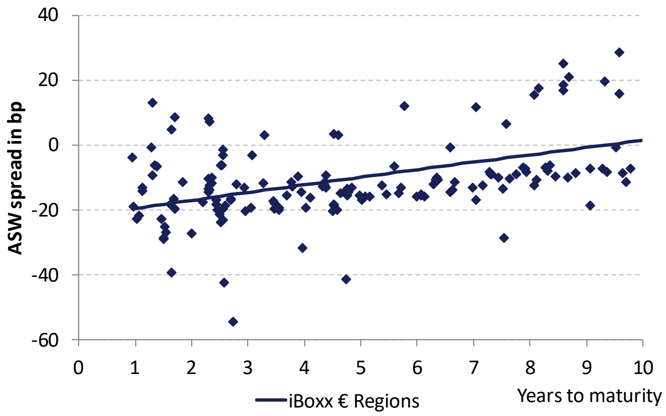
Bond type	Only those bonds whose cash flows can always be determined in advance are taken into consideration in the Markit iBoxx € indices. T-bills and other money market instruments are not included; the only currency permitted is the euro. The origin of the issuer is irrelevant.
Rating	All bonds in the Markit iBoxx € indices must have an investment grade Markit iBoxx rating. The rating approach used by the Markit iBoxx indices is based on the average of the ratings awarded by the three rating agencies Fitch, Moody's and S&P.
Residual term to maturity	Each bond included in an iBoxx € Index must have a minimum residual term to maturity of one year on the day the composition of the Index is specified.
Outstanding volume	Minimum volume outstanding EUR 1.0bn

Source: Markit, NORD/LB Markets Strategy & Floor Research

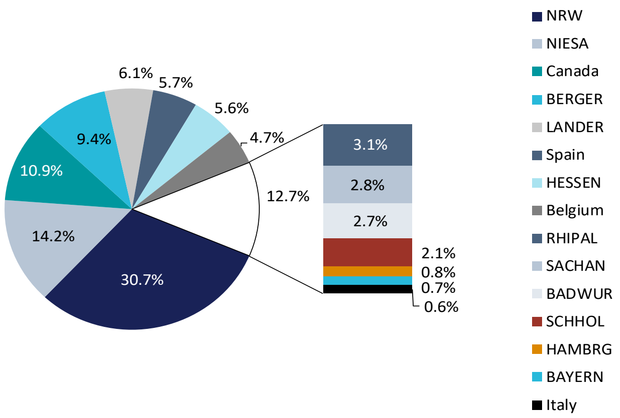
Risk premiums vary due to periphery issuers

From our perspective, the inclusion of Canadian provinces as well as municipalities and regions from Belgium, Spain and Italy does not ideally replicate the Bundeslaender segment. In fact, due to issuers originating from periphery countries in particular, the ASW spreads can, in part, differ significantly from those of the Bundeslaender. As a result of ratings and collateral mechanisms as well as differences in fundamental analysis, the spread level of Bundeslaender is considerably lower than that of peripheral issuers, which in turn reduces the comparability of the index.

ASW spreads of the iBoxx € Regions*



iBoxx € Regions by issuer



* Residual term to maturity > 1 year and < 10 years.
Source: Bloomberg, Markit, NORD/LB Markets Strategy & Floor Research

Weighting of Bundeslaender does not reflect the actual Laender bond market

The weighting of the Laender in the iBoxx € Regions does not truly depict the actual Laender market either. This is primarily due to the criteria for bond selection used by Markit for the iBoxx € Sub-Sovereigns indices. The criteria, in particular the specification of minimum issue volumes of EUR 1.0bn and fixed-interest bonds, cause a distorted weighting of the Bundeslaender in relation to one other. As a result, there is a large supply of bonds with lower volumes, while Saarland, for example, was not rated until October 2016 and Bremen exclusively issued floaters up to 2014. In general, the specification of the iBoxx € Regions means there is no benchmark for the performance and risk premiums of Laender floaters. Nevertheless, after excluding the periphery issuers, the iBoxx € Regions almost exactly replicates the ASW spread levels of bonds issued by the Bundeslaender.

Comment

Given the inherent weaknesses of the iBoxx € Regions, we shall use the total number of Laender bonds in circulation to produce a relative view of each of the Bundeslaender in the following analyses. For this reason, we analyse fixed-interest bonds in relation to all Bundeslaender bonds with an outstanding volume of at least EUR 500m. Similarly, where no fixed-interest bonds are available for analysis, where appropriate we look at floating rate notes issued by a Bundesland in relation to all the Laender floaters with an outstanding volume of at least EUR 500m as well.

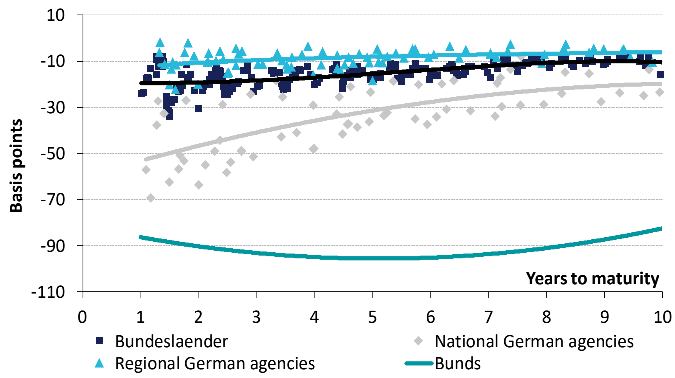
Performance und relative value
Total return and spread performance

LCR and dwindling liquidity as performance drivers
While the spread performance of Supranationals, Sub-Sovereigns and Agencies (SSAs) in 2014 was still being impacted by the LCR classification in particular alongside a general decline in liquidity, this trend towards the drying-up of the market has been exacerbated further since 2015 by way of the Eurosystem's asset purchasing programmes. Since 2016, the spread performance of SSAs has primarily been characterised by the purchases made by the ECB and the national central banks within the scope of the APP and PSPP. An approach on the part of the national central banks that could occasionally be described as aggressive also impacted the spread development of sub-sovereigns. After the scope of the purchase programme was expanded to include regional bonds, the measures taken by the central bank have had a very direct impact. In addition, spreads were affected by a general decline in liquidity within the SSA segment, which merely served to further increase the rarity value of a number of bonds and issuers. Several extensions of the PSPP in addition to the PEPP launched in 2020 have ensured, and continue to ensure, that demand for Laender bonds has been sustained at a high level. Despite the fact that the ECB discontinued its net purchasing activities, the ECB remains the largest investor in the market on account of reinvestments.

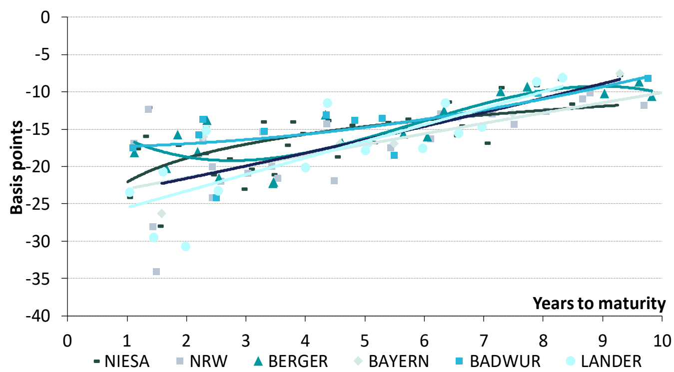
Laender bonds – a comparison

Only a certain relative attractiveness remains
Up to the beginning of the Eurosystem's purchase programme in March 2015, German Laender bonds traditionally offered a high level of relative attractiveness compared to German sovereign bonds (Bunds) in the German SSA investment segment. Even though the PSPP has already had a considerable impact on the Laender segment, there are still some premiums to be found. The PEPP, which was launched in 2020, ensured that spreads in this segment were compressed further – although this mainly occurred among Laender bonds themselves, and less in comparison with Bunds. An interesting aspect to note here is the relative stability of the ASW spreads in comparison with the G spreads, where volatility is significantly higher due to the fluctuations in the respective Bunds.

ASW spreads – a comparison



ASW spreads – a comparison



NB: Residual term to maturity >1 year and <10 years; minimum outstanding volume of EUR 500m. National agencies: KFW, FSMWER, RENTEN, among others. Regional agencies: NRWBK, ERSTAA, LBANK, BAYLAN, IBB, BYLABO, WIBANK, among others.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

More ESG issues on the horizon?

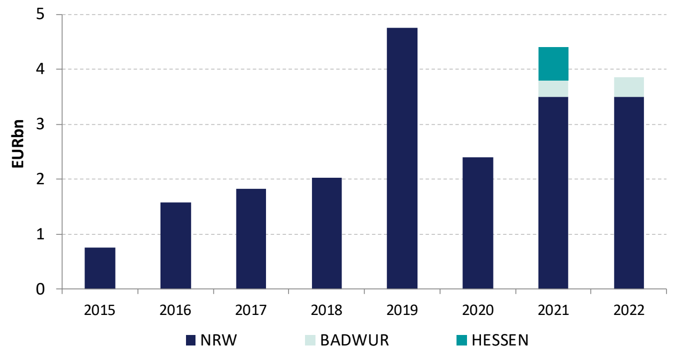
Green light for ESG bonds from German Laender
There can be no doubt that ESG bonds have already become a fixture on the international capital markets, with German Laender refusing to be left behind when it comes to this trend towards bonds with sustainability aspects. For example, North Rhine-Westphalia recognised the potential of this segment as early as 2015, when it issued an inaugural sustainability bond. Since then, NRW has been an annual issuer of sustainability bonds on the primary market. In 2021, two more Laender joined the ranks of ESG issuers. To start with, Baden-Wuerttemberg issued an inaugural green bond in March 2021, before Hesse also issued a green bond in June of the same year. In the short to medium term, we expect further Laender to conduct refinancing activities on the capital market via ESG bonds. The reasons for this are manifold. On the one hand, refinancing costs via sustainability bonds are often several basis points cheaper (key word: greenium), while on the other, the concept of sustainability is part and parcel of the policy approach. Hesse, for example, explicitly included this as an objective in its constitution in 2018: "The state, municipalities and associations of municipalities shall take into account the principle of sustainability in their actions in order to safeguard the interests of future generations" (Art. 26c. of the Hessian Constitution). Conversely, the higher costs for more extensive reporting could be a stumbling block for some sub-sovereigns, from which the profitability of an ESG issue could suffer.

Green, social and sustainability – a classification
Three forms of ESG bonds in particular have established themselves on the capital market: green bonds, social bonds and sustainability bonds. The respective designation already indicates which primary sustainability goal is to be pursued. In particular, green bonds pursue goals that serve environmental protection. For example, this can take the form of promoting the use of renewable energy or the financing of regional and long-distance public transport through more environmentally friendly (drive) options. Social bonds, on the other hand, are used (as you might expect) in connection with social projects. These are expressed, for example, in the promotion of social housing, or in initiatives to reduce unemployment and financing support measures. Sustainability bonds, on the other hand, are all-rounders and the projects supported can be of both an ecological and social nature. Projects that are fundamentally eligible for financing through sustainability bonds are to be found in the corresponding issuer frameworks. These tend to be closely linked to the respective guidelines of the International Capital Market Association (ICMA). The goals of the respective frameworks are based on the Sustainable Development Goals (SDGs) of the United Nations (UN) and the respective category of the Green Bond Principles (GBP), Social Bond Principles (SBP) or Sustainability Bond Guidelines (SBG). In addition to the corresponding use of proceeds, the respective ICMA guidelines provide additional guidance on the process of project evaluation and selection, management of proceeds and reporting.

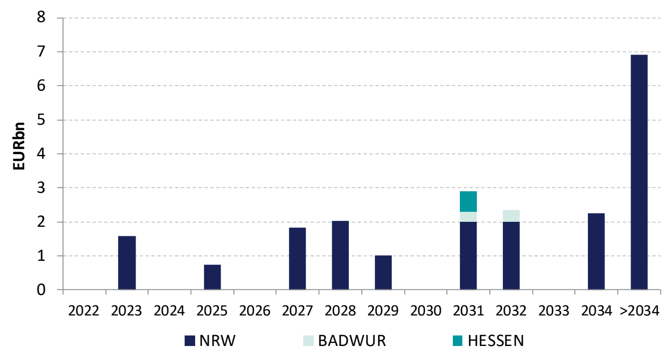
Room for improvement in issuance volume

Since the first sustainability bond was issued by North Rhine-Westphalia in 2015, this segment has enjoyed growing popularity: a further eleven sustainability bonds have followed from NRW. In 2021, the Laender of Hesse (EUR 600m) and Baden-Wuerttemberg (EUR 300m) each issued a green bond. In May 2022, it was once again Baden-Wuerttemberg that placed another green bond (EUR 350m) and offered the prospect of further green issues. The total volume of ESG bonds issued by the German Laender currently stands at EUR 21.6bn, with the majority attributable to sustainability bonds from NRW. With efforts to invest more in environmental and social areas, we anticipate that further Laender will opt to issue ESG bonds. We are expecting growing momentum in each of the ESG segments outlined above over the next few years. An upward trend in the volume of ESG bonds issued has already been observed in recent years. While the annual ESG volume issued in 2015 was just EUR 750m, a total of EUR 4.75bn was issued in 2019 and EUR 4.4bn in 2021, with North Rhine-Westphalia again accounting for the lion's share here.

ESG volume issued over time (EURbn)



Maturity profile of ESG bonds



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

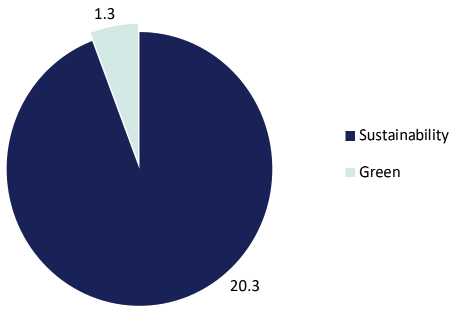
NRW offering long maturities

In terms of the maturity profile of the ESG bonds issued by the Laender, there is already quite a wide range of different maturities. NRW is unsurprisingly setting the pace in this regard, with the original maturities of the bonds issued ranging from seven years (issued in 2016; maturing in 2023) to 30 years (issued in 2022; maturing in 2052). However, the 10y maturity segment has dominated activities in this segment up to now, with Baden-Wuerttemberg and Hesse also opting for this maturity segment.

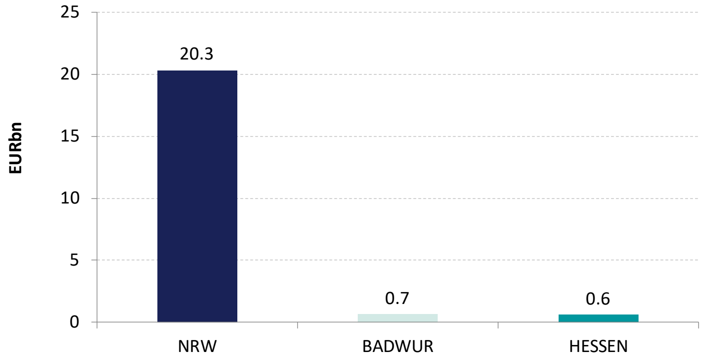
Data situation: as expected, sustainability ahead of green

Due to the early participation of North Rhine-Westphalia in the ESG market in the form of sustainability bonds, it is not surprising that this form of ESG bond boasts by far the largest volume to date (EUR 20.3bn). However, the three green bonds issued since 2021 (social bonds have not yet been issued) are probably just the beginning of the story in this context. The volume of EUR 1.3bn issued here so far represents only around 5.8% of the total volume. The lack of social bond issuance is perhaps misleading. After all, given that NRW issues sustainability bonds, social aspects are also included in the use of proceeds here. For example, the bond issued by NRW in 2022 seeks to finance affordable local public transport services in addition to promoting the construction of affordable housing.

Volume by ESG category (EURbn)



ESG volume by Bundesland (EURbn)



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Frameworks – similarities and differences

The issuers' frameworks are all in line with ICMA Principles. As already mentioned, the Laender of BADWUR and HESSEN (to use their tickers) have issued green bonds and published corresponding green bond frameworks in addition to having had them assessed by a second party opinion. NRW has been through the same process with its Sustainable Bond Framework. The content is therefore structured according to the four ICMA pillars, namely use of proceeds, project evaluation process, management of proceeds and annual reporting. While HESSEN and BADWUR have a corresponding focus on green finance, NRW can act more flexibly between social and environmental aspects with regard to the use of proceeds. This is also reflected in the project selection to date. Broken down into the categories of the ICMA's Green Bond Principles, for example, the lion's share of Hesse's green bond proceeds went towards "clean transport" (46%), followed by "environmentally sustainable management of living natural resources and land use" (29%). Meanwhile, a total of 14% was allocated to the category of "energy efficiency". A similar distribution of the use of proceeds can also be seen in Baden-Wuerttemberg, with the highest proportion (21.9%) attributable to the category "energy efficiency", followed by 17.5% to "environmentally sustainable management of living natural resources and land use". The category of "environmentally friendly buildings" accounted for a share of 17.0%, while a total of 13.1% was attributable to "clean transport". North Rhine-Westphalia, on the other hand, follows six categories of the Social Bond Principles and eight categories of the Green Bond Principles with its framework. Whereas pre-Covid it was mainly green aspects that played a part in the use of proceeds, NRW has increasingly concentrated on social projects as part of its pandemic response. For example, 62% of the sustainability bond No. 9 was used to finance the category "access to basic social services". The total share of green categories in the last issue was nearly 17%.

Comment

Despite the increasing volume in recent years, we believe that there remains additional significant untapped growth potential in the ESG segments. In this way, a niche product could ultimately be transformed into an established market with many players. Critical to this is the ever-increasing need for financing, among other aspects due to amendments to the energy transition and climate protection laws of the individual Laender. The ICMA principles provide solid guidelines containing core recommendations, while external audits also safeguard the use of proceeds with constant monitoring processes in place. The fact that only three of the 16 German Laender have a framework alone underlines the inherent catch-up potential for the vast majority of the Laender.

An overview of the German Laender

Authors: Dr Norman Rudschuck, CIIA // Jan-Phillipp Hensing

Laender characterised by high degree of heterogeneity – spread convergence could be reversed due to terminated purchase programmes

The German Laender are characterised by a high degree of heterogeneity. Differences between the Bundeslaender exist not only in terms of area, number of inhabitants and economic strength; they also differ significantly with regard to factors such as debt situation, focus on exports and demographic trends. In addition, the liquidity of their bonds and their ratings result in differences, although these are at most reflected marginally due to the very small differences in spreads. This spread convergence is being intensified or even actually manifested by way of the ECB's focus on bonds issued by German Laender within the framework of its securities purchases (e.g. under the PSPP and PEPP). Net purchasing activity here has now been brought to an end, meaning that the fundamental differences between the Laender will gradually start to become more important again. In the discussion below, we will initially look at the overall development of the Laender, before focusing on the differences between them.

Broad range of products

The 16 German Laender offer a broad range of bonds and Schuldscheindarlehen (SSD). At present, an outstanding volume of EUR 402.4bn is spread across 863 separate bond deals. Only EUR 14.2bn (3.5%) of this amount is not denominated in EUR, which illustrates the fact that foreign currencies remain of very minor importance in Laender funding mixes. Fixed-coupon bonds (outstanding volume: EUR 357.8bn) and floating rate notes (EUR 27.8bn; FRNs or floaters) dominate Laender funding profiles. Overall, 342 EUR-denominated bonds feature benchmark-size volumes. In the non-public segment, loans and Kassenkredite together account for a volume of around EUR 167.3bn. The data also includes a total of 18 Laender jumbos (EUR 19.7bn) jointly placed by a group of several Laender.

General information

Total debt*

EUR 581.0bn

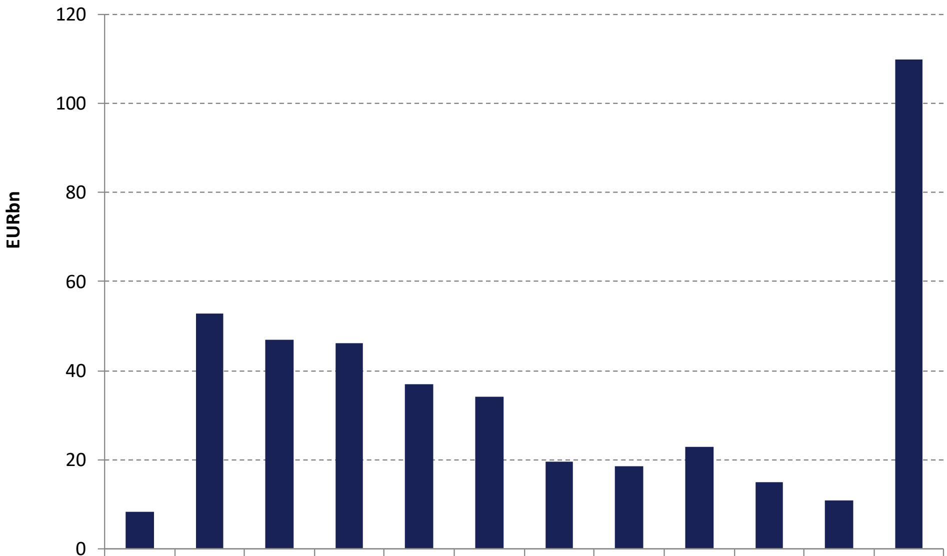
Of which bonds**

EUR 422.1bn

* As reported at year-end 2021

** Data retrieved on 05 October 2022

Outstanding bonds issued by the German Laender



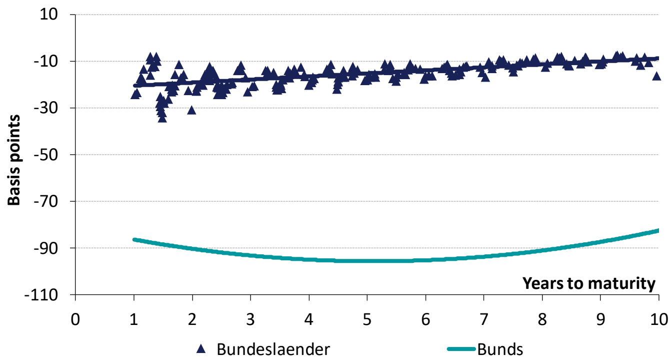
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
Laender bonds	8.3	52.9	47.0	46.2	36.9	34.2	19.5	18.6	22.9	14.8	10.8	110.1

Foreign currencies are converted into EUR at rates as at 05 October 2022.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

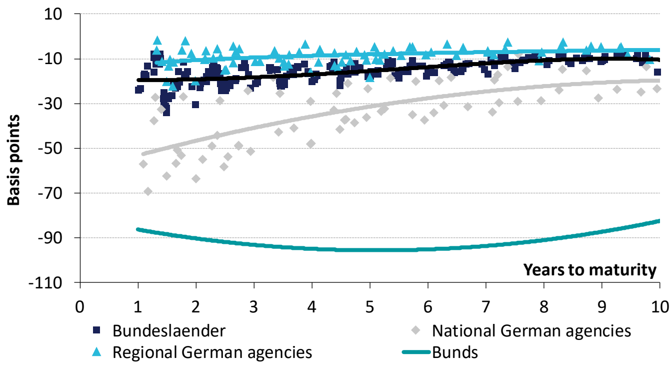
Ratings

The ratings agencies Fitch, Moody's and S&P link their ratings for each of the Bundeslaender with the rating of the German federal government (for the most part). Fitch regards the system of financial equalisation among the Bundeslaender and the principle of federal loyalty in general as the dominant factors in equating the ratings directly. Moody's also views this system as a significant factor, although the agency does take other aspects into consideration, with the result that the ratings are not necessarily equated. The Bundesland of NRW, for example, is currently rated Aa1, which is one notch below the Aaa top rating held by the German federal government. S&P makes an even wider distinction. Although this rating agency does also factor the system of financial equalisation among the Bundeslaender and the principle of federal loyalty in to its rating decision, it occasionally diverges more widely from the AAA rating held by the German federal government. In this context, for example, S&P currently awards NRW a rating of AA (for the first time since 2004) following a rating upgrade in September 2019.

ASW spreads vs. Bunds



ASW spreads vs. agencies



NB: Residual term to maturity >1 year and <10 years; minimum outstanding volume of EUR 500m.
National agencies: KFW, FMSWER, RENTEN, among others. Regional agencies: NRWBK, LBANK, BAYLAN, IBB, BYLABO, WIBANK, among others.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Relative value

Volume-weighting of the German Bundeslaender in the iBoxx € Regions

78.1%

No. of German bonds in iBoxx € Regions

157 (out of 203) [77.3%]

Pick-up versus swaps*

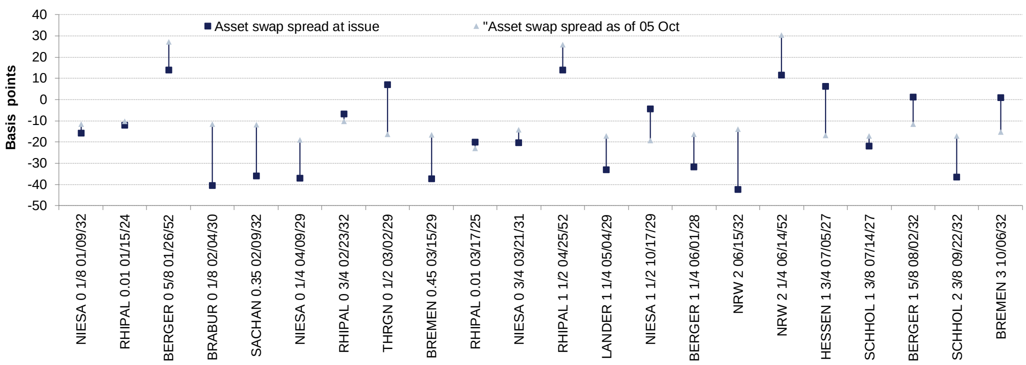
-45 to +92bp (Median: -17bp)

Pick-up versus Bunds*

+58 to +100bp (Median: +93bp)

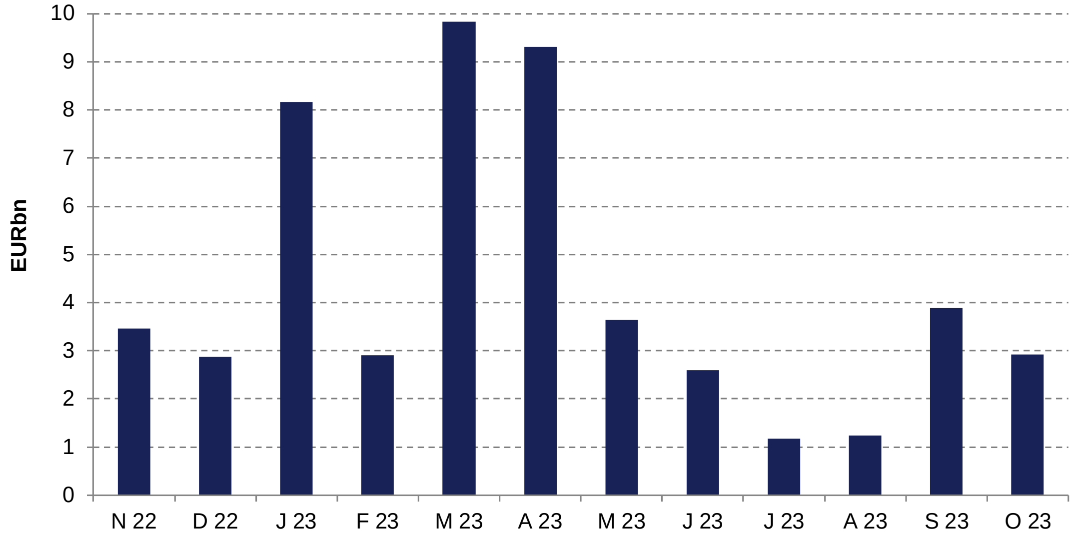
*vs. interpolated figures; minimum term of 1 year; minimum volume EUR 0.5bn.

Performance of fixed income benchmark issues 2022**



** Issuance volume of at least EUR 0.5bn. Bonds are not necessarily liquid.
For the sake of improved visibility, the Methuselah bond issued by NRW (priced at ms +106bp in 2022) is not included this year.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Bond amounts maturing in the next 12 months



Source: Laender, Bloomberg, NORD/LB Markets Strategy & Floor Research

Refinancing

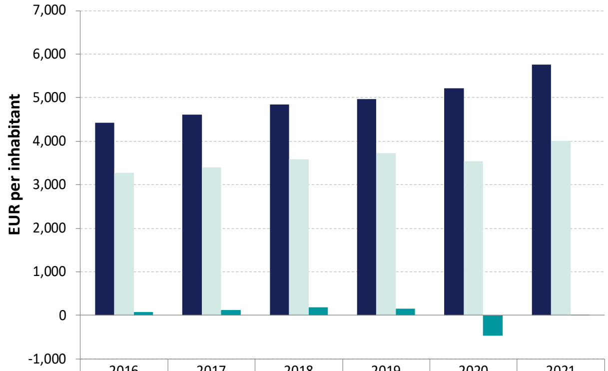
Although Laender issuance volumes have been declining for many years, they have nonetheless remained at a high level. Before the coronavirus pandemic, the recently introduced debt brake was a factor in this development. After 2020 and 2021, significant refinancing volumes and gross credit authorisations are expected for 2022 as well. The most important funding instruments are bonds and SSD deals, while public-sector bonds in benchmark format are used just as frequently as large-volume private placements. As a result, there is a relatively abundant fresh supply of large-volume bonds. After credit authorisations rose from around EUR 70bn to approximately EUR 154bn in 2020 on the back of supplementary budgets, these authorisations fell to EUR 119bn in 2021 and EUR 91bn in 2022. As such, credit authorisations remain at a high level (2019: EUR 67bn).

Credit authorisations of German Laender in 2022 (EURbn)*

	2022*	
	Net	**Gross**
Baden-Wuerttemberg	-0.96	23.78
Bavaria	5.83	7.07
Berlin	0.75	8.20
Brandenburg	0.16	3.25
Bremen	0.62	1.98
Hamburg	1.60	4.39
Hesse	0.99	7.73
Mecklenburg-Western Pomerania	-	0.42
Lower Saxony	-0.69	5.91
North Rhine-Westphalia	0.09	13.85
Rhineland-Palatinate	0.89	4.89
Saarland	0.40	2.30
Saxony	0.00	0.41
Saxony-Anhalt	-	1.65
Schleswig-Holstein	-0.03	4.57
Thuringia	-0.17	0.81
Total	**9.48**	**91.21**

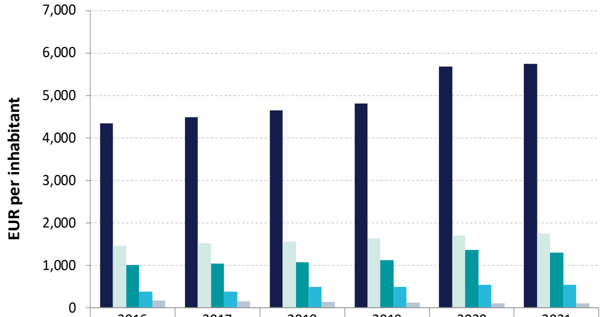
*Some figures are rounded and/or provisional; as at: 05 October 2022; unchanged values from 16 March 2022
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



	2016	2017	2018	2019	2020	2021
Operating revenue	4,420	4,615	4,843	4,974	5,217	5,752
Tax revenue	3,271	3,394	3,585	3,720	3,540	4,003
Deficit/surplus	74	127	189	159	-465	10

Development of expenditure in EUR per capita



	2016	2017	2018	2019	2020	2021
Operating expense	4,346	4,488	4,654	4,815	5,681	5,742
Staff expenditure	1,461	1,520	1,557	1,631	1,703	1,756
Grants to municipals	1,001	1,043	1,074	1,126	1,355	1,296
Capital expenditure	378	382	488	496	542	546
Interest expense	162	151	138	124	103	109

Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

Budget figures 2021

Balance (vs. 2020)
EUR 0.8bn (EUR +39.5bn)

Balance/GDP (2020)
0.02% (-1.15%)

Balance per capita (2020)
EUR 10 (EUR -465)

Tax revenue (vs. 2020)
EUR 333.2bn (EUR +38.8bn)

Taxes per capita (2020)
EUR 4,003 (EUR 3,540)

Taxes/interest paid (2020)
36.8x (34.4x)

Total revenue/interest paid (2020
52.9x (50.6x)

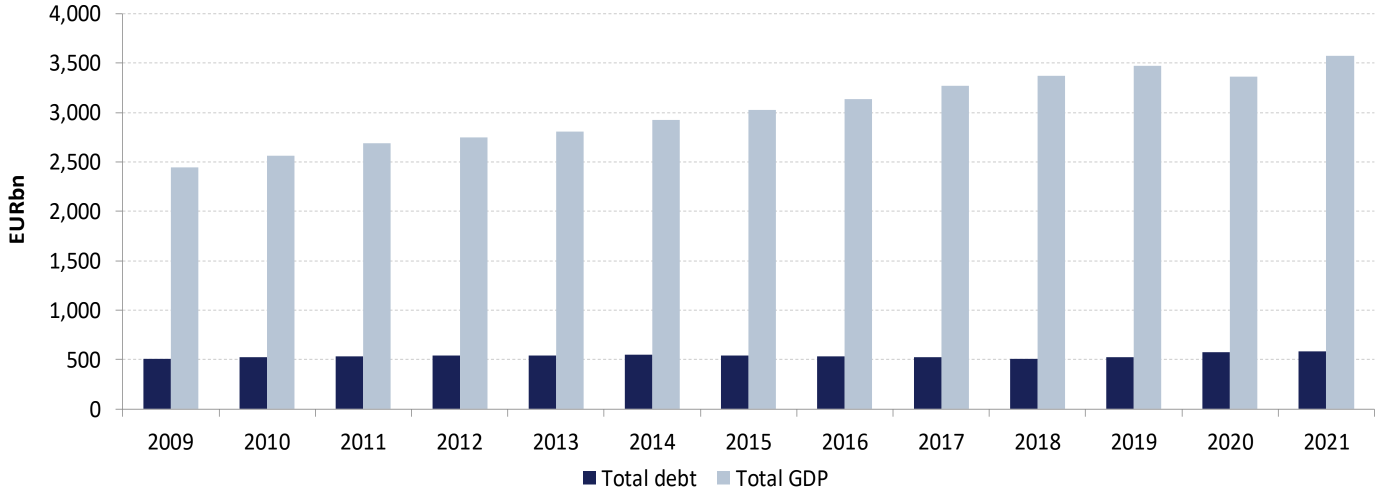
Debt level (vs. 2020)
EUR 581.0bn (EUR +2.4bn)

Debt/GDP (2020)
16.3% (17.2%)

Debt/revenue (2020)
1.2x (1.3x)

Although the budgetary development of the Laender had, generally speaking, been very positive in the years prior to Covid-19, the pandemic brought this trend to an abrupt halt. However, a positive budget balance of EUR 0.8bn was already achieved again in 2021. This can be attributed to the increase in tax revenues in particular. The slight increase in total expenditure amounting to EUR +5.5bn to EUR 478.0bn was not as pronounced as the rise in total revenues of EUR +45.0bn to EUR 478.8bn. As such, the consistently positive development in total revenues seen in previous years has been continued. Over the past five years, growth of +31.3% has been recorded here. In contrast, a similarly sharp rise in total expenditure of +33.3% has been registered across the same time frame. This development can primarily be attributed to the dramatic increase in expenditure incurred as a result of the Covid-19 crisis in 2020. Grants to municipalities, which saw significant growth of +20.3% in the previous year, fell slightly from EUR 112.7bn to EUR 107.8bn. In contrast, personnel expenses rose slightly by +3.2% year on year from EUR 141.6bn to EUR 146.1bn. As a result, personnel expenses have now increased by +21% over the past five years. Despite interest expenses rising for the first time again (EUR +0.5bn Y/Y), an improved ratio of total revenue to interest paid (52.9x) was achieved owing to a proportionally greater increase in revenues. The development in tax revenues was so positive that it was able to offset the slight increase in interest expenses, producing another record value for the tax-interest coverage metric in the period under review (2021: 36.8x; 2020: 34.4x; 2019: 30.0x). For the fourth consecutive year, capital expenditure was up, rising slightly in comparison with 2020 by +0.9% from EUR 45.1bn to EUR 45.5bn. While it was a mixed picture on the key credit metric front for both Laender and Bund in 2020 due to the pandemic, in 2021 debt sustainability (ratio of debt to total revenues) of 1.2x was basically back to its pre-pandemic level (2019: 1.3x), which went alongside the record values for interest coverage and total revenues. A positive development in the ratio of debt to GDP can also be reported: this metric declined from 17.2% to 16.3%, which can be attributed to an increase in GDP.

Overview of Laender debt and economic output

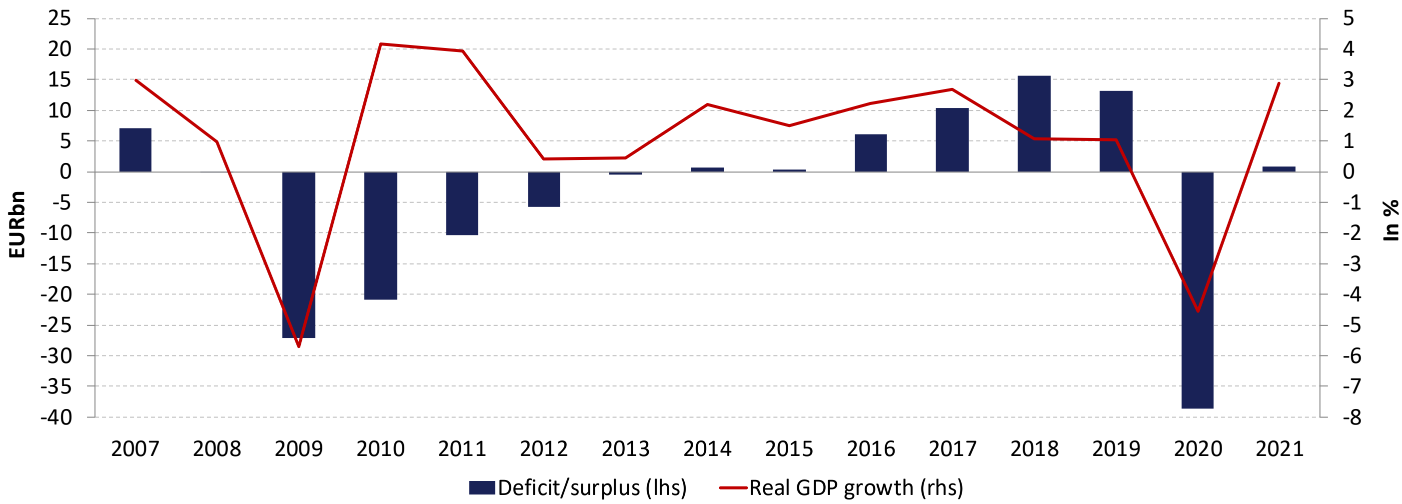


Source: Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Small rise in Laender debt

While the overall debt level of the Bundeslaender rose on a constant basis over previous years, from 2014 onwards, the debt trend stabilised and even fell in both 2017 and 2018. Due to the introduction of the debt brake at the start of 2020, however, the majority of the Bundeslaender took the opportunity to take on fresh debt again during the 2019 budget year. In 2020, debt rose once more on account of the Covid-19 pandemic, with aggregated new debt totalling EUR 78.2bn. However, in view of the pandemic situation, the numerous economic measures aimed at mitigating the impact of the crisis and the suspension of the debt brake, the increase in total debt ended up being on the small side, at just EUR +2.3bn overall. Gross credit authorisations were initially supposed to total roughly EUR 70bn in 2020, although the actual value eventually came in at EUR 154bn. The reason for this was several supplementary budgets implemented in an attempt to deal with the additional financial expenditure incurred on account of the Covid-19 pandemic. For 2022, the Laender are currently planning credit authorisations totalling EUR 91.2bn. This would represent the second successive decline in credit authorisations, after a value of EUR 119.4bn was recorded in 2021. This is another indicator that the economic consequences of the pandemic are – slowly but surely – continuing to ebb away.

Overview of Laender balances and real GDP growth



Source: Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Positive trend in budget balances

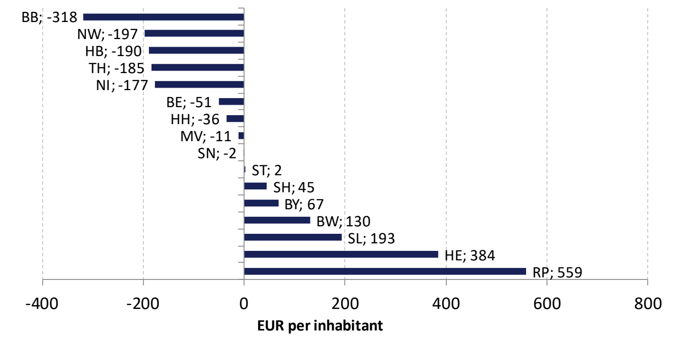
The aggregated budget balances of the Bundeslaender have followed a significantly positive trend since 2010. Although a deficit of EUR 20.8bn was posted in 2010, deficits subsequently fell on an almost constant basis over the years that followed. A sea change came about in 2014, resulting in what was by far the largest surplus seen over recent years in 2018 (EUR 15.7bn). This was closely followed by the positive budget balance recorded in 2019 (EUR 13.2bn). The positive trend seen in recent years was not continued into 2020, again owing to the coronavirus crisis. In fact, the largest deficit of recent years was recorded in 2020, at EUR -38.6bn. The primary drivers of this development were falling tax revenues (-4.9% on average across Germany) and a rise in expenditures (+18.9% on average across Germany). In 2021, this development was turned on its head: through a sharp rise in tax revenues (+13.2%) and only a marginal rise in expenditure (+1.2%), a positive budget balance of EUR +0.8bn was recorded.

Overview of the Bundeslaender 2021

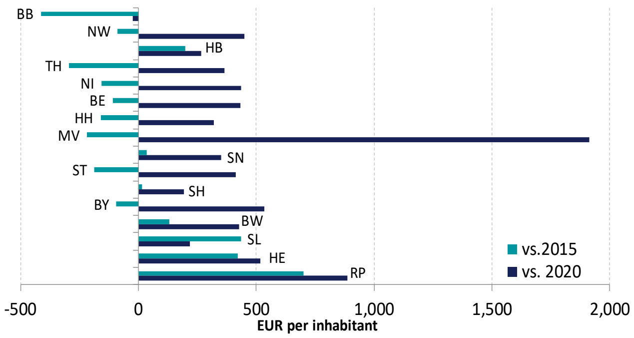
	Adjusted income (EUR bn)	Adjusted expenditure (EUR bn)	Balance (EUR bn)	Debt level (EUR bn)	GDP (EUR bn)	Debt/GDP (in %)	Balance/GDP (in %)
BW	61.8	60.4	1.4	38.0	536.0	7.1	0.3
BY	72.8	72.0	0.9	19.8	661.5	3.0	0.1
BE	35.8	36.0	-0.2	59.6	163.0	36.6	-0.1
BB	13.9	14.7	-0.8	17.8	78.7	22.6	-1.0
HB	7.3	7.4	-0.1	36.0	34.2	105.1	-0.4
HH	19.6	19.7	-0.1	25.4	126.7	20.0	-0.1
HE	36.7	34.3	2.4	40.4	302.5	13.4	0.8
MV	10.5	10.5	0.0	8.5	49.7	17.1	0.0
NI	36.5	37.9	-1.4	61.6	315.8	19.5	-0.5
NW	96.4	99.9	-3.5	158.6	733.3	21.6	-0.5
RP	23.0	20.7	2.3	28.5	162.2	17.6	1.4
SL	4.9	4.7	0.2	13.5	35.6	38.0	0.5
SN	20.4	20.4	0.0	4.3	134.5	3.2	0.0
ST	12.5	12.5	0.0	21.9	67.1	32.6	0.0
SH	15.7	15.6	0.1	31.0	104.5	29.7	0.1
TH	10.9	11.4	-0.4	16.1	65.5	24.6	-0.6
Total	**478.8**	**478.0**	**0.8**	**581.0**	**3,570.6**	**16.3**	**0.0**

BW = Baden-Wuerttemberg, BY = Bavaria, BE = Berlin, BB = Brandenburg, HB = Bremen, HH = Hamburg, HE = Hesse, MV = Mecklenburg-Western Pomerania, NI = Lower Saxony, NW = North Rhine-Westphalia, RP = Rhineland-Palatinate, SL = Saarland, SN = Saxony, ST = Saxony-Anhalt, SH = Schleswig-Holstein, TH = Thuringia.
Source: National accounts produced by the Laender, Federal Statistical Office, NORD/LB Markets Strategy & Floor Research

Budget balance in EUR per capita



Change in budget balance in EUR per capita



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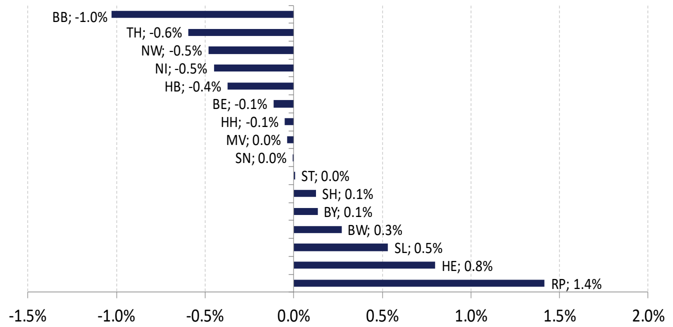
Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

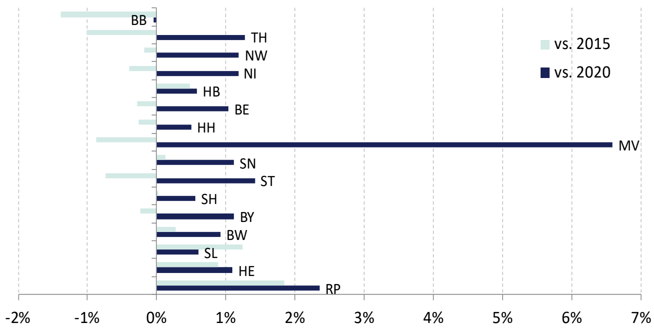
Stabilisation of Laender balances

While lower tax revenues still weighed heavily on the Laender budget balances in 2020, balances per capita stabilized in every Bundesland in 2021. The improvement in the budget balance on a per capita basis was particularly substantial in Mecklenburg-Western Pomerania, where a sharp rise versus 2020 was achieved. Brandenburg was the only Bundesland that did not achieve an improvement in its budget balance per capita, although it should be mentioned at this point that Brandenburg was the only federal state in 2020 in which there was no deterioration in this metric either. Nevertheless, Brandenburg ranks behind North Rhine-Westphalia and the Hanseatic City of Bremen at the lower end of the Laender league table in terms of budget balance per capita. With a plus of EUR 2.4bn, Hesse achieved the highest absolute budget balance out of all the German Laender. However, in per capita terms, Hesse has to admit to defeat to Rhineland-Palatinate, where a positive balance of EUR 559 per capita was generated.

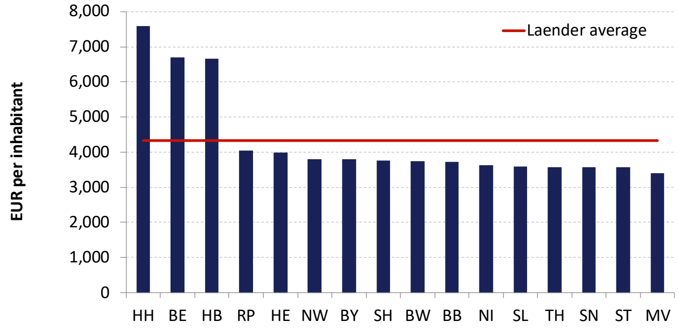
Budget balance as a % of GDP



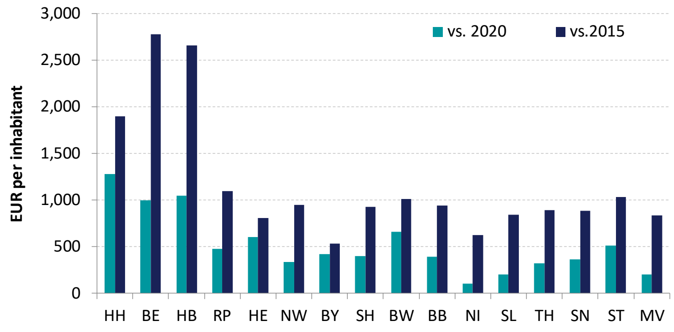
Change in budget balance as a % GDP



Taxes in EUR per capita



Change in taxes in EUR per capita



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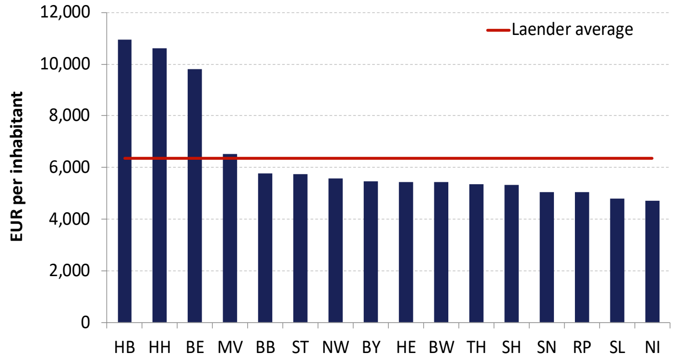
Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

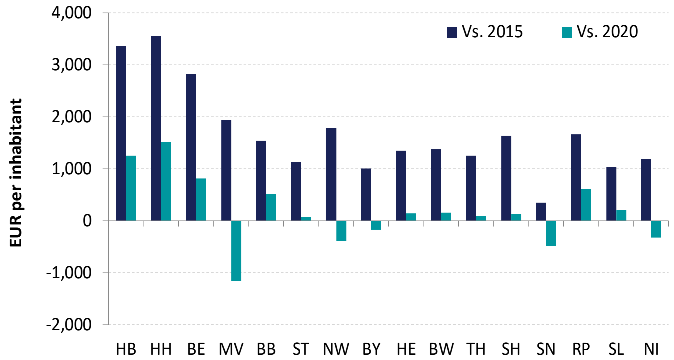
City states with highest tax revenue per capita

In terms of tax revenues on a per capita basis, the city states of Bremen, Berlin and above all Hamburg traditionally stand out, with all three generating above-average tax revenues in relation to their population. This trend was continued in 2021, with Hamburg again topping the charts for this metric. After Rhineland-Palatinate (+21.7%), the strongest growth in percentage terms versus the prior year was also recorded in Hamburg (+20.3%). All Bundeslaender returned to positive territory when it comes to the change recorded against the prior year value. At this juncture, it should also be mentioned that Bremen and Berlin were also able to register significantly positive growth in per capita tax revenues in comparison with 2020.

Expenditure in EUR per capita



Change in expenditure in EUR per capita



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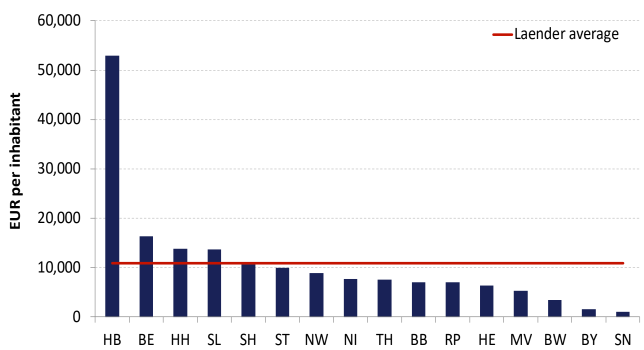
Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

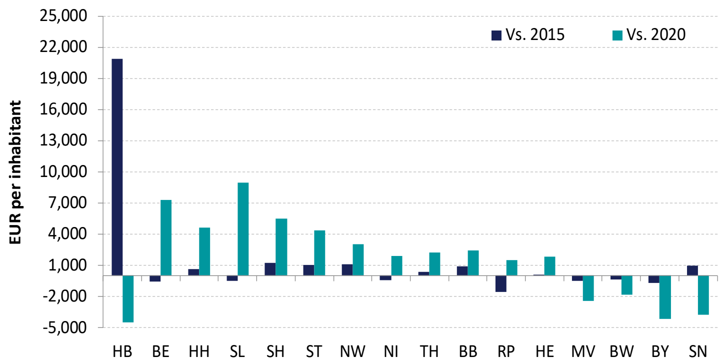
Lower Saxony again with lowest expenditure per capita

The city states also traditionally display the largest outflows in terms of per capita expenditure levels, while the Bundesland of Lower Saxony again posted the lowest level of per capita expenditure in 2021. However, total revenues rose only marginally versus 2020. In this respect, the East German non-city states (EUR 5,563) have slightly higher expenditure levels per capita in comparison with West German non-city states (EUR 5,351), although these respective values have now started to converge again.

Debt per capita in EUR



Change in debt per capita in EUR



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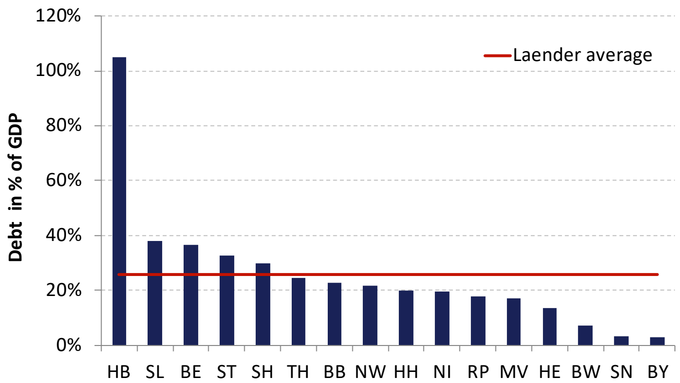
Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

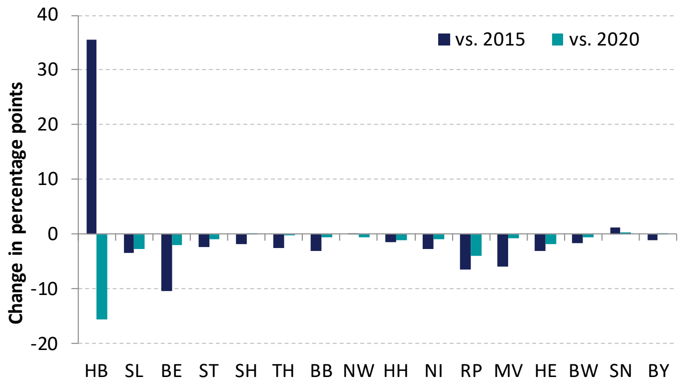
Highest debt per capita in city states and Saarland

For years now, the city states and Saarland have had the highest level of per capita debt. Bremen's historically weak budget performances have exacerbated this development. Having already posted substantial growth in debt per capita in 2019 and 2020, Bremen managed to post the largest absolute decline in this metric across all Laender. Other Laender to have reduced debt per capita in 2021 included Bavaria, Baden-Wuerttemberg, Saxony and Mecklenburg-Western Pomerania.

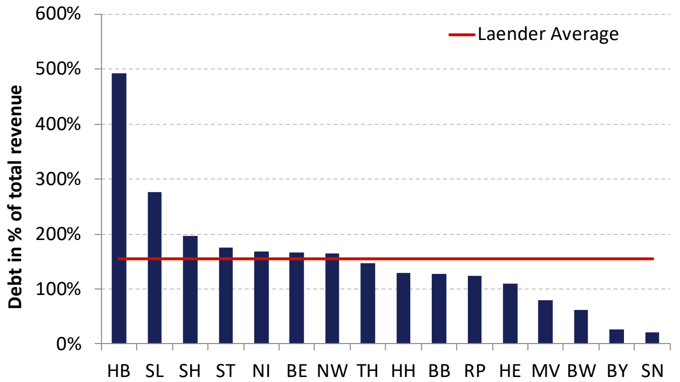
Debt as a % of GDP



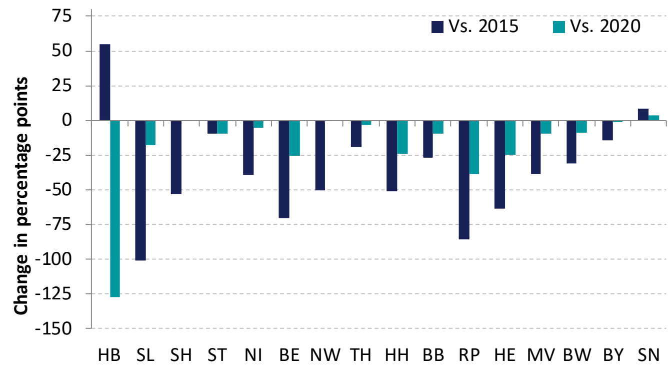
Change in debt as % of GDP (in percentage points)



Debt/revenue



Change in debt/revenue (in percentage points)



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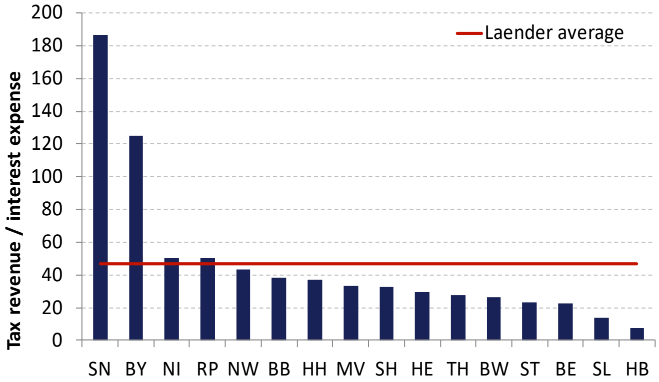
Source: Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Reduction in the debt-revenue ratio

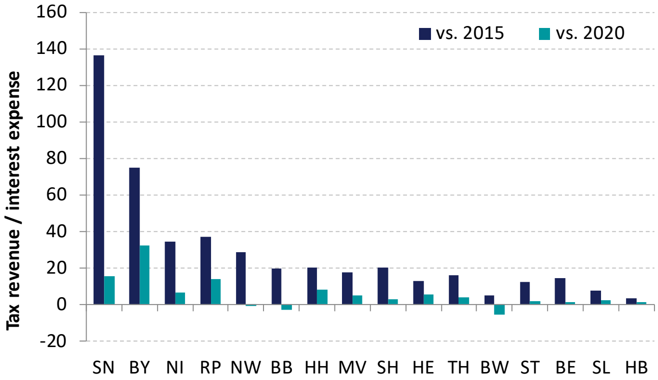
The ratio of debt to revenue also reveals major differences between the Laender. In 2021, a reduction in this key metric was achieved across all Laender with the exception of Saxony, which already has a very low debt/income ratio in any case. The reason for this development is increased Laender revenues following the pandemic year 2020. In this context, Bremen achieved the greatest reduction. However, high debts had also been built up here over the past few years, meaning that it is (almost) the only sub-sovereign with a higher debt-revenue ratio in comparison with 2015. In comparison with 2020, Rhineland-Palatinate and Hamburg achieved the greatest reductions in the debt-revenue ratio.

Rising trend across Germany for interest coverage
On account of steadily declining interest expenses at Laender level and simultaneously increased tax revenues, the tax-interest coverage improved across practically all Bundeslaender as a result. Only Baden-Wuerttemberg, Brandenburg and North Rhine-Westphalia failed to record an improvement in this key metric in 2021. However, since these Laender are in mid-table in a national comparison and the declines were in any case minimal, this can be regarded as more of a side note to the main headline. Saxony and Bavaria achieved by far the best values in this regard.

Tax-interest coverage



Change in tax-interest coverage



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Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

Comment
The segment of German Laender continues to represent the most important sub-market for sub-sovereign issuers in Europe and even the world. A steady supply of fresh bonds ensures the market offers a relatively diverse range of products. The increased issuance volume aimed at counteracting the effects of the coronavirus crisis has also led to a high level of fresh supply in the current year too. Laender finances largely continued their positive development in the previous year. For example, key credit metrics have improved, in some cases outperforming the equivalent values from the last pre-crisis year of 2019. However, the heterogeneity of this market segment has nevertheless remained at a high level. Budget balances, tax revenue, debt and a number of key credit metrics reveal differences between the Laender, which are actually quite considerable in some cases. Despite the strong progress that has been made, the Laender of Bremen and Saarland in particular are under pressure due to their high levels of debt. Overall, however, an improvement in the creditworthiness of the Laender can be reported. Nevertheless, it should not be forgotten that the current market environment is still concealing fundamental differences. In this context, the purchase programmes of the Eurosystem (PSPP and PEPP) have suppressed, and continue to suppress, both spreads and yields. The huge economic breakdown triggered by the coronavirus crisis in 2020 precipitated a decline in revenue streams and growth in new debt on the part of the Bundeslaender. Signs of recovery then started to emerge from the shadows in 2021, although rising energy prices due to Putin's war of aggression in Ukraine have so far posed a major challenge in 2022. This is likely to further increase the heterogeneity of the Laender sub-market. In addition, the debt brake remains suspended for 2022.

Bundesland and politics

Link to the Ministry of Finance

Homepage

Number of inhabitants (2021)

11,124,642

State capital

Stuttgart

Government

Greens/CDU

Minister-President

Winfried Kretschmann (Greens)

Expected next election date

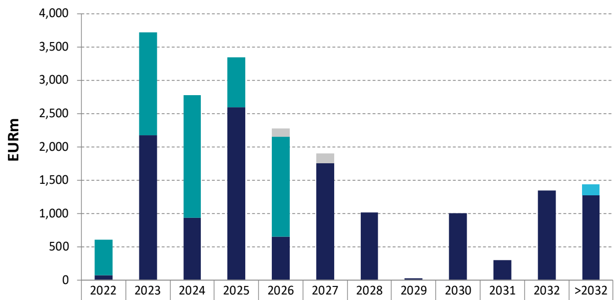
Spring 2026

Ratings	Long-term	Outlook
Fitch	-	-
Moody's	Aaa	stab
S&P	AA+	stab

Baden-Wuerttemberg

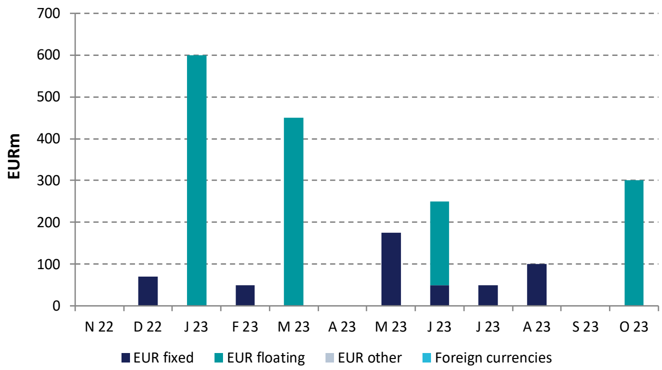
Covering a total area of 35,748 km^2 and with a population of 11.1m inhabitants, Baden-Wuerttemberg is the third-largest federal state of Germany in terms of both size and population. The Bundesland of today was formed in 1951 from the regions of Wuerttemberg-Baden, Wuerttemberg-Hohenzollern and Baden by the Allies in the wake of the Second World War, with Stuttgart chosen as the state capital. Stuttgart is Germany's sixth-largest city and recognised as the most important economic hub in Baden-Wuerttemberg. Germany owes much of its global reputation as an innovative export-focused nation to the Bundesland of Baden-Wuerttemberg. For example, major industrial firms such as Daimler, Porsche and Bosch are located in and around the Stuttgart area. Alongside these established companies, Baden-Wuerttemberg is a shining light for start-ups, with nine of the "Top 50 Start-Ups" located in the Bundesland in 2021. It therefore ranks among the most innovative and entrepreneur-friendly regions of Germany. For example, it has overtaken both Bavaria and Berlin in the rankings, with Baden-Wuerttemberg now sharing top spot with NRW. This success is no coincidence: in 2017, a platform for networking and financial support was created in the form of "Start-up BW". The overall picture is underlined by a 9.3% rise in business start-ups in 2021 (which equates to a total of 77,700 new commercial enterprises). In comparison with 2019, the last year prior to the Covid-19 crisis, the increase is as high as 14.4%. For the first time since 2016, there was even an increase in start-ups with an economic substance again. In addition to its high-tech industries, it is also a popular holiday destination, with tourists flocking in their droves to visit the Black Forest and Lake Constance as well as the famous vineyards of the Allgäu region. Moreover, four of Germany's 11 elite-level universities are located there (Heidelberg, Karlsruhe, Konstanz and Tübingen), underlining the region's research strength even more clearly, which means that academic excellence is equally as important to the region as its technologically intensive industries. Since 2021, the Bundesland has been issuing green bonds as well, and looks set to build up an ESG curve in the future (2021: EUR 300m; 2022: EUR 350m).

Overall maturity profile

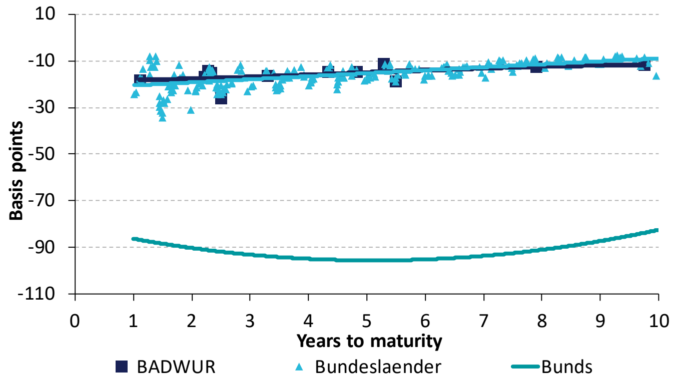


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
Foreign currencies	0	0	0	0	0	0	0	0	0	0	0	167
EUR other	0	0	0	0	128	153	0	0	0	0	0	0
EUR floating	540	1,550	1,850	750	1,500	0	0	0	0	0	0	0
EUR fixed	70	2,175	933	2,600	651	1,750	1,011	25	1,000	300	1,350	1,275

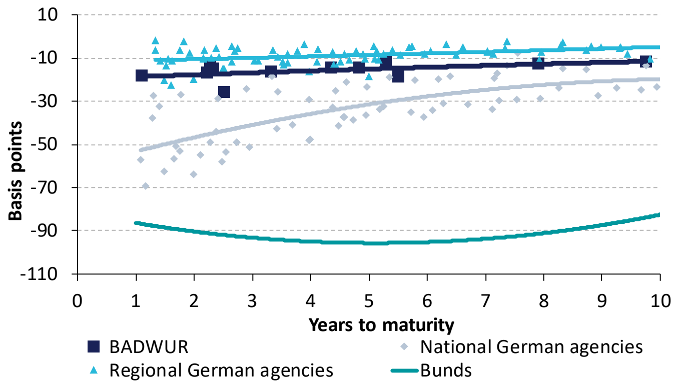
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



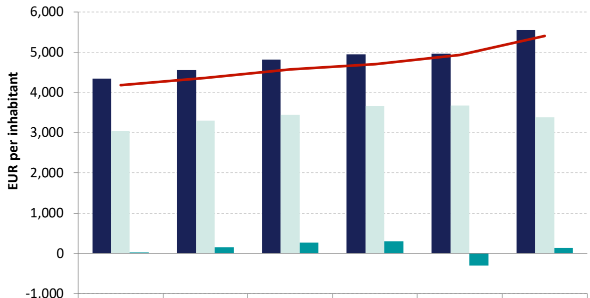
NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.

Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market	Economy 2021	Key figures 2021
Debt level* (ranking)**	**GDP (ranking)**	**Tax-interest coverage (ranking)**
EUR 38.0bn (12th)	EUR 536.0bn (3rd)	26.5x (12th)
Outstanding bonds	**GDP per capita (ranking)**	**Total revenue/interest paid (ranking)**
EUR 19.8bn	EUR 48,247 (4th)	39.4x (12th)
ESG volume	**Real GDP growth (ranking)**	**Debt/GDP (ranking)**
EUR 0.7bn	3.4% (2nd)	7.1% (3rd)
Bloomberg ticker	**Unemployment (ranking)**	**Debt/revenue (ranking)**
BADWUR	3.9% (2nd)	0.6x (3rd)

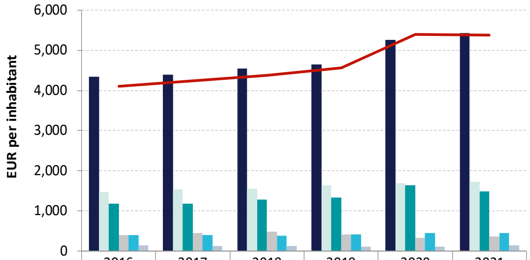
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



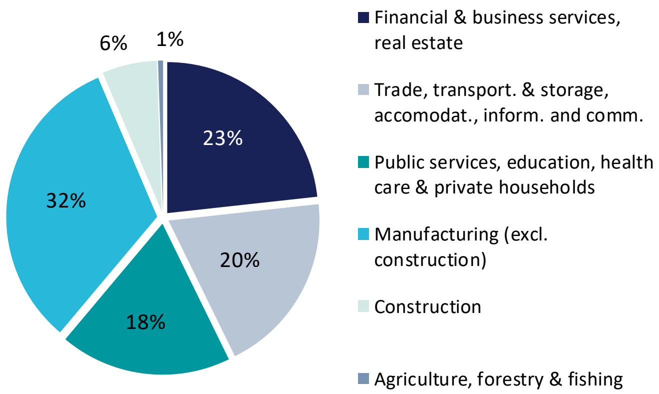
	2016	2017	2018	2019	2020	2021
Operating revenue	4,353	4,555	4,818	4,955	4,966	5,557
Tax revenue	3,037	3,304	3,447	3,667	3,686	3,389
Deficit/surplus	17	157	273	305	-296	130
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

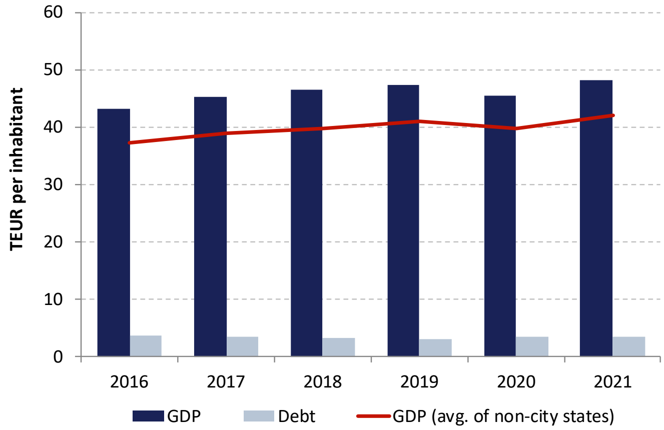


	2016	2017	2018	2019	2020	2021
Operating expense	4,336	4,399	4,545	4,649	5,262	5,427
Staff expenditure	1,469	1,535	1,549	1,637	1,688	1,720
Grants to municipals	1,177	1,172	1,283	1,339	1,632	1,493
Equalisation mechanism (net)	405	455	478	407	331	361
Capital expenditure	398	390	377	412	452	446
Interest expense	134	127	126	111	105	141
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



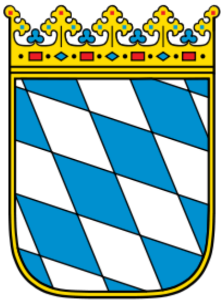
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Debt sustainability and interest coverage
+ Strong, innovative and diversified economy
+ International trade
+ Low unemployment rate

Weaknesses

– Trend in debt level
– Dependency on manufacturing sector
– Resource bottlenecks being felt particularly keenly



Bundesland and politics

Link to the Ministry of Finance

[Homepage]

Number of inhabitants (2021)

13,176,989

State capital

Munich

Government

CSU/Free Voters of Bavaria

Minister-President

Markus Söder (CSU)

Expected next election date

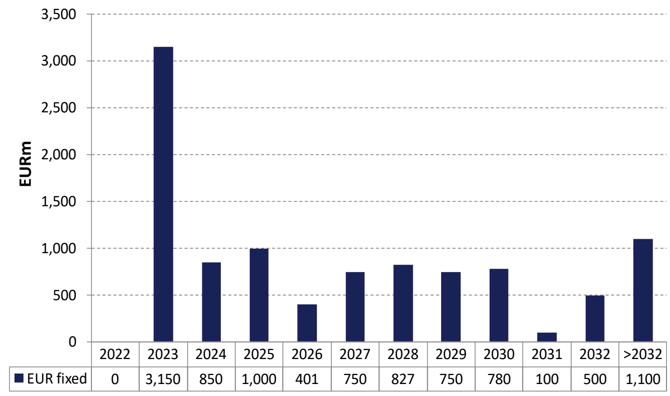
Autumn 2023

Ratings	Long-term	Outlook
Fitch	-	-
Moody's	Aaa	stab
S&P	AAA	stab

Bavaria

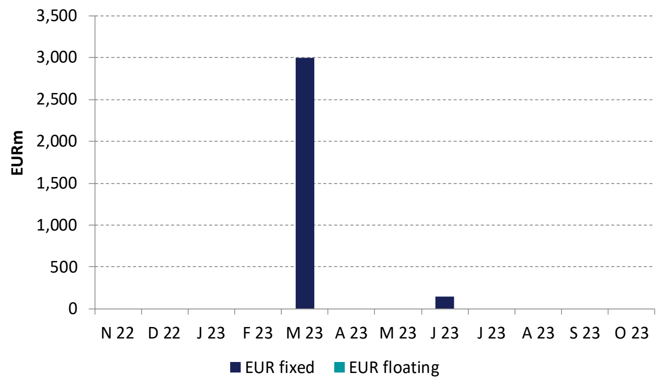
At 70,542 km^2, the Free State of Bavaria is the largest Bundesland by area. Its population of 13.2m inhabitants is exceeded only by NRW. The Free State has existed in its present form since 1 September 1955, when Lindau was re-integrated into the Land. Only a handful of other Laender can boast a similarly broad industrial base. Aside from a focus on industry (mechanical and electrical engineering in addition to information and communication technology), the automotive industry is of particular importance. Moreover, in 2021, just under 30% of all the patents registered in Germany came from Bavaria, underlining the innovative capacity of the economy. In this context BMW (Bayerische Motoren Werke AG) was ranked in second place across the whole of Germany for its total of 1,860 patent applications in 2021. In addition, agriculture and tourism are of great importance to the economy. No other Land has a greater area of agricultural land. From a tourism viewpoint, Bavaria is a global brand. Bavaria's international profile is reflected in strong visitor numbers, with approximately 20% of all overnight stays in hotels and guesthouses in Germany per year attributable to Bavaria. Since 2019, it has registered a negative external trade balance. In 2021, imports overtook exports by a value of EUR 22.2bn. In terms of economic output, Bavaria has always made a substantial contribution to the GDP of Germany. In 2021, Bavarian GDP amounted to EUR 661.5bn, which corresponds to 18.5% of German economic output as a whole. At 3.5%, unemployment in Bavaria is the lowest in Germany. The Bavarian budget has also been solid for many years. In this context, the Free State of Bavaria can claim one of the top spots for all key credit metric rankings in a comparison of the Laender. Having implemented two supplementary budgets totalling EUR 20bn in order to combat the coronavirus pandemic, Bavaria is presumably unlikely to achieve its target of continual debt reduction year on year, which it voluntarily set itself many years ago (previously, it was aiming to be debt-free by 2030). Nevertheless, the budgetary situation in Bavaria remains exemplary in a Laender comparison. For many years, the Free State was by far the most important net payer to the federal financial equalisation system.

Overall maturity profile

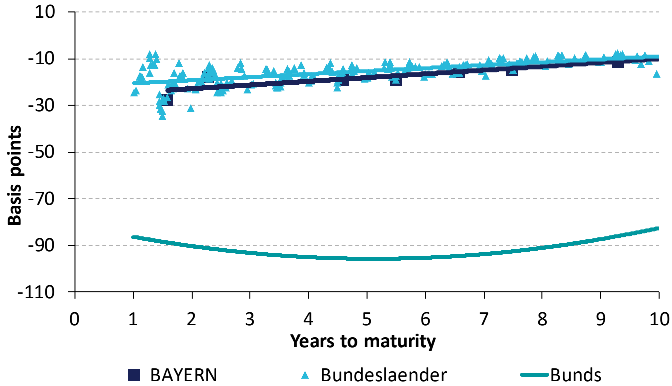


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR fixed	0	3,150	850	1,000	401	750	827	750	780	100	500	1,100

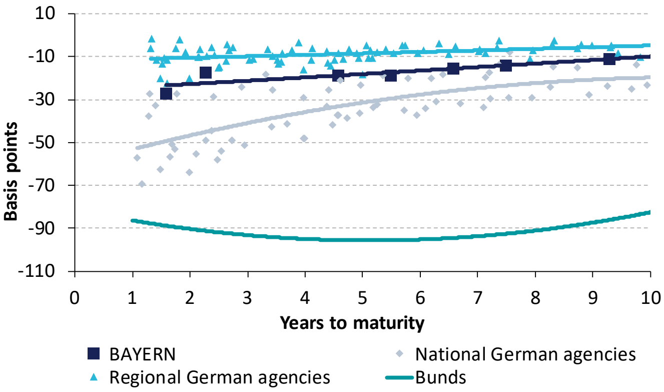
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies

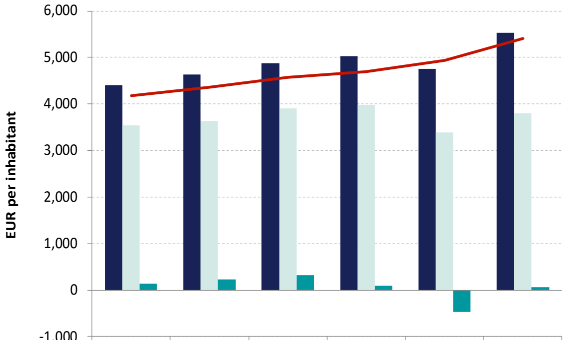


NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market	Economy 2021	Key figures 2021
Debt level* (ranking)**	**GDP (ranking)**	**Tax-interest coverage (ranking)**
EUR 19.8bn (6th)	EUR 661.5bn (2nd)	125.3x (2nd)
Outstanding bonds	**GDP per capita (ranking)**	**Total revenue/interest paid (ranking)**
EUR 10.2bn	EUR 50,289 (3rd)	182.3 (2nd)
ESG volume	**Real GDP growth (ranking)**	**Debt/GDP (ranking)**
EUR 0.0bn	3.0% (5th)	3.0% (1st)
Bloomberg ticker	**Unemployment (ranking)**	**Debt/revenue (ranking)**
BAYERN	3.5% (1st)	0.3x (2nd)

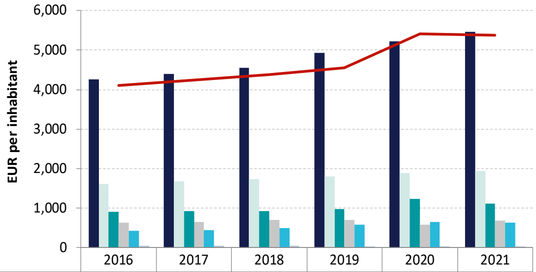
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



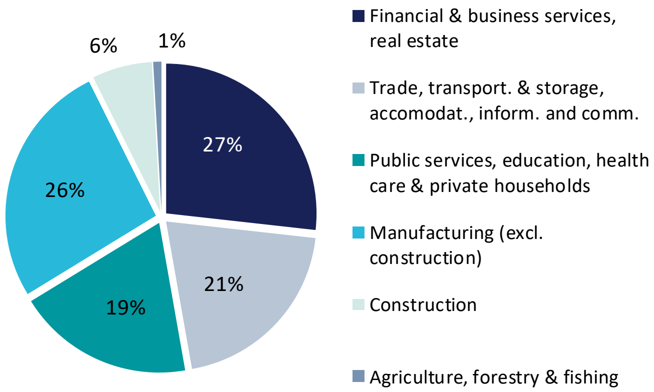
	2016	2017	2018	2019	2020	2021
Operating revenue	4,407	4,634	4,878	5,025	4,754	5,528
Tax revenue	3,546	3,638	3,906	3,982	3,384	3,801
Deficit/surplus	140	230	322	97	-467	67
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

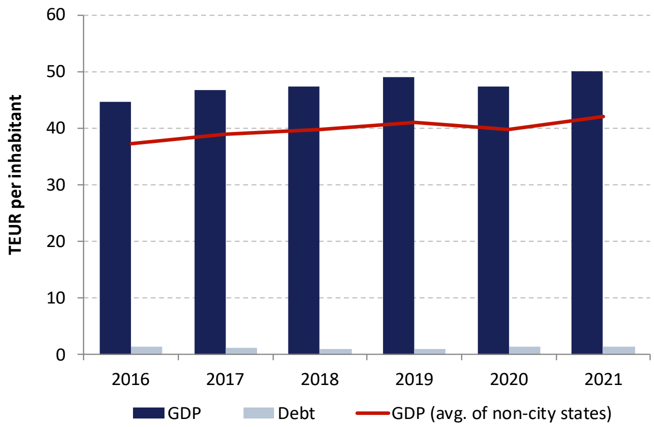


	2016	2017	2018	2019	2020	2021
Operating expense	4,267	4,403	4,556	4,928	5,221	5,461
Staff expenditure	1,623	1,691	1,728	1,804	1,883	1,937
Grants to municipals	913	925	927	983	1,242	1,113
Equalisation mechanism (net)	633	659	709	698	591	686
Capital expenditure	433	455	505	581	648	628
Interest expense	58	56	45	40	36	30
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Debt sustainability and interest coverage
+ Strong, innovative and diversified economy
+ Internationally competitive
+ Low unemployment rate

Weaknesses

– High level of pension payments and personnel expenses
– Dependency on foreign trade

Bundesland and politics

Link to the Ministry of Finance

[Homepage]

Number of inhabitants (2021)

3,677,472

State capital

-

Government

SPD/Greens/The Left

Mayor

Franziska Giffey

Expected next election date

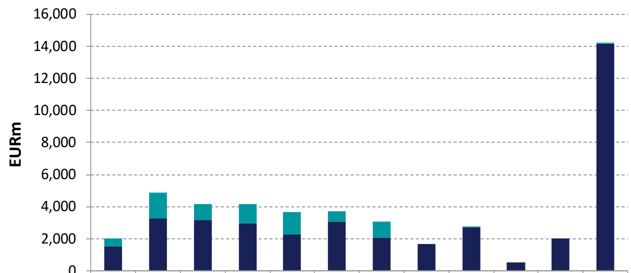
Autumn 2026

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	Aa1	stab
S&P	-	-

Berlin

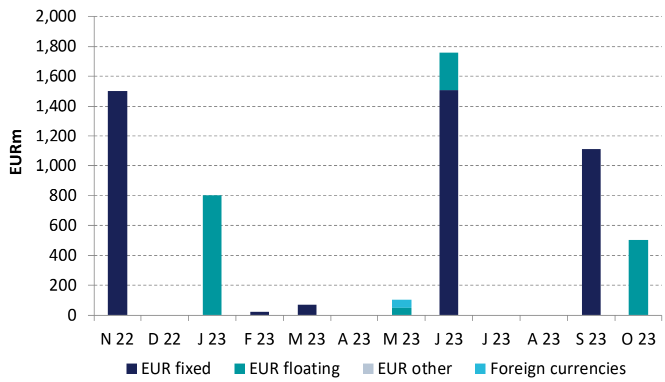
With a population of around 3.7m people and covering an area of approximately 891 km^2, the capital city of Germany, Berlin, is the most densely populated Bundesland in Germany and the largest city in the European Union (EU) by population. Following reunification in 1990, Berlin again became the capital of Germany. The most important institutions of the federal government were then gradually relocated to Berlin, creating many new jobs in the process. One in every five Berliners is of foreign nationality and one in three comes from an immigrant background. In total, Berlin is home to people from nearly 190 different countries. Woodland and forests, farms, waterways, allotments, parklands and sports areas account for 44% of the area of Berlin, making it the greenest capital city in Europe. Moreover, Berlin is also aiming to be climate-neutral by 2050. The city's proximity to universities and research institutions also promotes the influx and investment of companies from sectors including information and communication technology, multimedia, transport technology, environmental engineering, medical technology and biotechnology. In reaction to the consequences of the Covid-19 pandemic, Berlin launched the "Neustart Wirtschaft" (Economic Reboot) programme in March 2022. This builds upon strategies and measures that were developed and implemented over the course of 2020 and 2021 during initial recovery phases. Tourism, retail and the creative industries all stand to benefit from this. However, the majority of Berlin's value added is derived from the service sector, accounting for just under 64% of the gross value added generated by the local economy. Alongside London, Berlin is also regarded as the start-up powerhouse of Europe. No other cities within Europe have the same standard of infrastructure required for start-ups. In the wake of Brexit, Berlin is expected to see future growth in this key economic segment for the EU. Overall, Berlin generated just under 4.6% of Germany's total economic output in 2021. After the federal financial equalisation system was reconfigured, Berlin was again the largest recipient under the terms of Financial Power Equalisation (Finanzkraftausgleich; FKA) after 2020.

Overall maturity profile

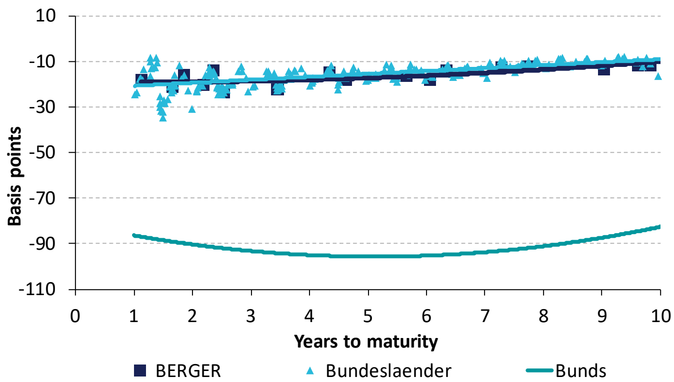


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
Foreign currencies	0	51	0	0	0	0	0	0	0	0	0	110
EUR other	0	0	0	0	0	0	51	0	0	0	0	0
EUR floating	500	1,600	1,005	1,190	1,400	650	1,000	0	50	0	0	0
EUR fixed	1,500	3,240	3,135	2,955	2,280	3,055	2,071	1,652	2,700	526	2,025	14,190

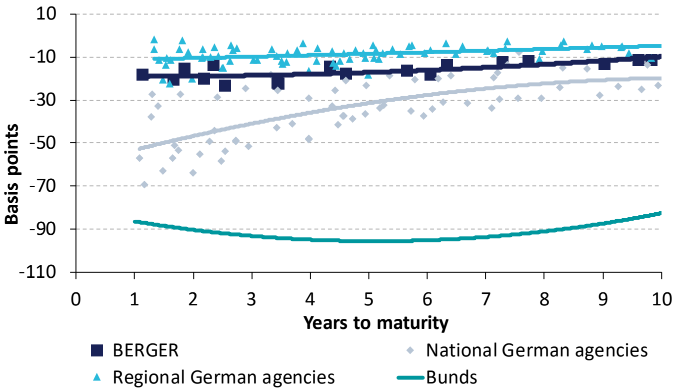
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

Capital market

Debt level* (ranking)**

EUR 59.6bn (14th)

Outstanding bonds

EUR 46.9bn

ESG volume

EUR 0.0bn

Bloomberg ticker

BERGER

Economy 2021

GDP (ranking)

EUR 163.0bn (6th)

GDP per capita (ranking)

EUR 44,472 (6th)

Real GDP growth (ranking)

3.3% (3rd)

Unemployment (ranking)

9.8% (15th)

Key figures 2021

Tax-interest coverage (ranking)

22.7x (14th)

Total revenue/interest paid (ranking)

33.0x (14th)

Debt/GDP (ranking)

36.6% (14th)

Debt/revenue (ranking)

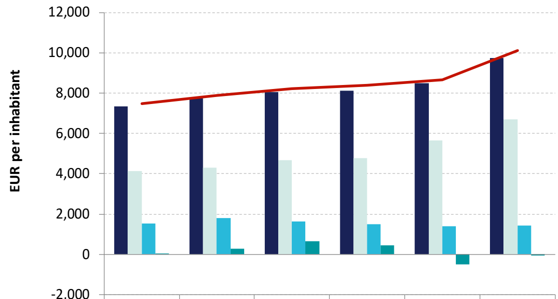
1.7x (11th)

* As reported at the end of the previous year.

**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.

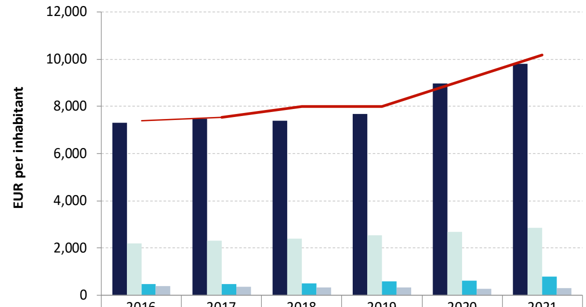
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



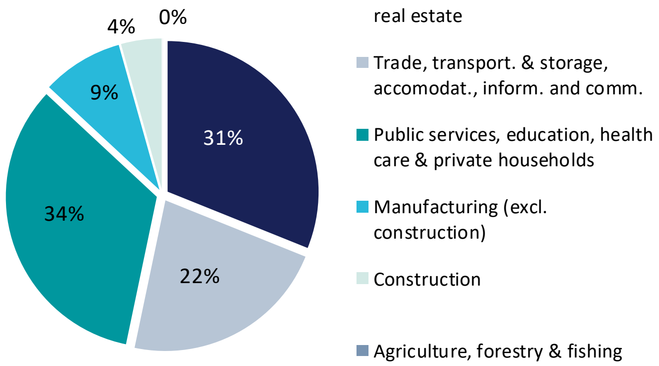
	2016	2017	2018	2019	2020	2021
Operating revenue	7,352	7,749	8,050	8,124	8,492	9,743
Tax revenue	4,131	4,308	4,672	4,778	5,658	6,704
Equalisation mechanism (net)	1,535	1,809	1,627	1,514	1,411	1,442
Deficit/surplus	38	282	664	433	-484	-51
Ø of operating revenues (city states)	7,473	7,871	8,221	8,386	8,652	10,106

Development of expenditure in EUR per capita

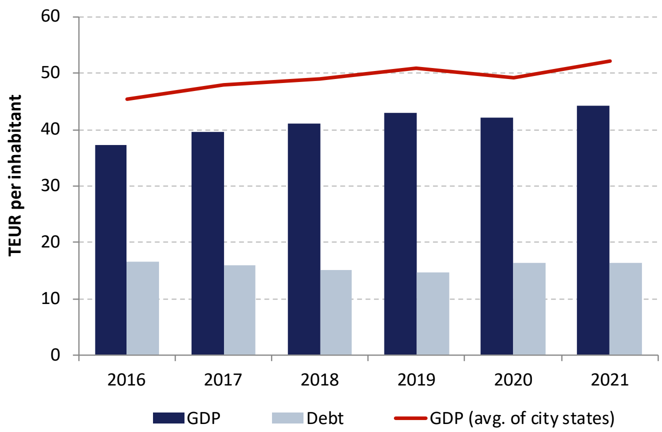


	2016	2017	2018	2019	2020	2021
Operating expense	7,314	7,466	7,385	7,691	8,976	9,794
Staff expenditure	2,184	2,300	2,402	2,537	2,690	2,857
Capital expenditure	477	455	504	590	605	793
Interest expense	387	365	338	316	265	295
Ø of operating expenses (city states)	7,402	7,541	8,001	8,002	9,094	10,167

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Solid budgetary development with constant debt level
+ Solid economic growth
+ High-density start-up network

Weaknesses

– Key credit metrics below average
– Above-average unemployment rate
– High interest expenses

Bundesland and politics

Link to the Ministry of Finance

[Homepage]

Number of inhabitants (2021)

2,537,868

State capital

Potsdam

Government

SPD/CDU/Greens

Minister-President

Dietmar Woidke (SPD)

Expected next election date

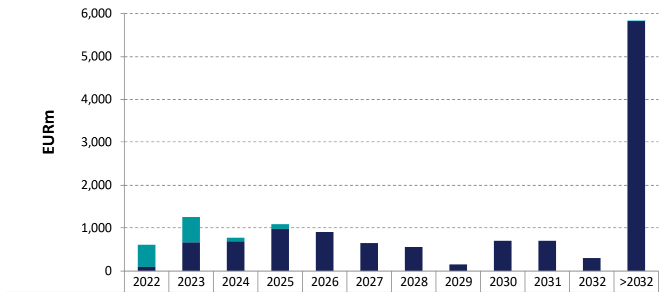
Autumn 2024

Ratings	Long-term	Outlook
Fitch	-	-
Moody's	Aaa	neg
S&P	-	-

Brandenburg

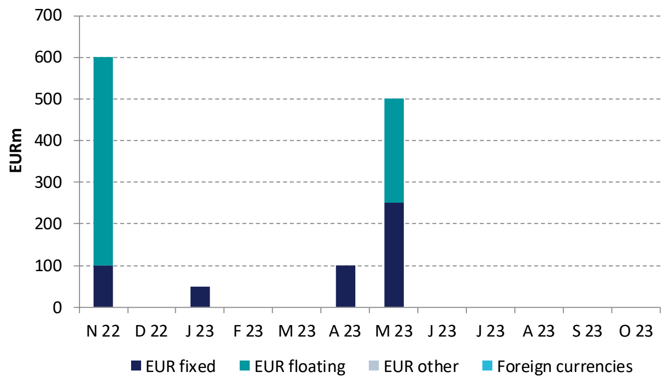
With an area totalling 29,654 km^2, Brandenburg is one of the largest Laender in Germany. However, with a population of just 2.5m people, it also has the second-lowest population density after Mecklenburg-Western Pomerania. Following the establishment of Brandenburg in its present form on 3 October 1990, numerous companies opted to set up shop around the Bundesland's capital, Potsdam, which is situated on the fringes of the federal capital, Berlin. These companies firstly benefited from the well-developed infrastructure on offer in the metropolitan region, while secondly Brandenburg is one of Europe's research hotspots, with the life sciences sector and engineering of key importance in this respect. The carmaker Tesla has meanwhile put its gigafactory into operation, with plans in place to increase the number of jobs on offer here to up to 12,000 in due course. Brandenburg is pursuing an innovative economic policy approach with a regional and sectoral focus. For example, synergy potentials are being unlocked in partnership with Berlin on the basis of the joint innovation strategy entitled "innoBB 25". While attempts to merge Brandenburg and Berlin into a single, joint Bundesland may ultimately have failed in 1996, their close cooperation in the context of the "Berlin/Brandenburg Metropolitan Region" continues to sustain the close links between the two Bundeslaender. Despite the creation of jobs for skilled workers, demographic development remains a core challenge for Brandenburg. No other Bundesland has a lower proportion of 15 to 25-year-olds in the overall population. In comparison with the rest of Germany, unemployment in Brandenburg has been particularly high for many years. Targeted support programmes, financed in particular by the European Social Fund (ESF), have, however, had some success in counteracting this circumstance. In 2021, economic output of EUR 78.7bn was generated in Brandenburg, which is equivalent to around 2.2% of total GDP in Germany. When it comes to economic growth in real terms, Brandenburg brings up the rear in a comparison of the Laender, although it has had some success in maintaining its key budget metrics at a solid level.

Overall maturity profile

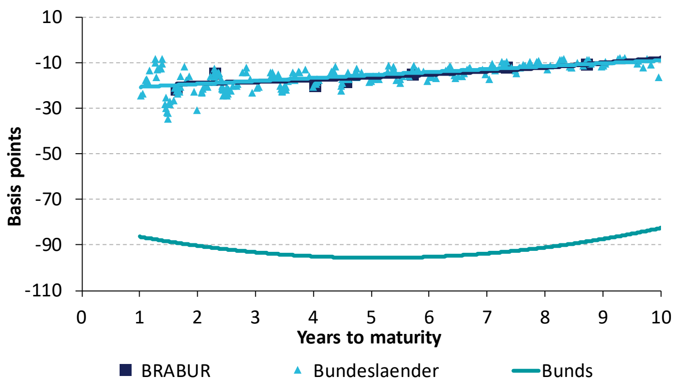


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
Foreign currencies	0	0	0	0	0	0	0	0	0	0	0	4
EUR other	0	0	0	0	0	0	0	0	0	0	0	0
EUR floating	500	600	100	100	0	0	0	0	0	0	0	0
EUR fixed	100	660	675	980	900	650	550	150	700	700	300	5,820

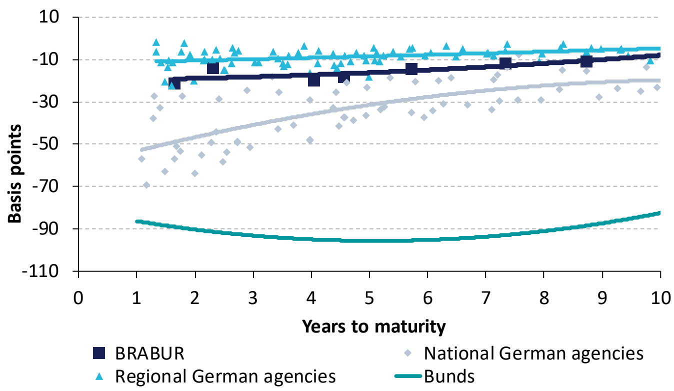
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market

Debt level* (ranking)**
EUR 17.8bn (5th)

Outstanding bonds
EUR 13.5bn

ESG volume
EUR 0.0bn

Bloomberg ticker
BRABUR

Economy 2021

GDP (ranking)
EUR 78.7bn (11th)

GDP per capita (ranking)
EUR 31,062 (13th)

Real GDP growth (ranking)
0.9% (16th)

Unemployment (ranking)
5.9% (8th)

Key figures 2021

Tax-interest coverage (ranking)
38.1x (6th)

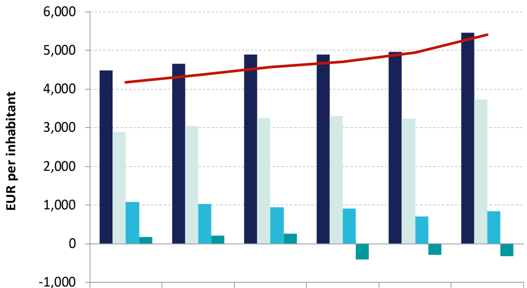
Total revenue/interest paid (ranking)
55.8 (7th)

Debt/GDP (ranking)
22.6% (10th)

Debt/revenue (ranking)
1.3x (7th)

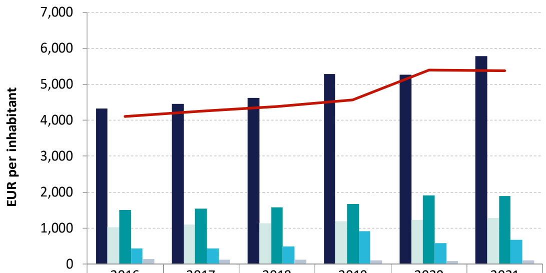
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



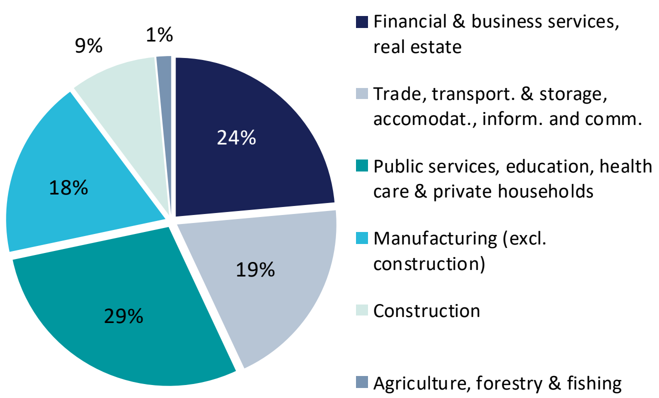
	2016	2017	2018	2019	2020	2021
Operating revenue	4,489	4,655	4,888	4,891	4,967	5,461
Tax revenue	2,894	3,050	3,246	3,303	3,238	3,730
Equalisation mechanism (net)	1,075	1,027	947	901	704	835
Deficit/surplus	168	200	263	-403	-293	-318
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

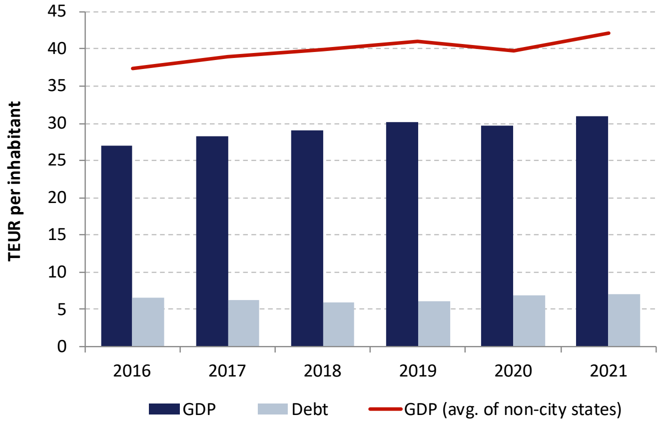


	2016	2017	2018	2019	2020	2021
Operating expense	4,320	4,455	4,626	5,294	5,260	5,779
Staff expenditure	1,020	1,087	1,127	1,181	1,231	1,290
Grants to municipals	1,503	1,547	1,571	1,672	1,902	1,899
Capital expenditure	430	439	479	907	585	673
Interest expense	133	120	112	107	79	98
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Solid economic growth before the coronavirus crisis
+ High-level investment in economy and infrastructure
+ Good budget metrics

Weaknesses

– Demographic trend
– Negative budget balance
– Low GDP growth

Bremen

With a population of 676,000 inhabitants and covering an area of 420 km², the city state of Bremen, which actually comprises the two cities of Bremen and Bremerhaven, has the smallest population of all 16 German Bundeslaender. Although Bremen has a long tradition of self-determination, ultimately it was due to the logistical interests of the USA that the actual allied power in this area (the United Kingdom) entrusted this part of the territory it occupied in the north of Germany to the Americans. Today, Bremen's port remains the second most important in Germany in economic terms, after Hamburg. Bremen's special status paved the way to its recognition as an independent Bundesland in 1947. Trade, transport and the hospitality industry are the mainstays of Bremen's economy. The automotive industry in addition to the aviation and aerospace technology sector are also major employers in Germany's smallest Bundesland. Bremen Technology Park, one of the largest of its kind in Germany, represents the breeding ground for these economic sectors. Bremen has a leading position in the food industry. By contrast, the ship and steel industry has been undergoing a structural transformation in recent decades and is consequently now only playing a subordinate role. In 2021, Bremen's GDP amounted to EUR 34.2bn, which equates to just under 1.0% of Germany's nationwide economic output. Unemployment in Bremen, which is the highest across Germany, is proving to be a real problem (2021: 10.7%), and is the most common cause for over-indebtedness in the Bundesland. In 2021, a total of 1,887 applications to initiate insolvency proceedings were presented in Bremen (+76.5%). Moreover, the exclave of Bremerhaven can be considered as structurally weak. On the other hand, there was an increase in arrivals (+10.7%) and overnight stays (+11.7%) in the tourism sector compared with 2020. After an impending budget emergency was identified in Bremen, the Stability Council will seek to carry out a further evaluation in the autumn of 2022. The findings will then be presented at the 26th meeting of the Stability Council in December. Nevertheless, key metrics such as the interest-tax ratio have already been improved (also in relation to 2019).

Bundesland and politics

Link to the Ministry of Finance

Homepage

Number of inhabitants (2021)

676,463

State capital

-

Government

SPD/Greens/The Left

Mayor

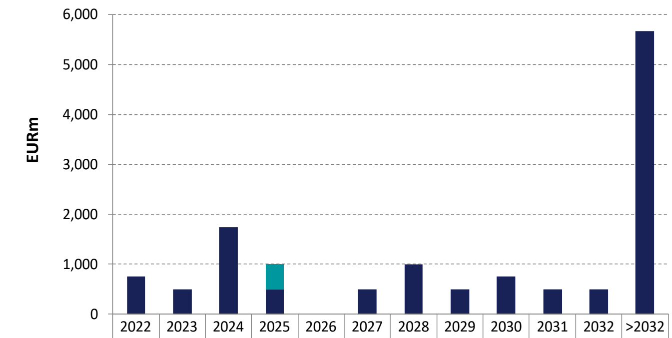
Andreas Bovenschulte (SPD)

Expected next election date

14 May 2023

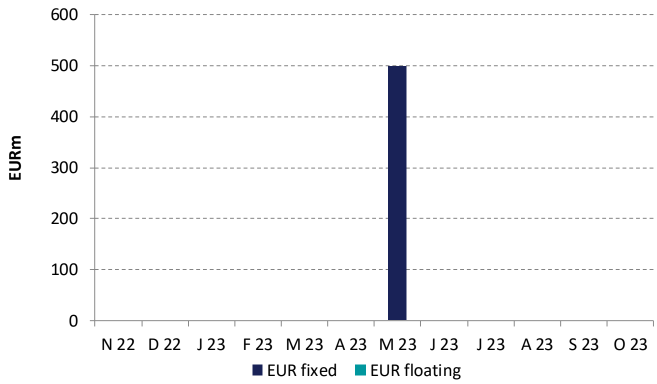
Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	-	-
S&P	-	-

Overall maturity profile

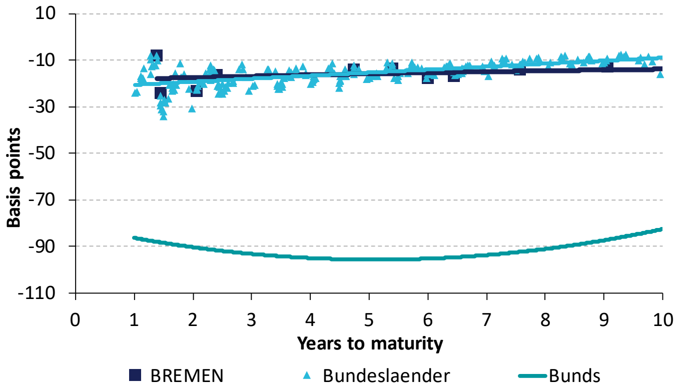


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR floating	0	0	0	500	0	0	0	0	0	0	0	0
EUR fixed	750	500	1,750	500	0	500	1,000	500	750	500	500	5,675

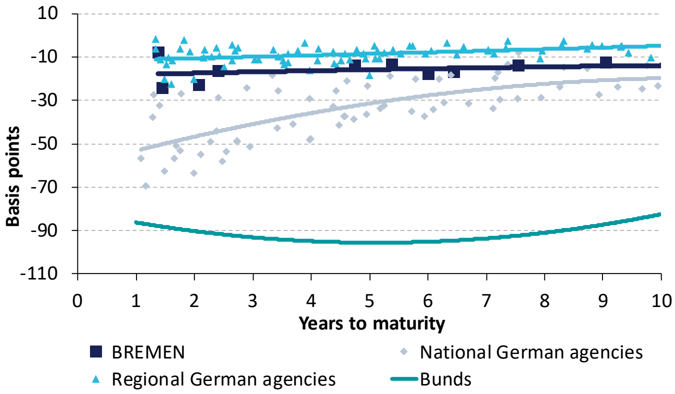
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies

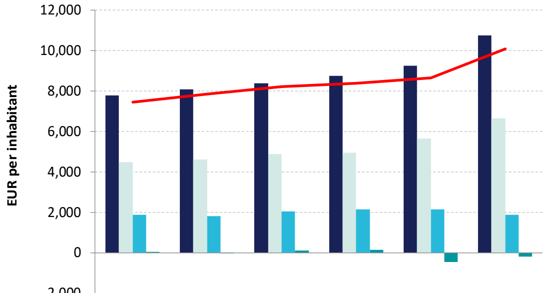


NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market	Economy 2021	Key figures 2021
Debt level* (ranking)**	**GDP (ranking)**	**Tax-interest coverage (ranking)**
EUR 36.0bn (11th)	EUR 34.2bn (16th)	7.6x (16th)
Outstanding bonds	**GDP per capita (ranking)**	**Total revenue/interest paid (ranking)**
EUR 13.4bn	EUR 50,673 (2nd)	12.2x (16th)
ESG volume	**Real GDP growth (ranking)**	**Debt/GDP (ranking)**
EUR 0.0bn	2.7% (6th)	105.1% (16th)
Bloomberg ticker	**Unemployment (ranking)**	**Debt/revenue (ranking)**
BREMEN	10.7% (16th)	4.9x (16th)

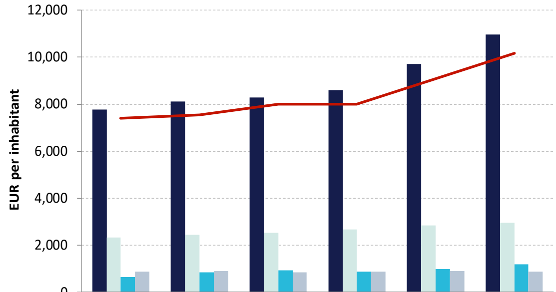
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



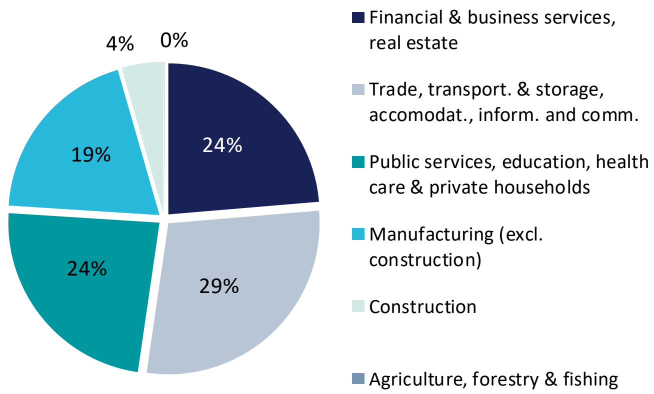
	2016	2017	2018	2019	2020	2021
Operating revenue	7,774	8,090	8,395	8,751	9,245	10,771
Tax revenue	4,491	4,610	4,898	4,950	5,654	6,654
Equalisation mechanism (net)	1,876	1,827	2,054	2,148	2,144	1,883
Deficit/surplus	8	-25	96	138	-456	-190
Ø of operating revenues (city states)	7,473	7,871	8,221	8,386	8,652	10,106

Development of expenditure in EUR per capita

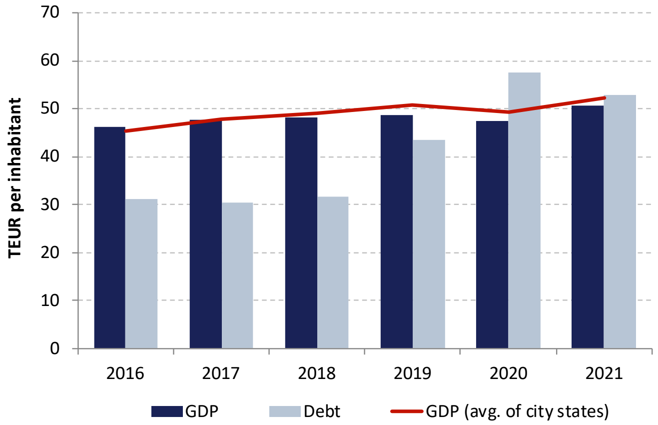


	2016	2017	2018	2019	2020	2021
Operating expense	7,766	8,115	8,299	8,613	9,701	10,961
Staff expenditure	2,340	2,442	2,527	2,686	2,836	2,956
Capital expenditure	656	861	945	887	985	1,204
Interest expense	880	903	856	882	900	880
Ø of operating expenses (city states)	7,402	7,541	8,001	8,002	9,094	10,167

Gross value added by economic sector



Trend in GDP and total debt



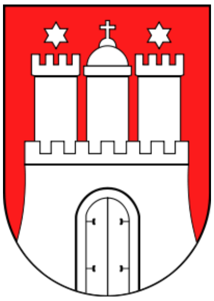
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Prospering foreign trade
+ Strong economic output per capita
+ Comparatively positive initial demographic position

Weaknesses

– Low debt sustainability and interest coverage
– High expenditure in relation to population
– Highest unemployment rate of all Laender



Bundesland and politics

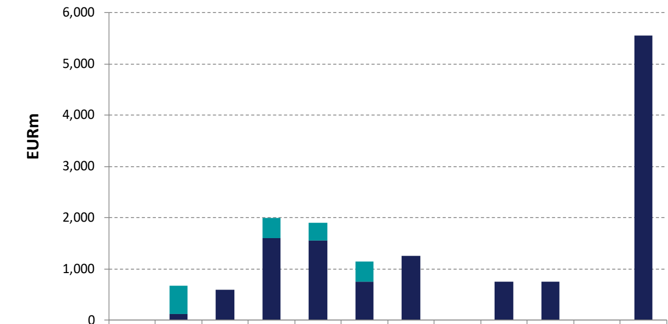
Link to the Ministry of Finance
[Homepage]
Number of inhabitants (2021)
1,853,935
State capital
-
Government
SPD/Greens
Minister-President
Peter Tschentscher (SPD)
Expected next election date
Spring 2025

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	-	-
S&P	-	-

Hamburg

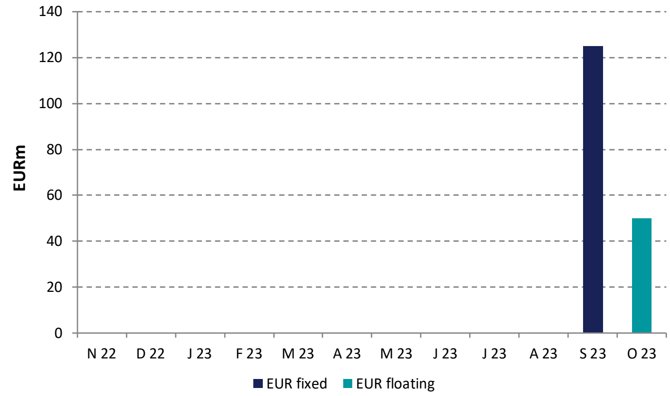
With a population of approximately 1.9m people, the Free and Hanseatic City of Hamburg is Germany's second-largest city after Berlin. Hamburg covers a total area of 755 km^2, producing a population density of 2,384 inhabitants per square kilometre, meaning that it again ranks second only to Berlin in a Laender comparison for this metric. Hamburg has traditionally valued its sense of political independence and owes its economic importance to the city's port, which is among the largest of its kind anywhere in the world. Across Europe, only the ports of Rotterdam and Antwerp handled a greater volume of container transshipments in 2021. The importance of the economic sectors involving logistics, the port and maritime trade is accordingly high. More than 110,000 jobs are directly dependent on the port. As a commercial, transport and services hub within Germany, Hamburg represents one of the country's main conurbations and boasts excellent transport links. This is also reflected in the composition of Hamburg's GDP: the financial and commercial sector contribute more to the relative gross value added in Hamburg than is the case for any other Bundesland. Demographic trends in Hamburg are also relatively advantageous. The only other Bundesland that has a higher proportion of the overall population aged between 25 and 45 is Berlin, while the proportion of over 45s is the lowest in Germany. This gives rise to a comparatively positive outlook for demographic trends in Hamburg. Alongside the city's internal potential, the international profile of the city has now been promoted for a number of years. However, it is not only the tourism sector that has benefited from this; the Hanseatic city has in the meantime also become the preferred location for Chinese companies establishing a presence in continental Europe as a result. Alongside the Elbphilharmonie concert hall, the exhibition space has also boosted the city's reputation abroad. In 2021, Hamburg's economy generated 3.5% of Germany's economic output. For years now, Hamburg has generated the highest GDP per capita of all Laender (2021: EUR 68,483; nationwide: EUR 42,953). Therefore, all that is left to be said is that several aspects of life in the north remain top level – except for the city's two football teams!

Overall maturity profile

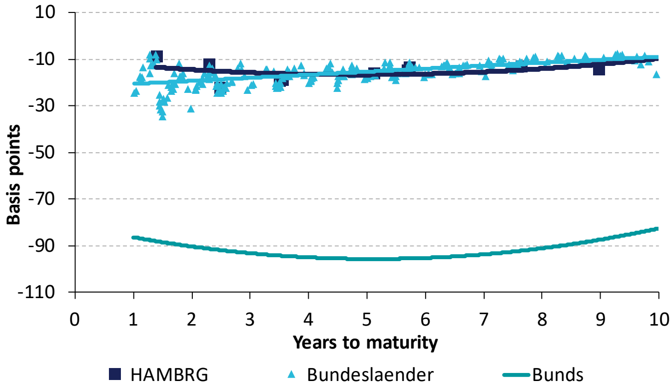


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR floating	0	550	0	400	350	400	0	0	0	0	0	0
EUR fixed	0	125	600	1,600	1,550	750	1,250	0	750	750	0	5,550

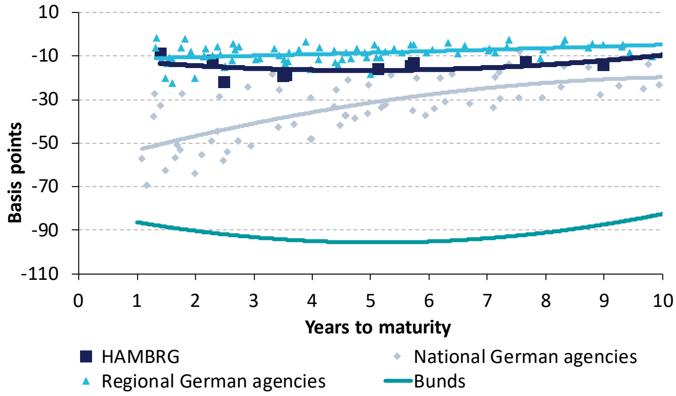
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market

Debt level* (ranking)**
EUR 25.4bn (8th)

Outstanding bonds
EUR 14.6bn

ESG volume
EUR 0.0bn

Bloomberg ticker
HAMBRG

Economy 2021

GDP (ranking)
EUR 126.7bn (9th)

GDP per capita (ranking)
EUR 68,483 (1st)

Real GDP growth (ranking)
2.0% (11th)

Unemployment (ranking)
7.5% (13th)

Key figures 2021

Tax-interest coverage (ranking)
37.3x (7th)

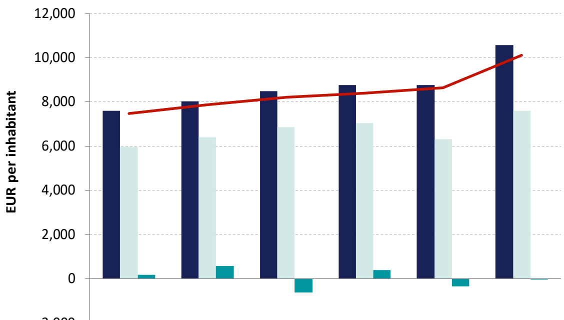
Total revenue/interest paid (ranking)
52.0x (8th)

Debt/GDP (ranking)
20.0% (8th)

Debt/revenue (ranking)
1.3x (8th)

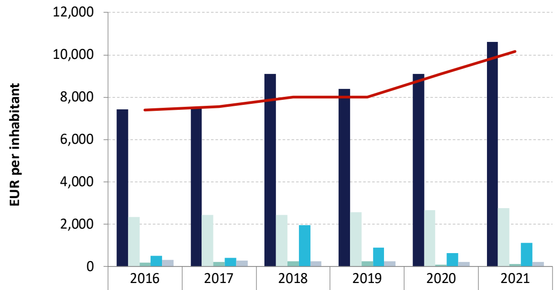
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



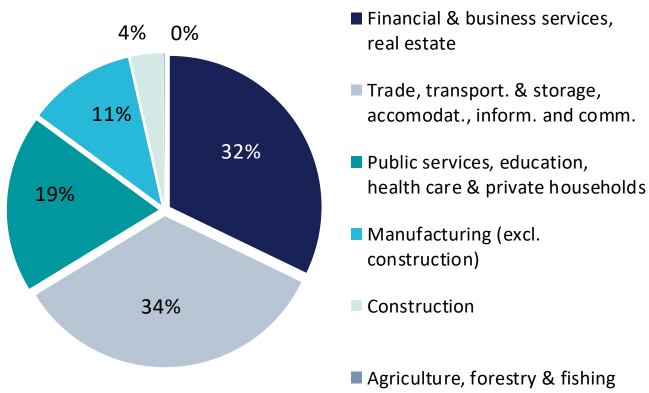
	2016	2017	2018	2019	2020	2021
Operating revenue	7,599	8,032	8,495	8,770	8,751	10,583
Tax revenue	5,964	6,412	6,853	7,039	6,307	7,587
Deficit/surplus	158	557	-614	374	-354	-36
Ø of operating revenues (city states)	7,473	7,871	8,221	8,386	8,652	10,106

Development of expenditure in EUR per capita

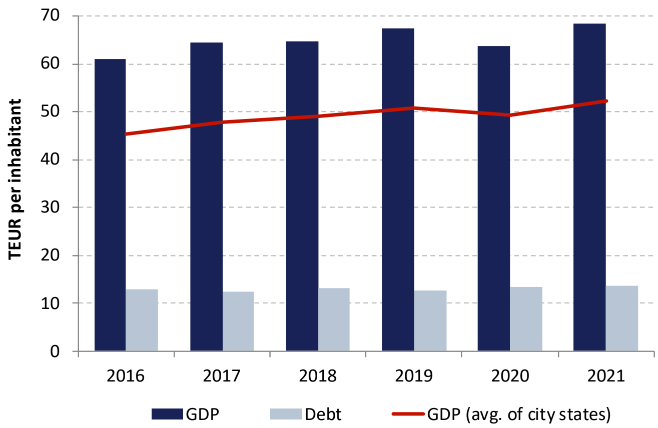


	2016	2017	2018	2019	2020	2021
Operating expense	7,440	7,474	9,109	8,395	9,106	10,618
Staff expenditure	2,345	2,449	2,443	2,557	2,668	2,771
Equalisation mechanism (net)	183	197	244	253	93	124
Capital expenditure	501	406	1,949	888	647	1,116
Interest expense	305	276	244	242	216	203
Ø of operating expenses (city states)	7,402	7,541	8,001	8,002	9,094	10,167

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Economic power in relation to population
+ Prospering foreign trade
+ Comparatively positive initial demographic position
+ High tax revenues in relation to population

Weaknesses

– High expenditure in relation to population
– Debt level in relation to population

Hesse

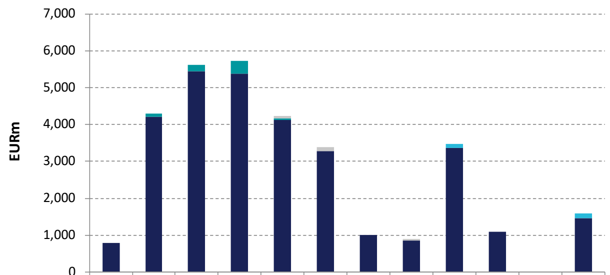
With approximately 6.3m inhabitants, Hesse is one of the most populous Laender in Germany. It has an area of 21,116 km^2, which means that only three other non-city states have a higher density of population. Hesse's economy is heavily diversified. Manufacturing industries (excluding construction), trade, hospitality and transport, in addition to both public and private service providers, all generate a similar level of gross value added respectively. The chemicals, metal processing and automotive industries predominate in northern Hesse. Trading companies, in particular, benefit from Frankfurt Airport's role as one of the most important air traffic hubs in Europe (freight and passenger transport) in conjunction with the highly developed transport infrastructure. The economy is nevertheless dominated by finance, leasing and corporate services. As the largest city in Hesse, the international financial centre of Frankfurt is also a focus of the Bundesland's financial sector. It is here that, among other organisations, the European Central Bank (ECB), the European Insurance and Occupational Pensions Authority (EIOPA) and the German stock exchange are headquartered. The importance of this financial centre is set to be increased further with the relocation of a number of foreign banks and financial services providers in the wake of the United Kingdom's withdrawal from the EU, commonly referred to as Brexit. In order to confront global challenges such as global warming, scarcity of resources and the digital transformation, a new innovation programme ties in with national and international frameworks such as the European Green Deal, the Sustainable Development Goals (SDGs) of the United Nations and the high-tech strategy of the German federal government. The strategy ranges from start-up consulting and support for companies in the area of R&D, all the way through to sourcing IT equipment for schools and universities. The innovation programme will also outline how a small yet innovative municipality will be able to cut a significant portion of its greenhouse gas emissions as early as 2024 or make products more resource-efficient and sustainable through 3D printing.

Bundesland and politics

Link to the Ministry of Finance
Homepage
Number of inhabitants (2021)
6,295,017
State capital
Wiesbaden
Government
CDU/Greens
Minister-President
Boris Rhein (CDU)
Expected next election date
Autumn 2023

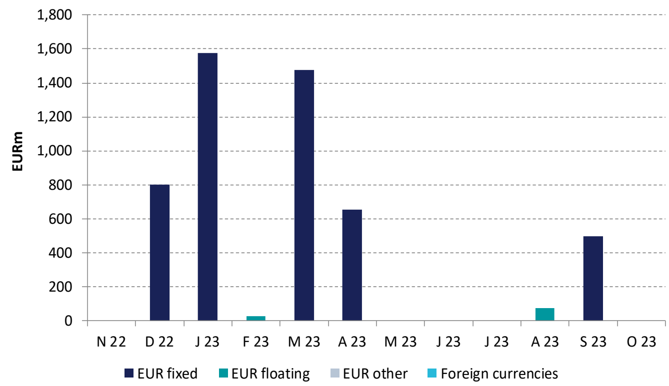
Ratings	Long-term	Outlook
Fitch	-	-
Moody's	-	-
S&P	AA+	stab

Overall maturity profile

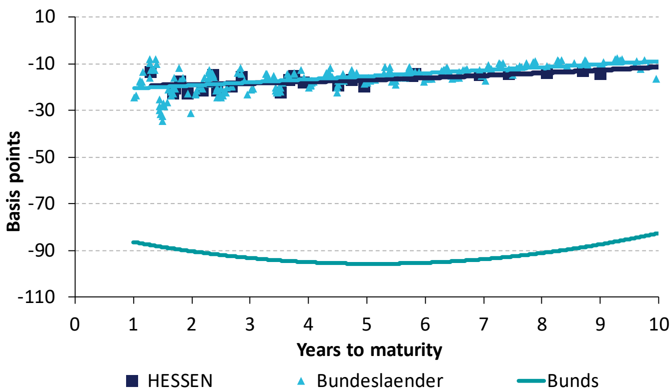


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
Foreign currencies	0	0	0	0	0	0	0	0	102	0	0	110
EUR other	0	0	0	0	51	102	0	51	0	0	0	0
EUR floating	0	100	175	350	50	0	0	0	0	0	0	0
EUR fixed	800	4,202	5,450	5,380	4,126	3,275	1,000	850	3,360	1,100	0	1,470

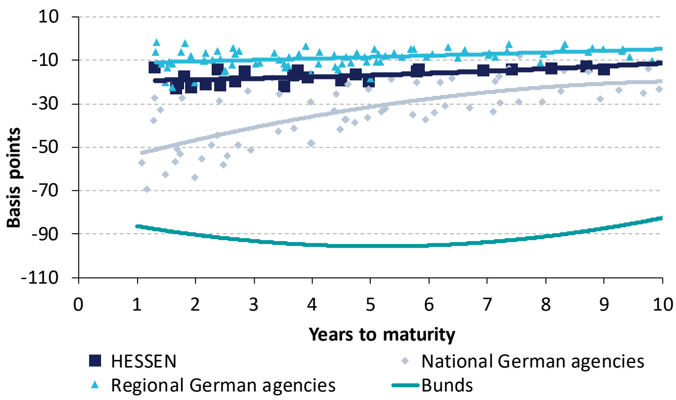
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market

Debt level* (ranking)**
EUR 40.4bn (13th)

Outstanding bonds
EUR 32.1bn

ESG volume
EUR 0.6bn

Bloomberg ticker
HESSEN

Economy 2021

GDP (ranking)
EUR 302.5bn (5th)

GDP per capita (ranking)
EUR 48,164 (5th)

Real GDP growth (ranking)
3.1% (4th)

Unemployment (ranking)
5.2% (4th)

Key figures 2021

Tax-interest coverage (ranking)
29.7x (10th)

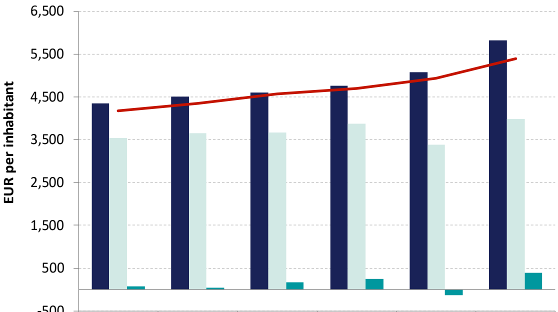
Total revenue/interest paid (ranking)
43.4x (10th)

Debt/GDP (ranking)
13.4% (4th)

Debt/revenue (ranking)
1.1x (5th)

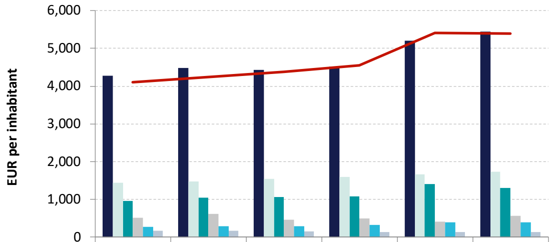
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



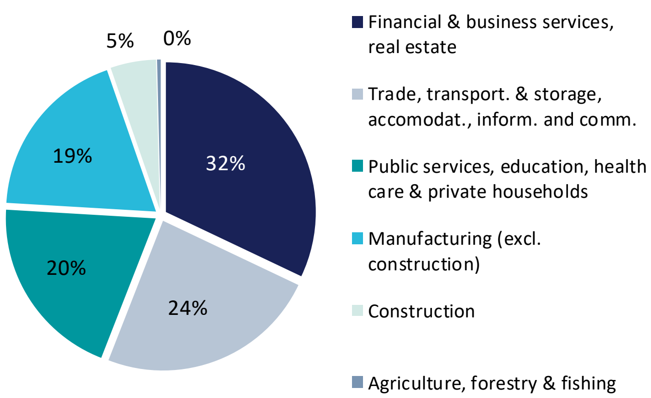
	2016	2017	2018	2019	2020	2021
Operating revenue	4,359	4,514	4,601	4,761	5,075	5,831
Tax revenue	3,550	3,660	3,665	3,881	3,387	3,991
Deficit/surplus	76	35	172	246	-133	384
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

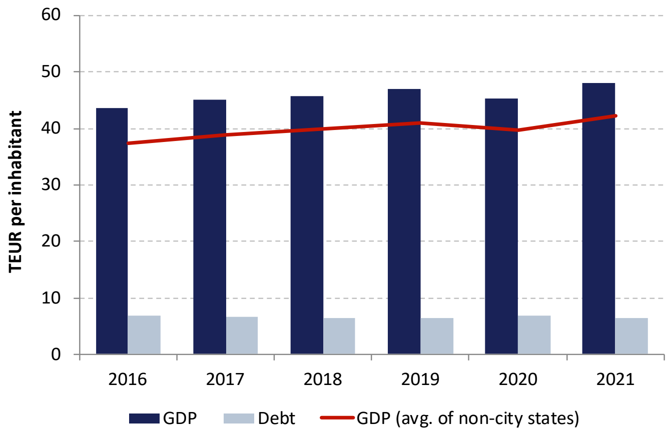


	2016	2017	2018	2019	2020	2021
Operating expense	4,283	4,479	4,429	4,515	5,208	5,447
Staff expenditure	1,439	1,480	1,536	1,596	1,672	1,738
Grants to municipals	964	1,045	1,056	1,074	1,402	1,300
Equalisation mechanism (net)	521	610	457	491	402	565
Capital expenditure	272	282	298	320	391	390
Interest expense	165	161	153	144	140	134
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Solid budget policy has reversed long history of deficits
+ Low unemployment rate

Weaknesses

– Below-average investment concentration
– Slightly below-average interest coverage
– High level of absolute debt

Mecklenburg-Western Pomerania

With a population of 1.6m inhabitants and covering an area of 23,295 km^2, Mecklenburg-Western Pomerania is the most sparsely populated Bundesland. It has existed in its present form since the reunification of Germany and is characterised by a large number of islands (794) and its long Baltic coastline, Bodden and inland coastline (1,470 km). As a result, tourism of course plays a vital role in the local economy. Tourism intensity (measured by the number of overnight stays per permanent resident) is higher than in any other Land. The role of agriculture, forestry and fishing is also comparatively high; in Mecklenburg-Western Pomerania, these industries contribute more as a percentage of GDP than in any of the other Laender. However, public services also contribute more to gross value added than in any other Bundesland. Shipping and the economic sectors associated with this are still significant. For example, according to information in our NORD/LB Regional Economy report, several companies operating in this sector are ranked among the 100 biggest companies across the Bundesland as a whole. Mecklenburg-Western Pomerania is also increasingly trying to gain a foothold in future technologies. The main drivers behind this are the Bundesland's two universities in Rostock and Greifswald. For example, the Wendelstein 7-X nuclear reactor has been located at the University of Greifswald since November 2015 for research purposes. In addition, the Bundesland is traditionally well-represented in the aerospace sector. Owing to its extensive stretch of coastline, renewable energies are also playing an increasingly important role. More than 70% of all electricity generated is now obtained from renewable sources. For example, the Lüttow-Valluhn solar park, which was newly opened on 07 September 2022, should save just under 6,000 tons of CO_2 per year. In 2021, the Bundesland generated GDP of EUR 49.5bn, which corresponds to 1.4% of total German economic output. As such, GDP per capita is lower in Mecklenburg-Western Pomerania than in any other Bundesland. However, it should also be stressed that the budget situation in the years before the Covid-19 pandemic had been continuously improved. This is above all reflected in the relatively low value for the debt per capita metric.

Bundesland and politics

Link to the Ministry of Finance

Homepage

Number of inhabitants (2021)

1,611,160

State capital

Schwerin

Government

SPD/ The Left

Minister-President

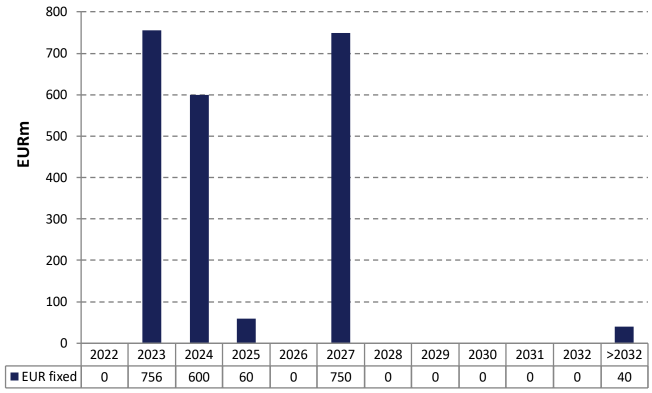
Manuela Schwesig (SPD)

Expected next election date

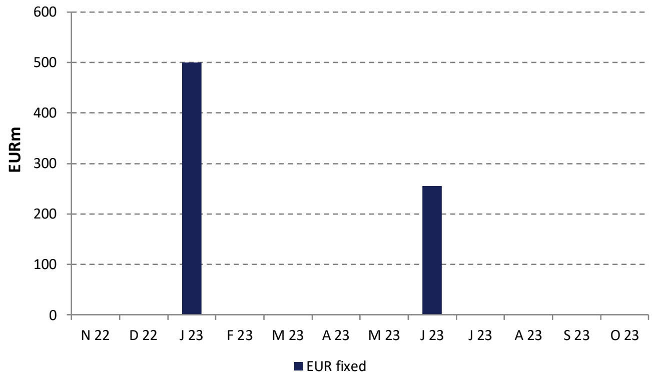
Autumn 2026

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	-	-
S&P	-	-

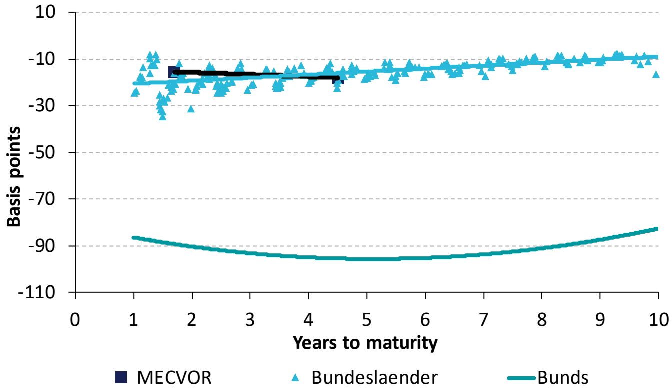
Overall maturity profile



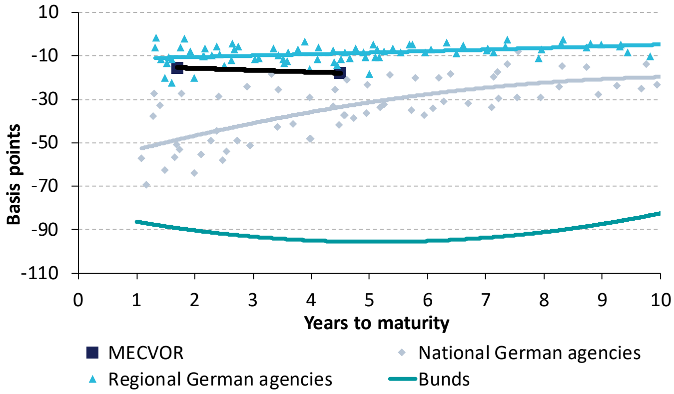
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies

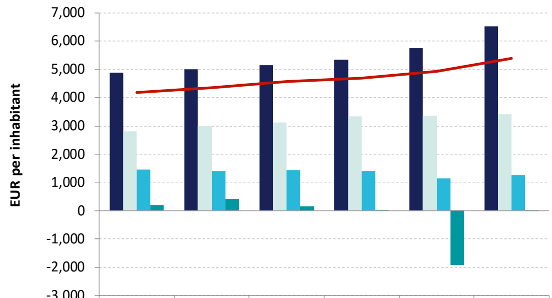


NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market	Economy 2021	Key figures 2021
Debt level* (ranking)**	**GDP (ranking)**	**Tax-interest coverage (ranking)**
EUR 8.5bn (2nd)	EUR 49.5bn (14th)	33.0x (8th)
Outstanding bonds	**GDP per capita (ranking)**	**Total revenue/interest paid (ranking)**
EUR 2.2bn	EUR 30,704 (16th)	63.3x (4th)
ESG volume	**Real GDP growth (ranking)**	**Debt/GDP (ranking)**
EUR 0.0bn	1.7% (13th)	17.1% (5th)
Bloomberg ticker	**Unemployment (ranking)**	**Debt/revenue (ranking)**
MECVOR	7.6% (14th)	0.8x (4th)

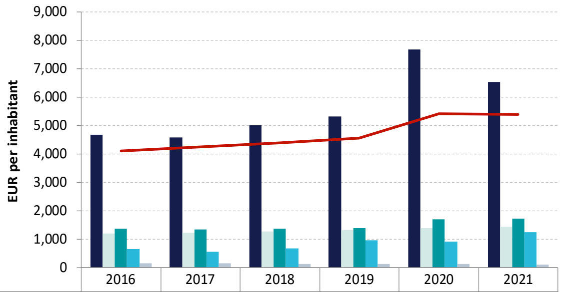
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



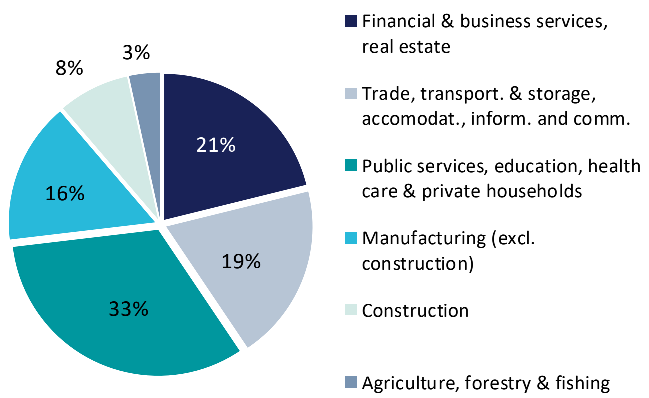
	2016	2017	2018	2019	2020	2021
Operating revenue	4,882	5,006	5,157	5,337	5,764	6,522
Tax revenue	2,813	2,996	3,123	3,333	3,369	3,402
Equalisation mechanism (net)	1,446	1,419	1,422	1,397	1,131	1,266
Deficit/surplus	197	420	147	16	-1,923	-11
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

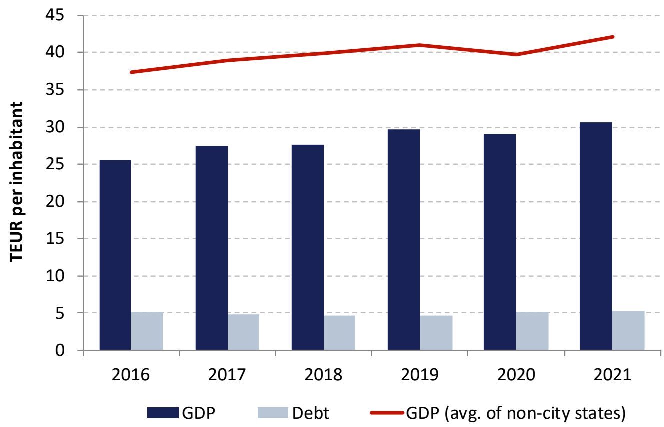


	2016	2017	2018	2019	2020	2021
Operating expense	4,685	4,586	5,010	5,321	7,687	6,533
Staff expenditure	1,200	1,217	1,263	1,312	1,386	1,431
Grants to municipals	1,361	1,329	1,351	1,394	1,686	1,729
Capital expenditure	636	546	664	959	909	1,246
Interest expense	155	140	132	123	120	103
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



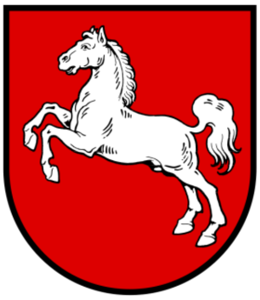
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Above-average revenues in relation to number of inhabitants
+ Very solid debt sustainability and interest coverage metrics
+ Solid economic growth

Weaknesses

– High per capita expenditure
– Low economic output (both in absolute terms and per capita)
– Unemployment is above average



Bundesland and politics

Link to the Ministry of Finance

[Homepage]

Number of inhabitants (2021)

8,027,031

State capital

Hanover

Government

SPD/Greens

Minister-President

Stephan Weil (SPD)

Expected next election date

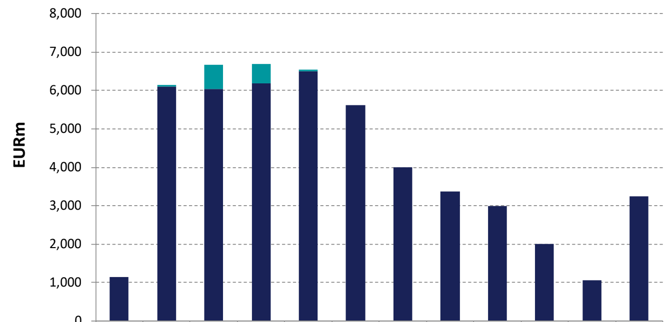
Autumn 2027

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	-	-
S&P	-	-

Lower Saxony

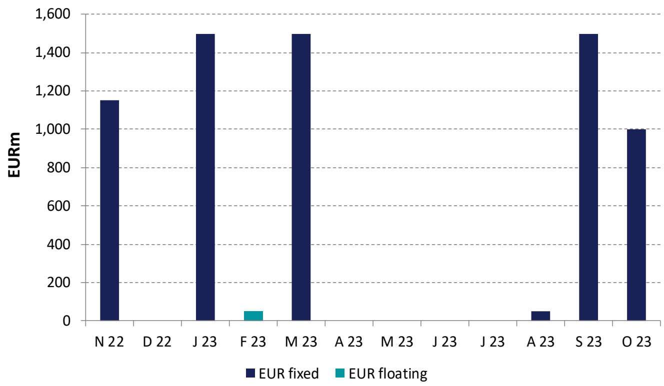
Formed from the regions of Hanover, Oldenburg, Brunswick and Schaumburg-Lippe in 1946, Lower Saxony is Germany's second-largest Bundesland, covering an area of approximately 47,710 km^2. Its population of just over 8.0m people is exceeded by only three other Laender. The population of Lower Saxony features an above-average proportion of inhabitants aged 6-15, which must be rated as a relative advantage given the general demographic trend in evidence across Germany as a whole. The economy is dominated by the automotive industry and its suppliers, which are located across the region with a focus on the areas around Hanover, Braunschweig, Wolfsburg, Salzgitter and Emden. More than a quarter of Lower Saxony's GDP is generated by manufacturing industries. The importance of this economic sector is therefore only higher in three other Laender. Lower Saxony's highly developed infrastructure is of great advantage in this regard, with the Bundesland actually boasting the most extensive rail network of all Laender across Germany. Home to the largest exhibition site in the world, with the pandemic situation having now eased, Hanover is again playing host to globally leading industrial (e.g. Hannover Messe, Domotex, EuroBlech, IAA Transportation, etc.) and information technology (formerly CeBIT) trade fairs. As the regional capital, Hanover is therefore an important location for current and future technologies at international level. Traditionally, farming is also a key sector of the economy in Lower Saxony, with gross value added higher in this Bundesland than any other. Lower Saxony also ranks among the leading Laender in terms of its use of renewable energies. As part of Germany's efforts to reduce its dependency on Russian gas, an LNG (Liquefied Natural Gas) terminal is being built in Wilhelmshaven on the Jade Bight of the North Sea coast, while Stade and Brunsbüttel are being considered as additional LNG locations. As such, Lower Saxony is assuming a leading role in solving a nationwide issue, with implications for the whole of Germany. In 2021, Lower Saxony generated 8.8% of German GDP, which is the fourth highest contribution of all sub-sovereigns.

Overall maturity profile

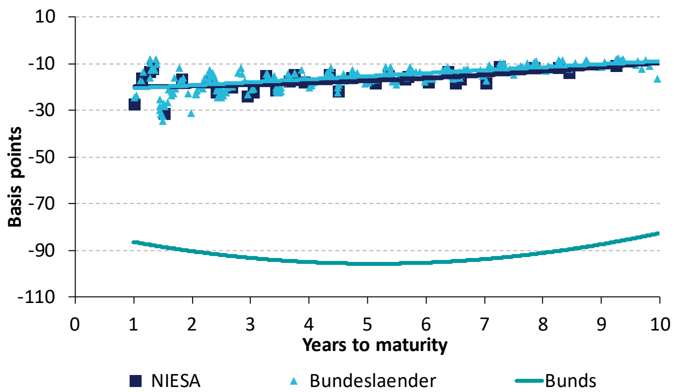


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR floating	0	50	625	500	50	0	0	0	0	0	0	0
EUR fixed	1,150	6,100	6,050	6,185	6,500	5,625	4,000	3,375	3,000	2,000	1,050	3,250

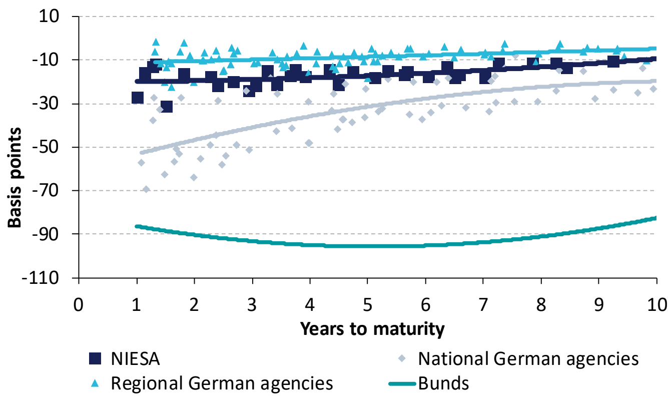
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies

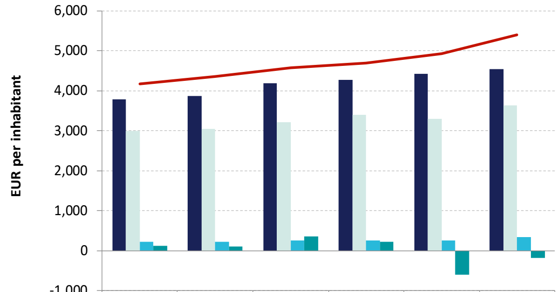


NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market	Economy 2021	Key figures 2021
Debt level* (ranking)**	**GDP (ranking)**	**Tax-interest coverage (ranking)**
EUR 61.6bn (15th)	EUR 315.8bn (4th)	50.4x (3rd)
Outstanding bonds	**GDP per capita (ranking)**	**Total revenue/interest paid (ranking)**
EUR 49.5bn	EUR 39,401 (9th)	63.1x (5th)
ESG volume	**Real GDP growth (ranking)**	**Debt/GDP (ranking)**
EUR 0.0bn	1.7% (13th)	19.5% (7th)
Bloomberg ticker	**Unemployment (ranking)**	**Debt/revenue (ranking)**
NIESA	5.5% (5th)	1.7x (12th)

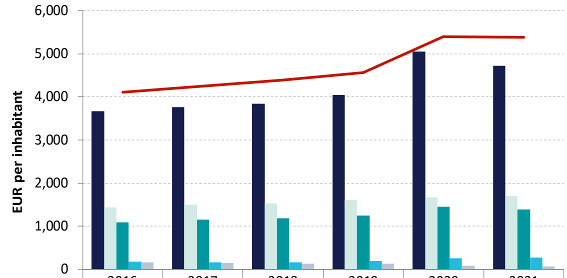
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



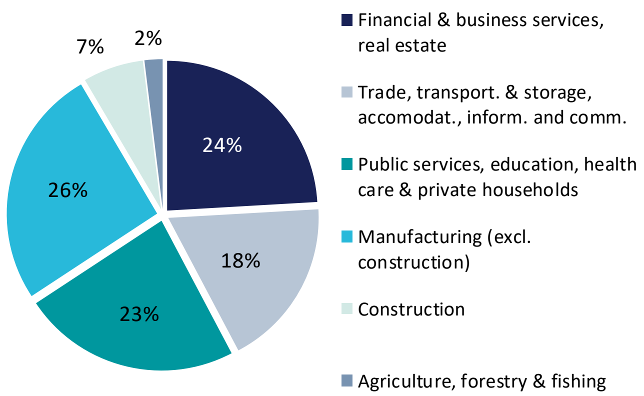
	2016	2017	2018	2019	2020	2021
Operating revenue	3,792	3,870	4,187	4,277	4,435	4,547
Tax revenue	2,998	3,040	3,222	3,403	3,301	3,630
Equalisation mechanism (net)	223	221	248	247	261	340
Deficit/surplus	123	105	349	225	-614	-177
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

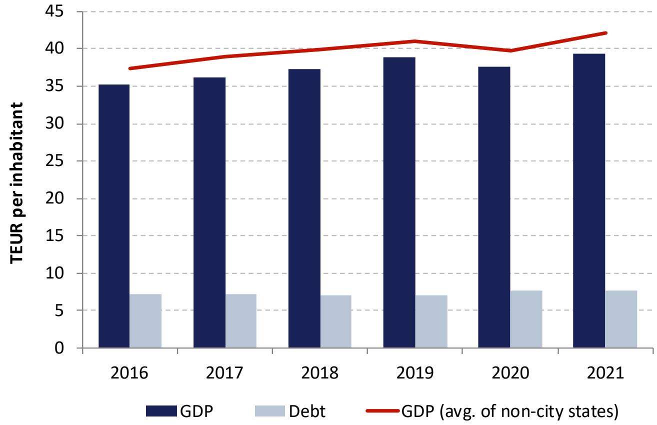


	2016	2017	2018	2019	2020	2021
Operating expense	3,669	3,765	3,837	4,052	5,049	4,724
Staff expenditure	1,427	1,490	1,535	1,602	1,671	1,708
Grants to municipals	1,087	1,158	1,177	1,239	1,453	1,381
Capital expenditure	174	163	161	192	251	267
Interest expense	160	146	133	123	75	72
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



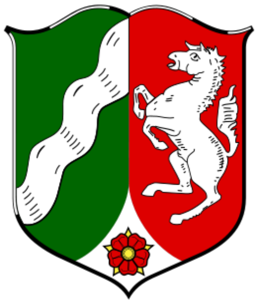
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Solid budgetary development
+ Low expenditure relative to the number of inhabitants
+ Low unemployment rate

Weaknesses

– Low investment ratio
– Below-average revenues in relation to population
– Relatively high debt level



Bundesland and politics

Link to the Ministry of Finance

Homepage

Number of inhabitants (2021)

17,924,591

State capital

Düsseldorf

Government

CDU/Greens

Minister-President

Hendrik Wüst

Expected next election date

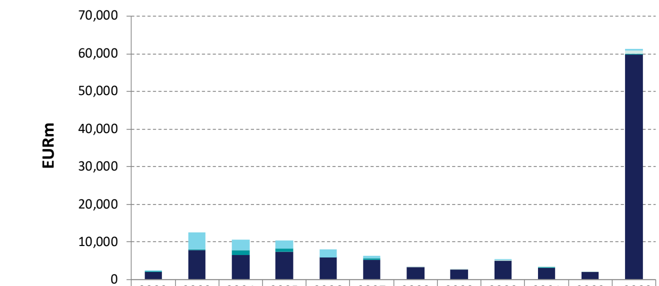
Spring 2027

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	Aa1	stab
S&P	AA	stab

North Rhine-Westphalia

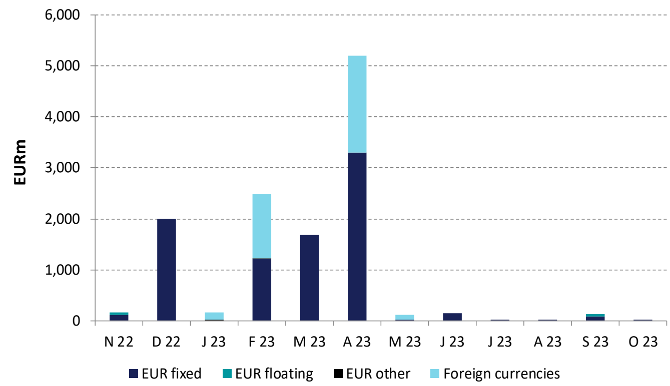
North Rhine-Westphalia (NRW) has existed since 1947. With a population of 17.9m people, it is Germany's most populous Bundesland. In addition, NRW covers a total area of almost 34,112 km², making it the most densely populated of all the non-city states in Germany. The population has been increasing over the past few years, with this growth resulting from a positive balance in migratory movements. Forecasts nevertheless suggest that the population will begin to decrease over the next few decades. However, the influx of immigrants does present the Land with an opportunity to counteract its problems related to demographic trends. NRW has developed its strong economic position over the course of several decades. This has been far from straightforward, due to the fact that the Land has been undergoing a process of structural change since the beginning of the 1960s. NRW has developed from a region shaped by mining and heavy industry towards an economy geared towards a modern service sector. In 2021, 7.4m people were employed in this sector, with this number having doubled since 1970. At 7.3%, unemployment in NRW is above the average across Germany as a whole (6.4%). At the same time, the Rhine-Ruhr metropolitan region is Europe's largest industrial region. NRW is coping with this upheaval primarily through strategies aimed at promoting Industry 4.0. For example, NRW is scheduled to be the first Land to have a comprehensive network of broadband and fibre-optic technology by 2026. The Land has also defined ambitious goals in the area of climate protection. By 2030, the aim is to cut greenhouse gas emissions by 65% in comparison with 1990, and by 88% by 2040. Thereafter, from 2045, NRW expects to be carbon-neutral. NRW has always generated a large portion of Germany's overall GDP, although this share has been on the slide for a few years now. With GDP of EUR 733.3bn in 2021, a total of 20.5% of German economic output was generated. Prior to the pandemic and flood disasters that struck the region in the summer of 2021, NRW was well on its way to consolidating its budget with a second consecutive surplus in the billions, which would have enabled the Land to bring its long-standing deficit cycle to an end.

Overall maturity profile

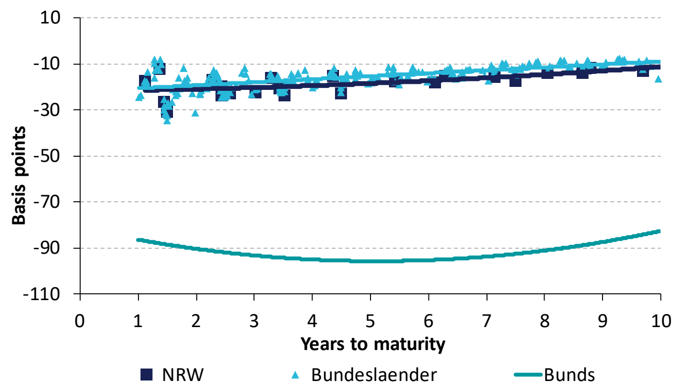


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
Foreign currencies	95	4,417	2,826	2,154	2,085	788	0	0	103	0	0	436
EUR other	0	80	25	25	0	10	10	71	305	315	80	885
EUR floating	40	50	1,200	900	40	300	0	0	100	100	0	272
EUR fixed	2,121	7,927	6,588	7,412	5,876	5,325	3,328	2,655	4,925	3,200	2,000	59,736

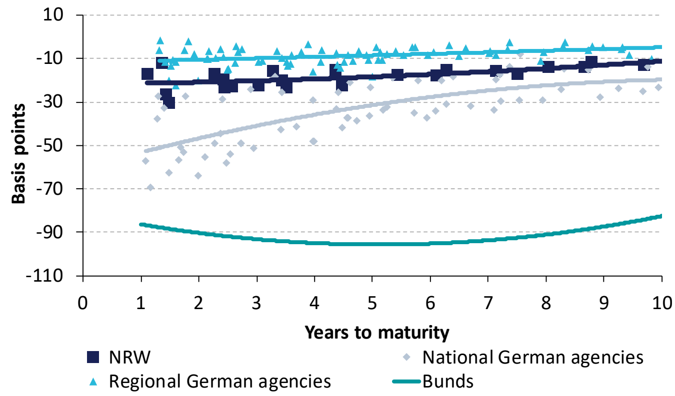
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



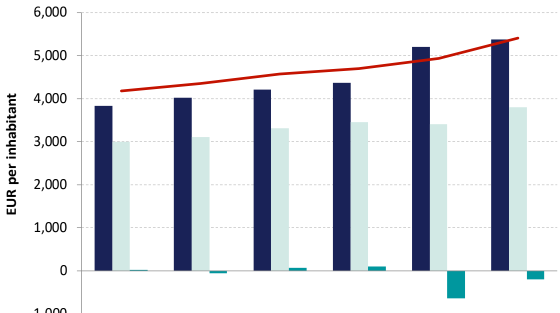
NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

Capital market	**Economy 2021**	**Key figures 2021**
Debt level* (ranking)**	**GDP (ranking)**	**Tax-interest coverage (ranking)**
EUR 158.6bn (16th)	EUR 733.3bn (1st)	43.3x (5th)
Outstanding bonds	**GDP per capita (ranking)**	**Total revenue/interest paid (ranking)**
EUR 128.8bn	EUR 40,951 (7th)	61.2x (6th)
ESG volume	**Real GDP growth (ranking)**	**Debt/GDP (ranking)**
EUR 20.3bn	2.2% (8th)	21.6% (9th)
Bloomberg ticker	**Unemployment (ranking)**	**Debt/revenue (ranking)**
NRW	7.3% (11th)	1.6x (10th)

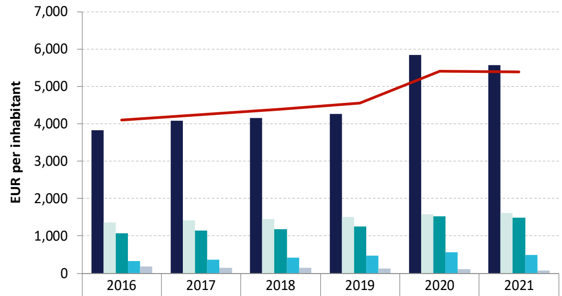
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



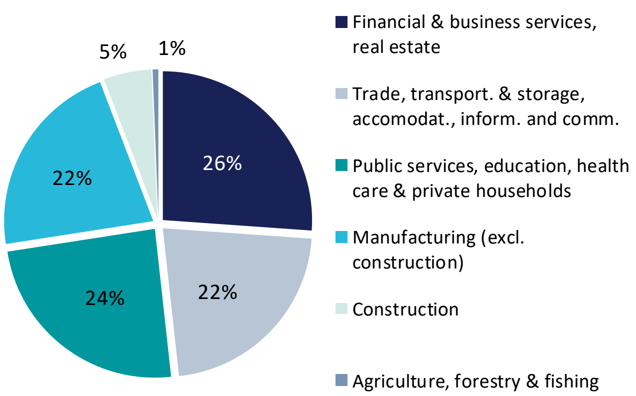
	2016	2017	2018	2019	2020	2021
Operating revenue	3,825	4,013	4,212	4,367	5,199	5,378
Tax revenue	3,002	3,114	3,303	3,455	3,405	3,806
Deficit/surplus	2	-68	60	96	-648	-197
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

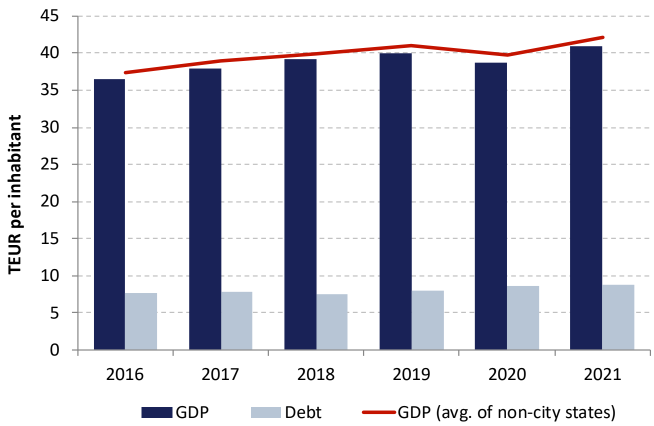


	2016	2017	2018	2019	2020	2021
Operating expense	3,823	4,082	4,153	4,271	5,847	5,575
Staff expenditure	1,362	1,419	1,446	1,513	1,579	1,618
Grants to municipals	1,065	1,140	1,181	1,246	1,531	1,494
Capital expenditure	334	370	410	468	566	500
Interest expense	186	156	148	137	112	77
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Solid budget performance
+ Well-diversified economy

Weaknesses

– Above-average pension liabilities
– Below-average debt sustainability
– High unemployment in structurally weak areas

Rhineland-Palatinate

A total of seven regions were merged to form the Bundesland of Rhineland-Palatinate on 18 May 1946, which was initially in the American and subsequently the French occupied zone after the Second World War. The Bundesland, which covers a total area of 19,858 km^2, now has a population of more than 4.1m people. Over the course of the next few decades, Rhineland-Palatinate is expected to be faced with the challenge of a declining population. Industry plays a more significant role in Rhineland-Palatinate's economy than in most other Laender. The proportion of gross value added attributable to manufacturing industries (excluding construction) is only higher in Baden-Wuerttemberg and Bavaria. Industrial clusters are to be found in various locations along the river Rhine. The chemicals sector is by far the most important branch of industry, responsible for more than 30% of total sales in the economy. Other key sectors, albeit to a far less significant extent than the chemicals industry, include vehicle manufacturing and mechanical engineering, the production of metal products as well as rubber and plastic goods. The pharmaceutical industry has helped to practically double total sales in Rhineland-Palatinate in comparison with 2020. At +9.6%, growth in real GDP in 2021 was by far the highest of the 16 Laender (by way of comparison: Baden-Wuerttemberg is the runner-up in this regard, having recorded growth of +3.4%). Looking to the future, Rhineland-Palatinate will primarily rely on promoting SMEs. In the past, targeted investments were made in research infrastructure in order to boost the innovative capacity of these firms. With the help of a communal debt relief fund, municipalities are also set to be freed from financial constraints linked to Kassenkredite. In 2021, Rhineland-Palatinate's economic output amounted to EUR 162.2bn, which equated to just under 4.5% of Germany's national GDP, while its (positive) budget balance is the second-highest out of all Laender after Hesse. This development has been driven by a sharp rise in tax revenues due, among other aspects, to the biotechnology firm BioNTech. In the FKA framework, R.-P. is now a net contributor, having previously been on the net recipient side. This trend is expected to be consolidated over the next few years.

Bundesland and politics

Link to the Ministry of Finance
Homepage

Number of inhabitants (2021)
4,106,485

State capital
Mainz

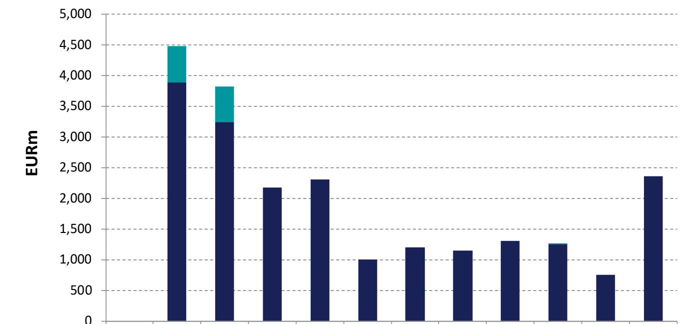
Government
SPD/Greens/FDP

Minister-President
Malu Dreyer (SPD)

Expected next election date
Spring 2026

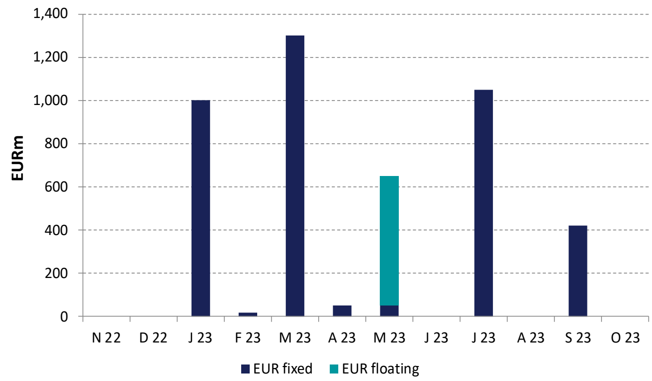
Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	-	-
S&P	-	-

Overall maturity profile

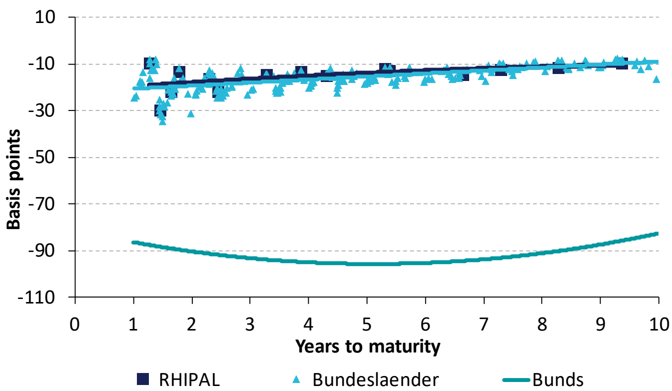


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR floating	0	600	580	0	0	0	0	0	0	20	0	0
EUR fixed	0	3,890	3,242	2,175	2,311	1,000	1,200	1,150	1,305	1,250	750	2,362

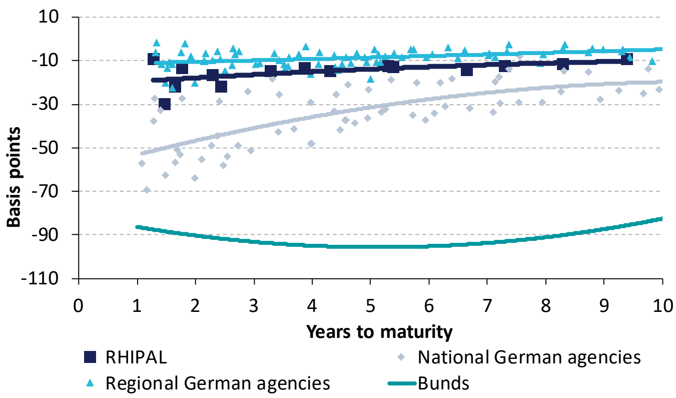
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies

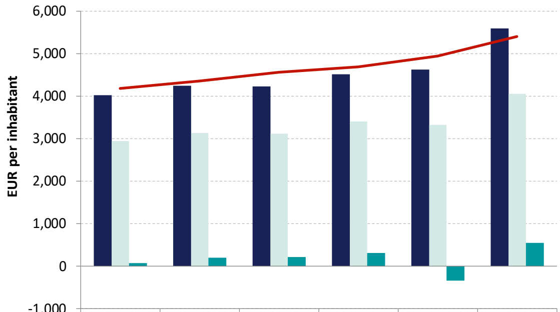


NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market	Economy 2021	Key figures 2021
Debt level* (ranking)**	**GDP (ranking)**	**Tax-interest coverage (ranking)**
EUR 28.5bn (9th)	EUR 162.2bn (7th)	50.3x (4th)
Outstanding bonds	**GDP per capita (ranking)**	**Total revenue/interest paid (ranking)**
EUR 21.8bn	EUR 39,555 (8th)	69.5x (3rd)
ESG volume	**Real GDP growth (ranking)**	**Debt/GDP (ranking)**
EUR 0.0bn	9.6% (1st)	17.6% (6th)
Bloomberg ticker	**Unemployment (ranking)**	**Debt/revenue (ranking)**
RHIPAL	5.0% (3rd)	1.2x (6th)

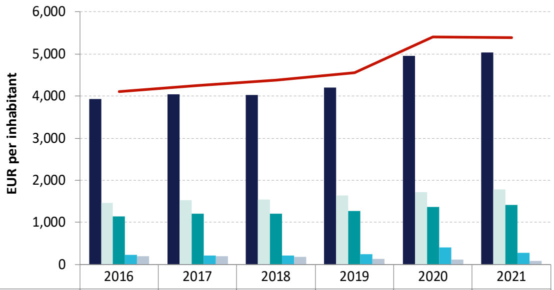
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



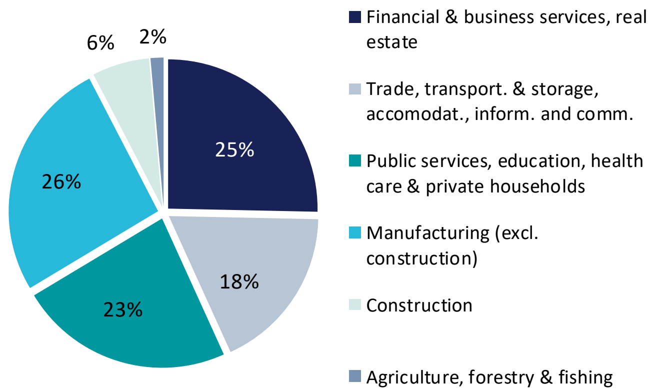
	2016	2017	2018	2019	2020	2021
Operating revenue	4,019	4,251	4,232	4,511	4,632	5,597
Tax revenue	2,949	3,145	3,125	3,404	3,327	4,051
Deficit/surplus	80	211	212	307	-328	559
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

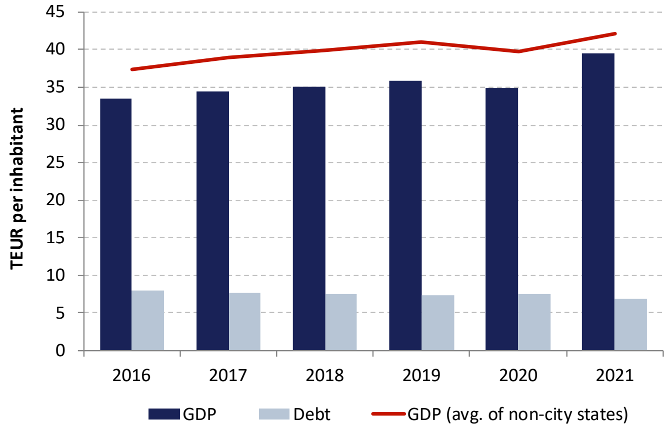


	2016	2017	2018	2019	2020	2021
Operating expense	3,940	4,041	4,020	4,204	4,960	5,038
Staff expenditure	1,465	1,522	1,545	1,638	1,723	1,778
Grants to municipals	1,138	1,216	1,213	1,269	1,363	1,421
Capital expenditure	234	209	207	245	403	279
Interest expense	202	201	184	141	116	91
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



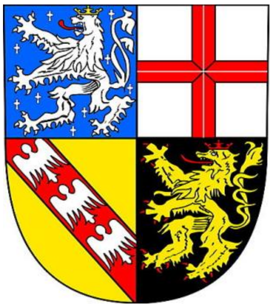
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Long period of budget deficits appears to be over
+ Diversified economic structure
+ Low unemployment rate

Weaknesses

– Highly dependent on the chemicals industry
– Low per capita revenue basis



Bundesland and politics

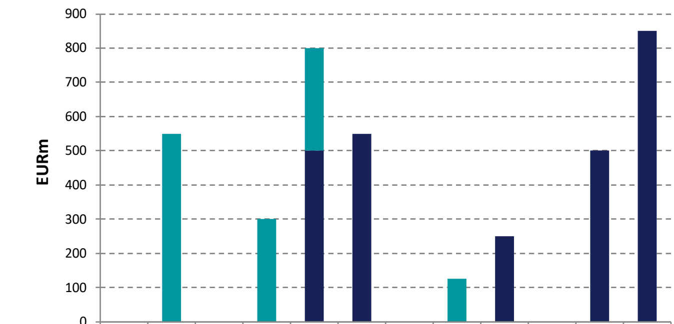
Link to the Ministry of Finance
Homepage
Number of inhabitants (2021)
982,348
State capital
Saarbrücken
Government
SPD
Minister-President
Anke Rehlinger (SPD)
Expected next election date
Spring 2027

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	-	-
S&P	-	-

Saarland

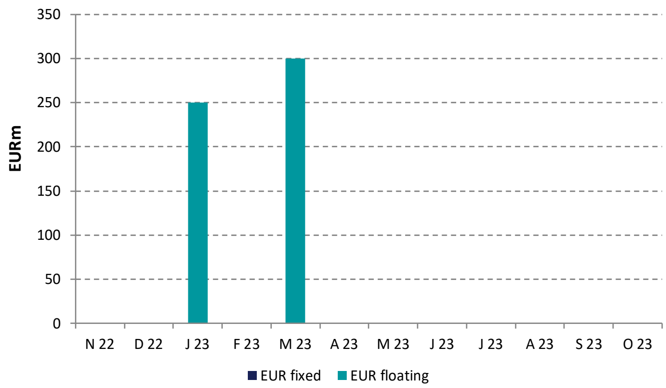
Covering an area of just 2,571 km^2, Saarland is the smallest of all the Laender (excluding the city states). At the same time, its overall population of just under one million people means that it is virtually twice as densely populated as the adjacent Bundesland of Rhineland-Palatinate. Saarland is the youngest of the western German Laender: after the Second World War, Saarland was initially a French protectorate until 1949 and an autonomous region until 1957, before it was incorporated within the Federal Republic of Germany. Saarland has the highest property ownership rate and the most cars per thousand inhabitants. The most important industries in Saarland are the steel, mechanical engineering and vehicle industries, with the first two recording significant sales growth in 2021. The steel industry in particular recorded an increase of +40.5% as a result of a global boom in demand. The mechanical engineering industry recorded growth of +24.2%, likewise driven by increased demand. The Bundesland's third core industry – the vehicle industry – actually recorded a sales decline from what was already a rather low level, amounting to -3.3% overall. According to a forecast from the German Association of the Automotive Industry (VDA), just 2.9 million vehicles were manufactured in Germany in 2021 – the lowest number since 1975. This decline also represents a challenge for the automotive supplier industry in Saarland. GDP in Saarland rose last year by EUR 1.5bn to EUR 35.6bn, while a positive budget balance was also attained. The budget balance per capita was higher in 2021 than at any point in the past decade. Following a marginally negative result in the prior year, the budget balance per capita amounted to EUR 193. After Rhineland-Palatinate and Hesse, this is the third best value for this metric in a comparison of the Laender. Aside from the three city states, Saarland has the highest per capita debt level of EUR 13,742. In terms of key budget metrics such as tax-interest coverage, the ratio of total revenue to interest paid and real GDP growth, Saarland again ranks towards the bottom of the Laender table. At 6.8%, unemployment is slightly higher than the national average of 6.4%.

Overall maturity profile

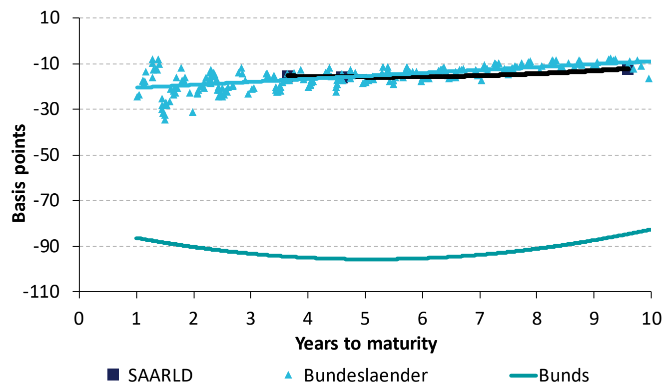


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR floating	0	550	0	300	300	0	0	125	0	0	0	0
EUR fixed	0	0	0	0	500	550	0	0	250	0	500	850

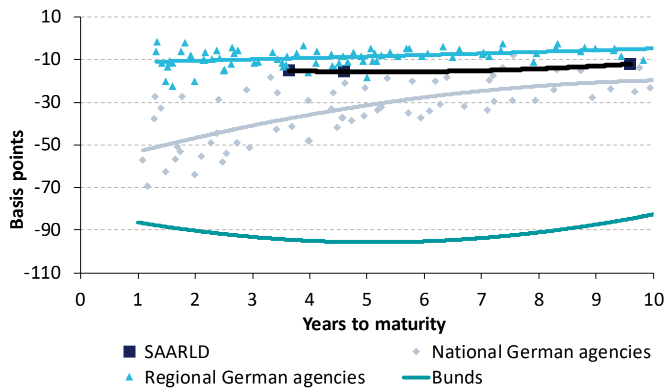
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

Capital market

Debt level* (ranking)**

EUR 13.5bn (3rd)

Outstanding bonds

EUR 3.9bn

ESG volume

EUR 0.0bn

Bloomberg ticker

SAARLD

Economy 2021

GDP (ranking)

EUR 35.6bn (15th)

GDP per capita (ranking)

EUR 36,242 (10th)

Real GDP growth (ranking)

1.4% (15th)

Unemployment (ranking)

6.8% (10th)

Key figures 2021

Tax-interest coverage (ranking)

14.0x (15th)

Total revenue/interest paid (ranking)

19.5x (15th)

Debt/GDP (ranking)

38.0% (15th)

Debt/revenue (ranking)

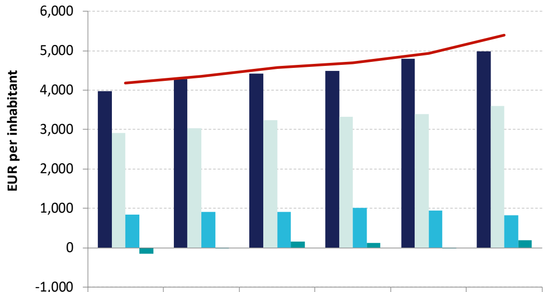
2.8x (15th)

* As reported at the end of the previous year.

**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.

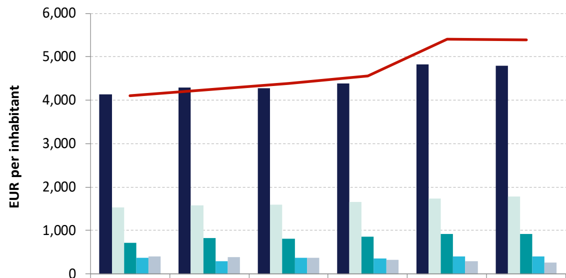
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



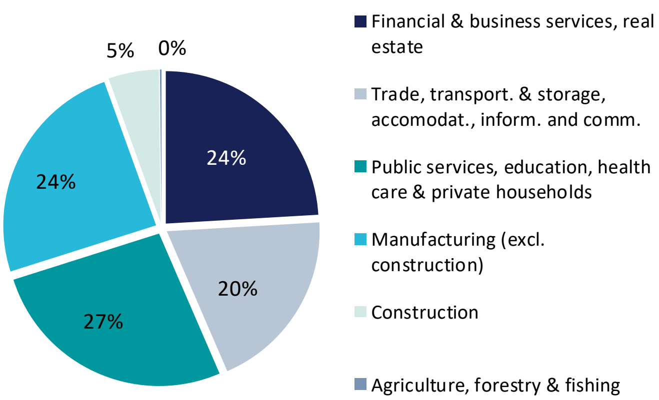
	2016	2017	2018	2019	2020	2021
Operating revenue	3,982	4,279	4,423	4,497	4,805	4,993
Tax revenue	2,921	3,040	3,233	3,331	3,395	3,598
Equalisation mechanism (net)	837	916	913	1,014	936	827
Deficit/surplus	-151	-12	147	119	-24	193
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

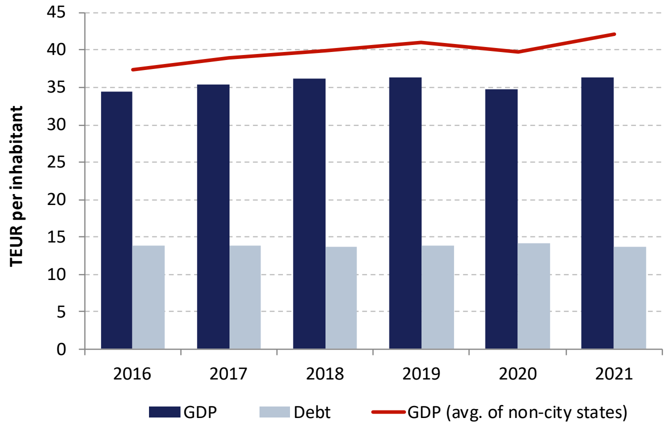


	2016	2017	2018	2019	2020	2021
Operating expense	4,133	4,291	4,277	4,378	4,829	4,800
Staff expenditure	1,525	1,578	1,598	1,656	1,726	1,778
Grants to municipals	718	820	802	850	926	915
Capital expenditure	363	291	377	356	404	397
Interest expense	394	379	365	320	292	256
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Improved budgetary performance
+ Manufacturing industries as key pillar of the economy

Weaknesses

– Long history of budget deficits
– High-level dependency on industrial sector
– Below-average debt sustainability and interest coverage

Saxony

Covering an area of 18,449 km^2 and with a population of just over 4.0m inhabitants, Saxony is the most densely populated of the East German Laender with the exception of the city state of Berlin. Since it was established on 3 October 1990, the Free State of Saxony has also been the strongest of the new Bundeslaender in an economic sense. Saxony's three most important economic sectors are public and private sector services (I), manufacturing industries (II) as well as finance, rental and corporate services (III). The latter sector has become increasingly important in recent decades. Since reunification, a large number of companies from various economic sectors have settled in Saxony. Particularly companies from the microelectronics and electro-technology sectors as well as the mechanical engineering and automotive industries have relocated to Saxony. In order to consolidate this trend, Saxony is pursuing an innovation strategy aimed at transforming the Bundesland into one of Europe's leading scientific and economic regions by 2030. In order to achieve this goal, Saxony is in the process of implementing measures intended to improve the innovative capacity and competitiveness of SMEs in particular. Saxony also has one of the highest investment ratios and additionally boasts a relatively well-educated population. The conurbations of Leipzig-Halle and Chemnitz-Zwickau represent the driving force of Saxony's economy. In economic terms, the Greater Dresden area is the strongest region in Saxony as measured by GDP. In 2021, the economy in Saxony generated GDP of EUR 134.5bn, which equated to 3.8% of total economic output across Germany as a whole. Traditionally, Saxony has been and remains to this day one of the largest recipients within the federal financial equalisation system, although at the same time it has also had one of the best budgetary situations too. For example, Saxony can regularly be found topping the Laender tables for various key budget metrics. Saxony enjoys huge financial flexibility as a result of posting the lowest debt level across all Laender. In terms of unemployment and real GDP growth, Saxony is ranked in mid-table in a comparison of the Laender, although at a value of EUR 33,254 its GDP per capita is relatively low (ranked 12th of all Laender).

Bundesland and politics

Link to the Ministry of Finance
Homepage

Number of inhabitants (2021)
4,043,002

State capital
Dresden

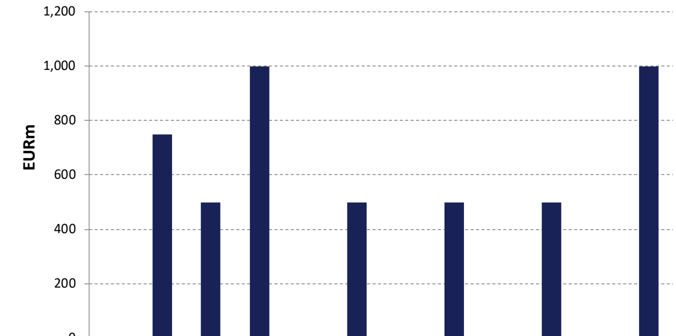
Government
CDU/Greens/SPD

Minister-President
Michael Kretschmer (CDU)

Expected next election date
Summer 2024

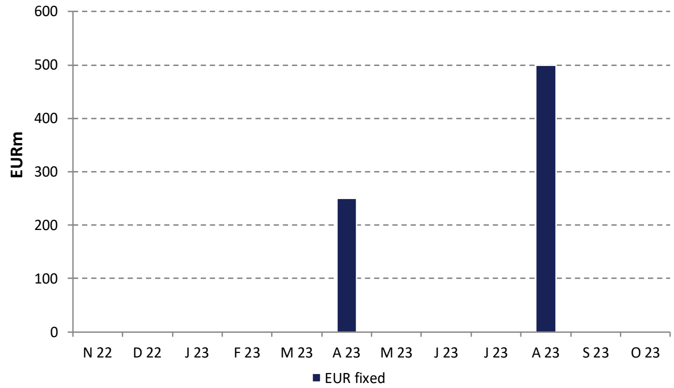
Ratings	Long-term	Outlook
Fitch	-	-
Moody's	-	-
S&P	AAA	neg

Overall maturity profile

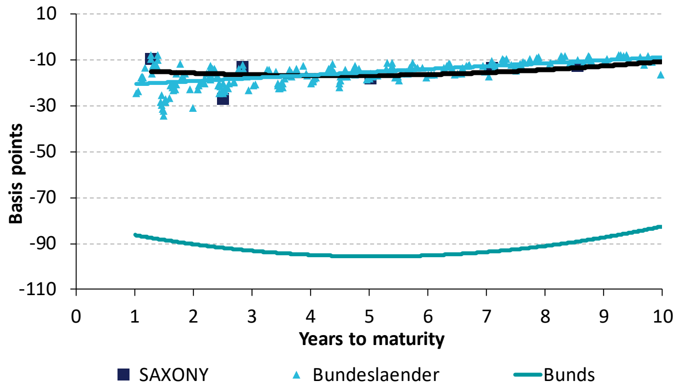


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR fixed	0	750	500	1,000	0	500	0	500	0	500	0	1,000

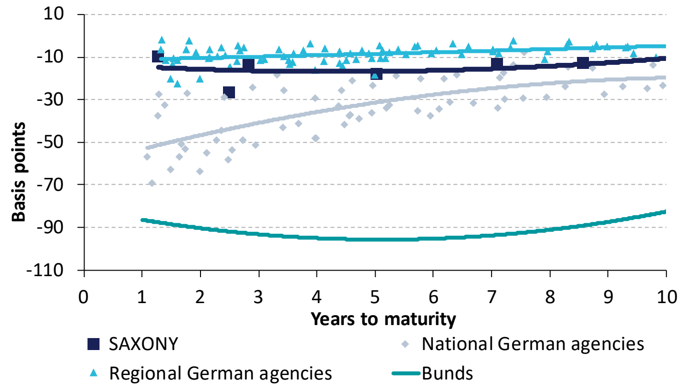
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

Capital market

Debt level* (ranking)**
EUR 4.3bn (1st)

Outstanding bonds
EUR 4.8bn

ESG volume
EUR 0.0bn

Bloomberg ticker
SAXONY

Economy 2021

GDP (ranking)
EUR 134.5bn (8th)

GDP per capita (ranking)
EUR 33,254 (12th)

Real GDP growth (ranking)
2.5% (7th)

Unemployment (ranking)
5.9% (8th)

Key figures 2021

Tax-interest coverage (ranking)
186.6x (1st)

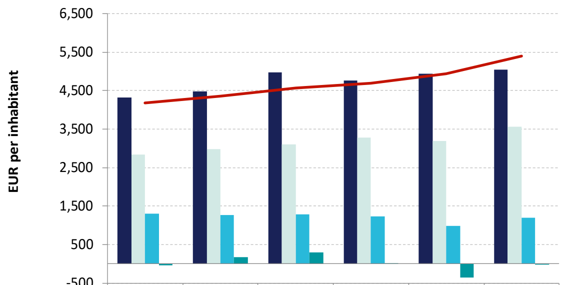
Total revenue/interest paid (ranking)
264.1x (1st)

Debt/GDP (ranking)
3.2% (2nd)

Debt/revenue (ranking)
0.2x (1st)

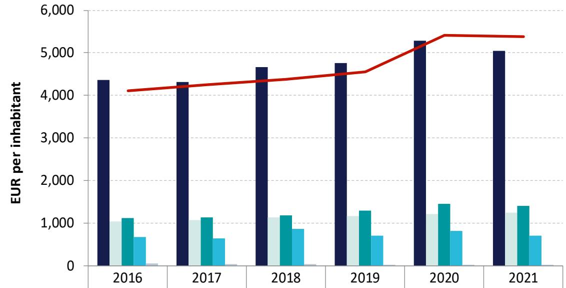
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



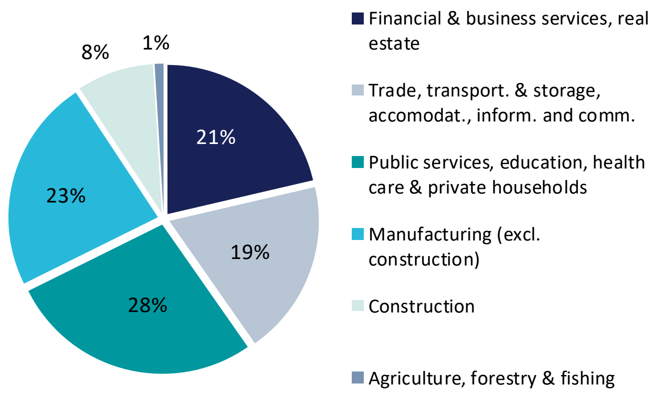
	2016	2017	2018	2019	2020	2021
Operating revenue	4,322	4,475	4,970	4,761	4,936	5,050
Tax revenue	2,833	2,980	3,108	3,282	3,199	3,567
Equalisation mechanism (net)	1,313	1,277	1,281	1,236	984	1,195
Deficit/surplus	-35	167	307	0	-351	-2
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

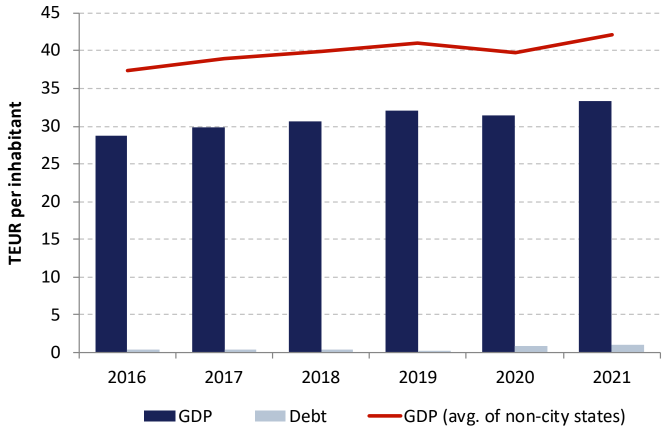


	2016	2017	2018	2019	2020	2021
Operating expense	4,356	4,308	4,663	4,760	5,287	5,052
Staff expenditure	1,043	1,067	1,130	1,169	1,220	1,250
Grants to municipals	1,112	1,141	1,187	1,289	1,452	1,407
Capital expenditure	682	636	864	709	811	711
Interest expense	47	43	39	30	19	19
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Healthy debt sustainability and interest coverage
+ Low absolute debt
+ Well-diversified economy
+ Highly attractive urban centres

Weaknesses

– Economic output and tax revenues below average in per capita terms
– Demographic trend as a risk factor

Bundesland and politics

Link to the Ministry of Finance

[Homepage]

Number of inhabitants (2021)

2,169,253

State capital

Magdeburg

Government

CDU/SPD/FDP

Minister-President

Reiner Haseloff (CDU)

Expected next election date

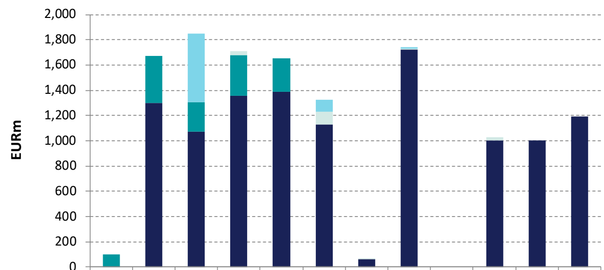
Summer 2026

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	Aa1	stab
S&P	AA	stab

Saxony-Anhalt

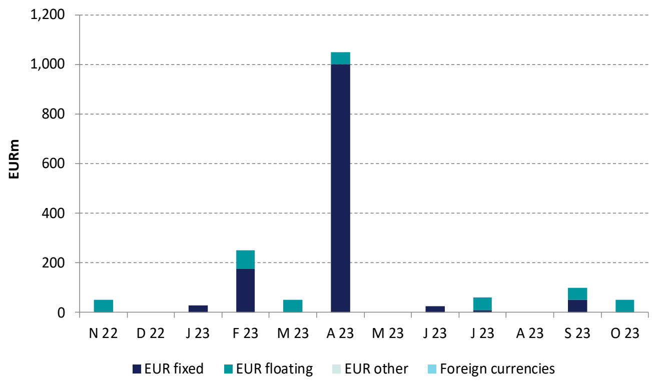
With a population of just under 2.2m people living across an area of 20,459 km^2, Saxony-Anhalt has the third-lowest population density of all Bundeslaender. As is the case with the other new Laender, Saxony-Anhalt came into existence on 3 October 1990. Key sectors of the economy include manufacturing industries, transport and services in particular. According to the information presented in our NORD/LB Regional Economy report, around 80% of employees at the 100 largest companies in Saxony-Anhalt (according to employee numbers) operate in these three economic sectors. The Bundesland's manufacturing industries are dominated by the chemicals sector, the food industry, mechanical engineering and metalwork. Most of the 100 largest companies are based in the region between Wernigerode, Magdeburg and Halle. In addition to the economic sectors mentioned above, agriculture also plays a comparatively important role. In addition to the traditional industries, the service sector and new sectors such as biotechnology, information and communication technologies, renewable resources, wind energy and photovoltaics have become established as key economic pillars. The relative structural weakness of this sparsely populated sub-sovereign has been countered since the reunification of Germany through the massive expansion of infrastructure in particular. In this regard, the industrial port at Magdeburg will be connected to the European waterway network by 2023 at a cost of EUR 40m. It is also committed to developing scientific infrastructure in the areas of engineering, environmental and life sciences. In spring 2022, the chip manufacturer Intel announced plans to construct a factory in Magdeburg. Construction is expected to begin in 2023, with around 10,000 jobs created here. This is the largest investment in Saxony-Anhalt for many decades. In 2021, 1.9% of total German economic output was generated in Saxony-Anhalt. As is the case with the other new Bundeslaender, Saxony-Anhalt has been particularly affected by the issue of demographic change: the proportion of over 65s is higher in Saxony-Anhalt than anywhere else in Germany, while at the same time the proportion of those aged 6 and under is the lowest in a comparison of the Laender. Since its inception, Saxony-Anhalt was at all times a net recipient within the federal financial equalisation system.

Overall maturity profile

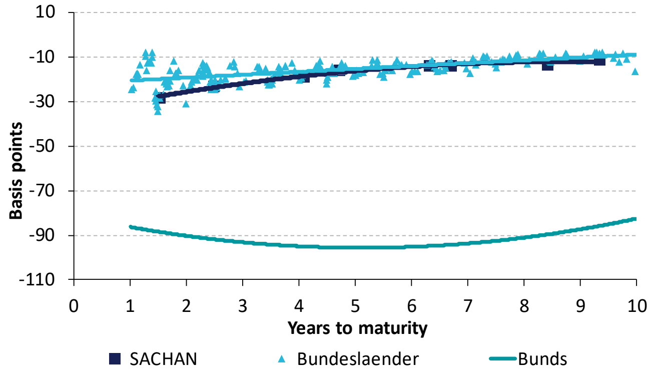


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
Foreign currencies	0	0	545	0	0	95	0	10	0	0	0	0
EUR other	0	0	0	30	0	102	10	10	0	30	0	0
EUR floating	100	375	230	325	270	0	0	0	0	0	0	0
EUR fixed	0	1,300	1,075	1,355	1,385	1,130	60	1,720	0	1,000	1,000	1,195

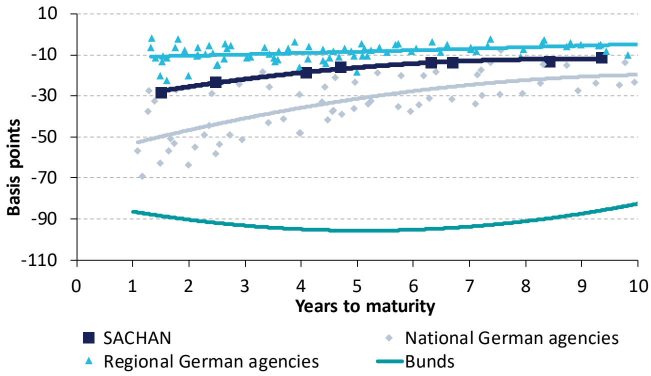
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market

Debt level* (ranking)**
EUR 21.9bn (7th)

Outstanding bonds
EUR 13.4bn

ESG volume
EUR 0.0bn

Bloomberg ticker
SACHAN

Economy 2021

GDP (ranking)
EUR 67.1bn (12th)

GDP per capita (ranking)
EUR 30,890 (15th)

Real GDP growth (ranking)
2.1% (10th)

Unemployment (ranking)
7.3% (11th)

Key figures 2021

Tax-interest coverage (ranking)
23.2x (13th)

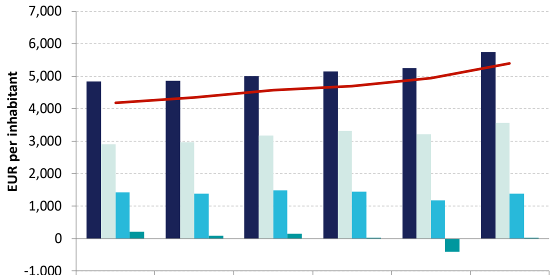
Total revenue/interest paid (ranking)
37.4x (13th)

Debt/GDP (ranking)
32.6% (13th)

Debt/revenue (ranking)
1.8x (13th)

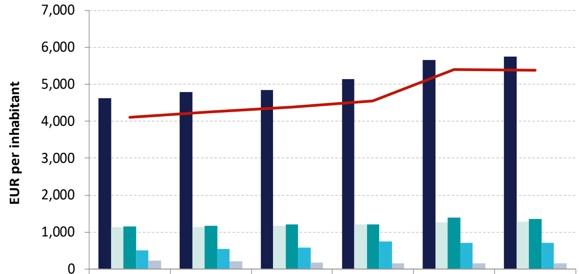
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



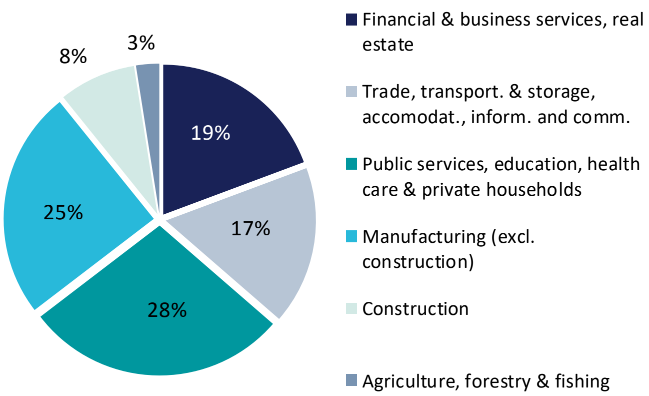
	2016	2017	2018	2019	2020	2021
Operating revenue	4,835	4,869	4,996	5,155	5,253	5,746
Tax revenue	2,905	2,966	3,173	3,318	3,217	3,563
Equalisation mechanism (net)	1,421	1,388	1,477	1,442	1,175	1,386
Deficit/surplus	207	83	142	20	-411	2
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

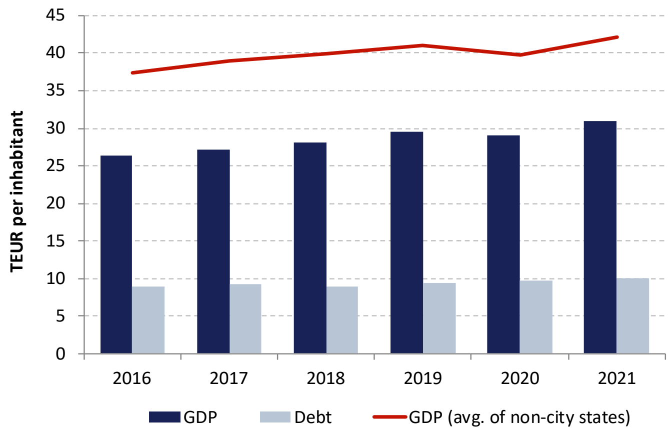


	2016	2017	2018	2019	2020	2021
Operating expense	4,627	4,786	4,854	5,135	5,664	5,744
Staff expenditure	1,136	1,140	1,165	1,201	1,257	1,278
Grants to municipals	1,145	1,165	1,210	1,216	1,391	1,357
Capital expenditure	503	549	579	752	715	716
Interest expense	228	203	166	164	150	154
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Very solid budget development
+ Manufacturing industries prominent
+ Low personnel expenses and pension liabilities

Weaknesses

– Above-average debt per capita
– Below-average economic output in per capita terms
– Demographic trend as a risk factor
– Below-average debt sustainability

Bundesland and politics

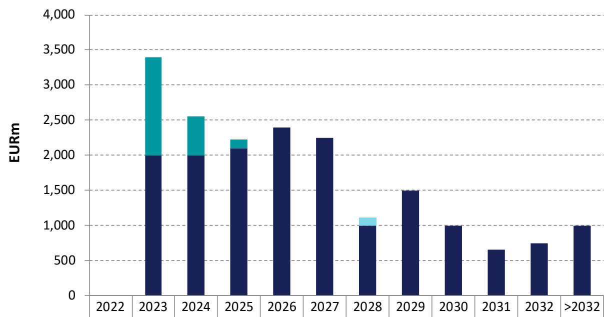
Link to the Ministry of Finance
Homepage
Number of inhabitants (2021)
2,922,005
State capital
Kiel
Government
CDU/Greens
Minister-President
Daniel Günther (CDU)
Expected next election date
Spring 2027

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	-	-
S&P	-	-

Schleswig-Holstein

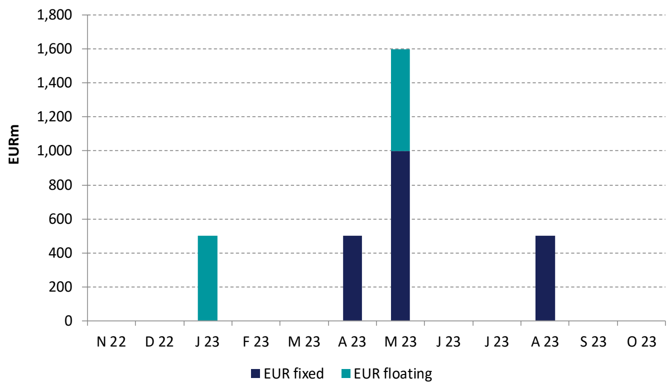
Covering a total area of 15,804 km^2, Schleswig-Holstein is the smallest non-city state in Germany with the exception of Saarland. Founded on 23 August 1946, Schleswig-Holstein was the first Bundesland to ratify its own state constitution after the promulgation of the Basic Law. Tourism is of crucial importance to its economy, with the proportion of GDP attributable to the tourism sector very high compared with the overall German average. Prior to the Covid-19 pandemic, around three quarters of gross value added was generated via the service sector, slightly above the national average. Schleswig-Holstein's economic development activities are concentrated, in particular, on the food industry, information technology, telecommunications and media, life sciences, logistics, aviation in addition to microtechnology and nanotechnology. Traditionally, fishing has also been an important area of the economy. Schleswig-Holstein accounts for approximately two thirds of the Germany fishery sector. Its location between the North Sea and the Baltic Sea means that attention is also focused on the maritime economy, tourism and the renewable energies sector. The latter is an essential element of the Bundesland's future economic planning. For example, Schleswig-Holstein has ambitions of becoming an exporter of green energy. In 2020, the Bundesland was already obtaining just under 175% of its gross electricity consumption from "green" sources. The state government has underlined these ambitions to become a more sustainable energy economy by recently adopting the Energy Transformation and Climate Protection Law, which supplements existing efforts in the area of wind power with an expansion of photovoltaic facilities and plans to establish municipal heating networks. Schleswig-Holstein is striving to cut greenhouse gas emissions by at least 65% by 2030 in comparison with the levels recorded in 1990, and by at least 88% by 2040, before achieving carbon-neutrality by 2045. In 2021, Schleswig-Holstein generated GDP of EUR 104.5bn, which equates to roughly 2.9% of total economic output across Germany. Following a deficit in the prior year, a cash surplus was generated again for the 2021 budget year. At 5.6%, unemployment in Schleswig-Holstein is below the national average.

Overall maturity profile

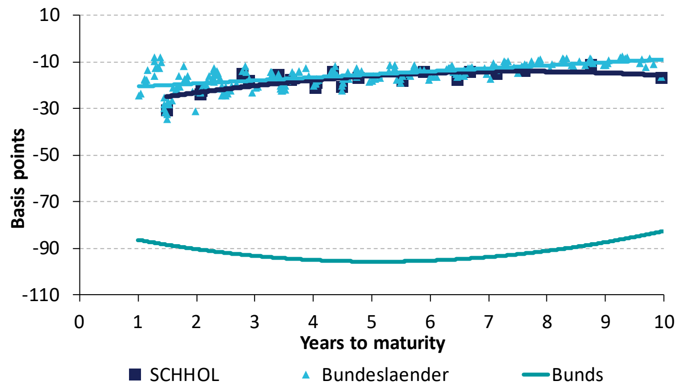


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
Foreign currencies	0	0	0	0	0	0	110	0	0	0	0	0
EUR floating	0	1,400	550	125	0	0	0	0	0	0	0	0
EUR fixed	0	2,000	2,000	2,100	2,400	2,250	1,000	1,500	1,000	650	750	1,000

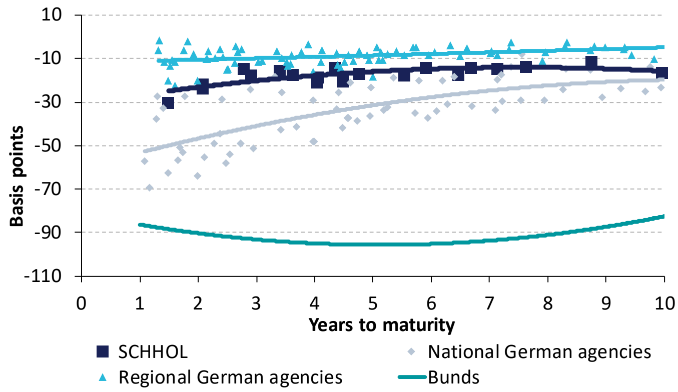
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Capital market

Debt level* (ranking)**

EUR 31.0bn (10th)

Outstanding bonds

EUR 18.8bn

ESG volume

EUR 0.0bn

Bloomberg ticker

SCHHOL

Economy 2021

GDP (ranking)

EUR 104.5bn (10th)

GDP per capita (ranking)

EUR 35,854 (11th)

Real GDP growth (ranking)

2.2% (8th)

Unemployment (ranking)

5.6% (6th)

Key figures 2021

Tax-interest coverage (ranking)

32.6x (9th)

Total revenue/interest paid (ranking)

46.7x (9th)

Debt/GDP (ranking)

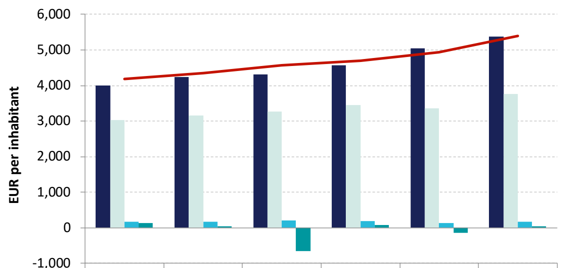
29.7% (12th)

Debt/revenue (ranking)

2.0x (14th)

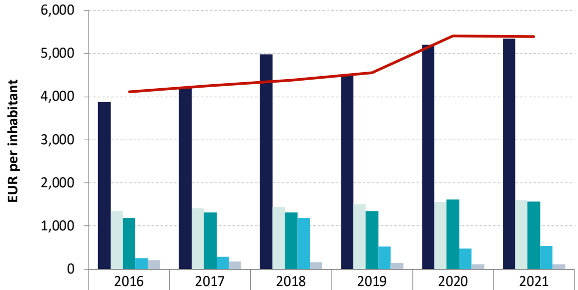
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



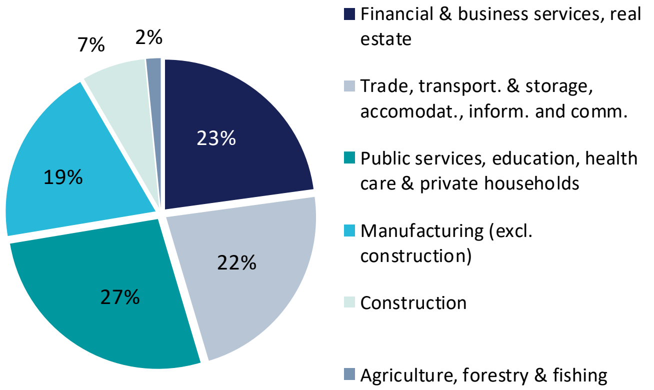
	2016	2017	2018	2019	2020	2021
Operating revenue	4,006	4,241	4,313	4,565	5,052	5,381
Tax revenue	3,034	3,150	3,262	3,449	3,354	3,753
Equalisation mechanism (net)	174	160	204	185	128	172
Deficit/surplus	133	43	-662	82	-147	45
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

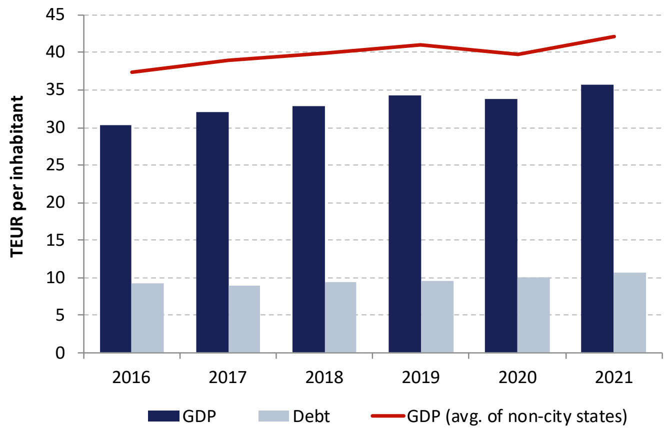


	2016	2017	2018	2019	2020	2021
Operating expense	3,872	4,198	4,974	4,484	5,199	5,336
Staff expenditure	1,349	1,408	1,432	1,495	1,547	1,592
Grants to municipals	1,189	1,306	1,305	1,346	1,614	1,569
Capital expenditure	254	280	1,192	517	477	534
Interest expense	205	171	159	142	112	115
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



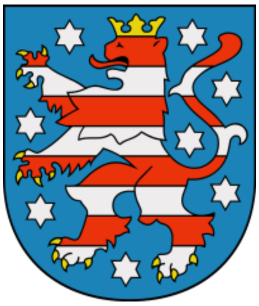
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Solid budget performance
+ High growth in real GDP
+ Low unemployment rate

Weaknesses

– Below-average debt sustainability and interest coverage
– High level of pension commitments
– Below-average economic output in per capita terms
– Above-average debt per capita



Bundesland and politics

Link to the Ministry of Finance

[Homepage]

Number of inhabitants (2021)

2,108,863

State capital

Erfurt

Government

The Left/SPD/Greens

Minister-President

Bodo Ramelow (The Left)

Expected next election date

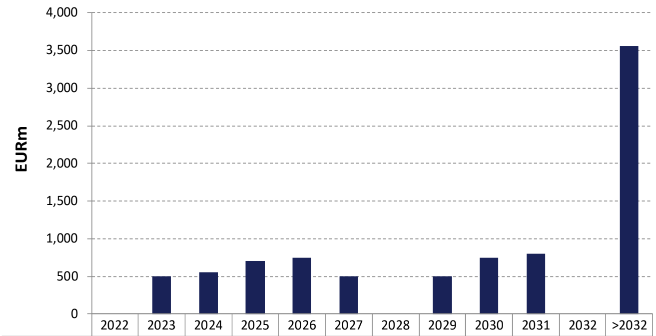
Autumn 2024

Ratings	Long-term	Outlook
Fitch	AAA	stab
Moody's	-	-
S&P	-	-

Thuringia

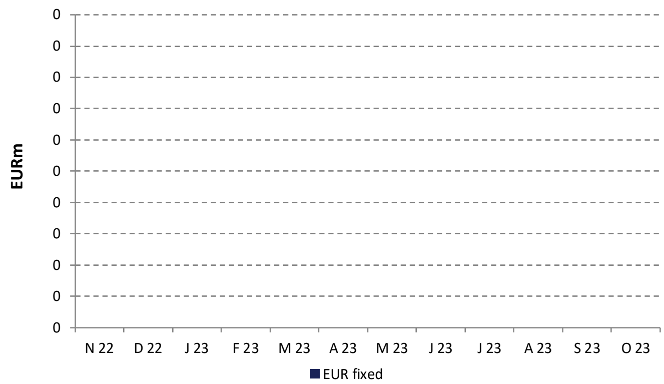
At 16,202 km^2, the Free State of Thuringia is the smallest of the eastern German Laender (excluding the city state of Berlin) in terms of area. With a population of around 2.1m people, only the Free State of Saxony is more densely populated among the non-city state Laender in the east of Germany. The economy of Thuringia, which was established in 1990, is dominated by manufacturing industries in particular, which account for a greater proportion of gross value added than in any other eastern German sub-sovereign. Including the construction sector, which accounts for a higher share of gross value added in only three other Laender, manufacturing industries are responsible for nearly one third of the gross value added generated. A large part of its economic output is attributable to the region around the chain of cities extending from Erfurt to Jena via Weimar in particular. The automotive and mechanical engineering sectors as well as the optical and medical technology sectors are of particular significance here. The economy is also distinguished by relatively high capacity for innovation. Within Thuringia, a discrepancy between the planning region in the south-west and the rest of the sub-sovereign has become apparent in recent years. This planning region is increasingly developing into the economic and growth engine. Investments are also being made in the education and research centres of Thuringia, with a particular focus in this regard on Jena, Erfurt and Ilmenau with its University of Technology. In the Education Monitor 2021, Thuringia was ranked in fourth place behind Saxony, Bavaria and Berlin, having been regularly ranked in the top three for several years. However, in fundamental terms, this continues to represent a good basis from which the Land can strive to counteract a lack of skilled workers and confront demographic trends, factors which also represent a major challenge. In terms of future aims, Thuringia envisages catching up with the elite group of non-city states in the area of digital infrastructure within the next decade. By 2025, convergent gigabit networks should be available in every community. At 5.6%, Thuringia has the lowest unemployment rate among the eastern Laender. It was at all times a net recipient since its inclusion in the federal financial equalisation system. At EUR 65.5bn, its GDP accounts for around 1.8% of the national economic output.

Overall maturity profile

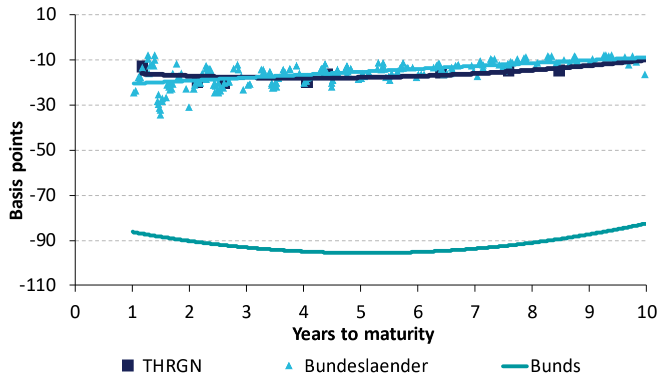


	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR floating	0	0	0	0	0	0	0	0	0	0	0	0
EUR fixed	0	500	550	700	750	500	0	500	750	800	0	3,565

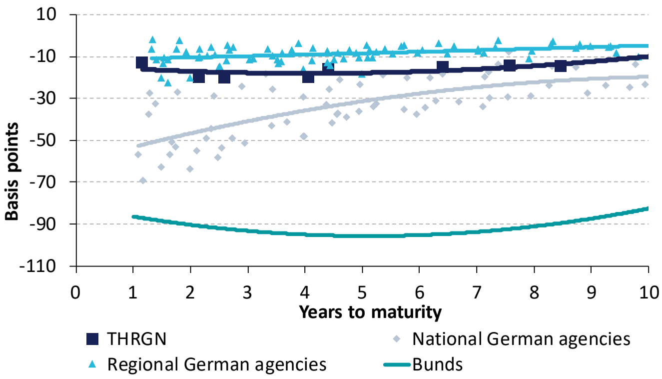
Bond amounts maturing in the next 12 months



ASW spreads vs. Bunds & peers



ASW spreads vs. German agencies



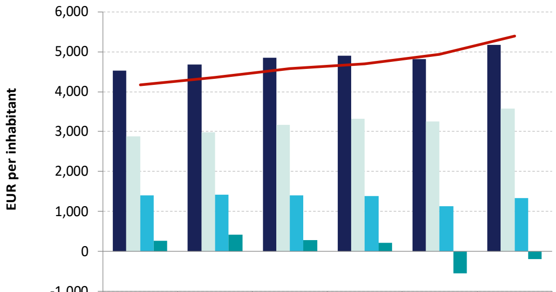
NB: Foreign currencies are converted into EUR at rates as at 05 October 2022; Residual term to maturity > 1 year and < 10 years; outstanding volume at least EUR 0.5bn.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

Capital market	Economy 2021	Key figures 2021
Debt level* (ranking)**	**GDP (ranking)**	**Tax-interest coverage (ranking)**
EUR 16.1bn (4th)	EUR 65.5bn (13th)	27.6x (11th)
Outstanding bonds	**GDP per capita (ranking)**	**Total revenue/interest paid (ranking)**
EUR 8.6bn	EUR 30,988 (14th)	39.8x (11th)
ESG volume	**Real GDP growth (ranking)**	**Debt/GDP (ranking)**
EUR 0.0bn	2.0% (11th)	24.6% (11th)
Bloomberg ticker	**Unemployment (ranking)**	**Debt/revenue (ranking)**
THRGN	5.6% (6th)	1.5x (9th)

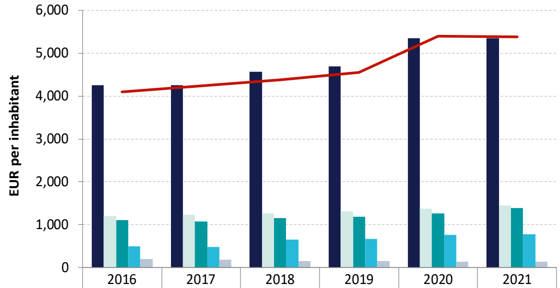
* As reported at the end of the previous year.
**Ranking of the Bundesland among the Laender for the respective key figure, where 1 is the best figure in the comparison of the Laender.
Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Development of revenue in EUR per capita



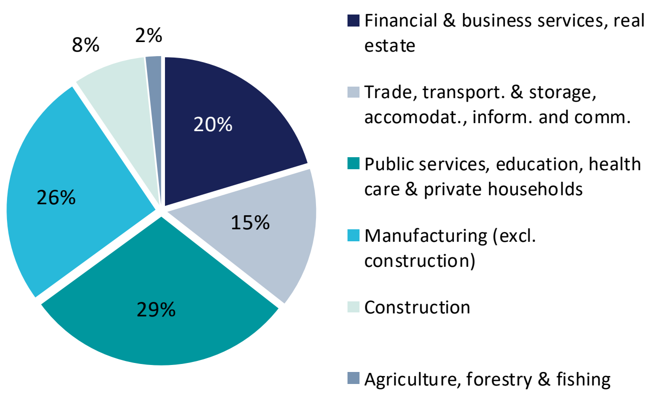
	2016	2017	2018	2019	2020	2021
Operating revenue	4,528	4,674	4,852	4,909	4,808	5,172
Tax revenue	2,881	2,987	3,175	3,320	3,258	3,580
Equalisation mechanism (net)	1,411	1,417	1,410	1,381	1,139	1,340
Deficit/surplus	274	425	291	210	-550	-185
Ø of operating revenues (non-city states)	4,178	4,357	4,572	4,699	4,940	5,401

Development of expenditure in EUR per capita

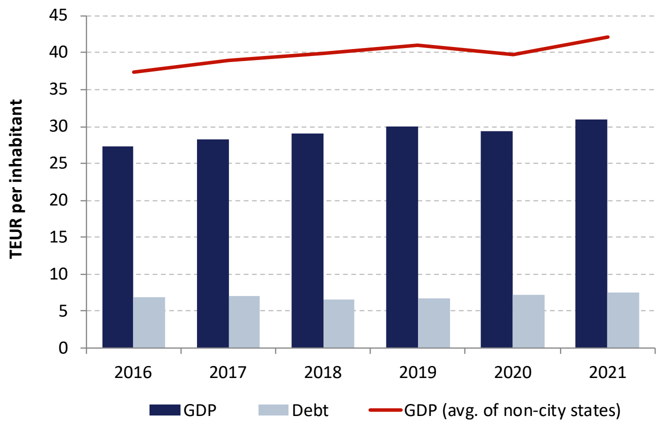


	2016	2017	2018	2019	2020	2021
Operating expense	4,254	4,249	4,561	4,699	5,359	5,356
Staff expenditure	1,192	1,225	1,257	1,312	1,374	1,455
Grants to municipals	1,107	1,083	1,160	1,191	1,269	1,393
Capital expenditure	490	483	652	672	764	775
Interest expense	201	179	155	147	136	130
Ø of operating expenses (non-city states)	4,104	4,246	4,385	4,558	5,407	5,385

Gross value added by economic sector



Trend in GDP and total debt



Source: Federal Statistical Office, Federal Ministry of Finance, national accounts produced by the Laender, NORD/LB Markets Strategy & Floor Research

Strengths

+ Solid budget performance
+ Manufacturing industries prominent
+ Low level of pension liabilities

Weaknesses

– Below-average economic output in per capita terms
– Demographic trend as a risk factor
– Increasing discrepancy between urban and rural areas

Link to bond overview

[Homepage]

Ratings

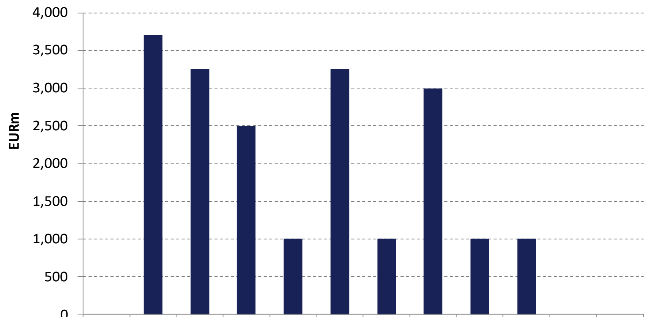
	Long-term	Outlook
Fitch	AAA*	-
Moody's	-	-
S&P	-	-

*** Issuer ratings not available. However, Fitch awards a rating for each individual bond.**

Gemeinschaft deutscher Laender (Joint Laender)

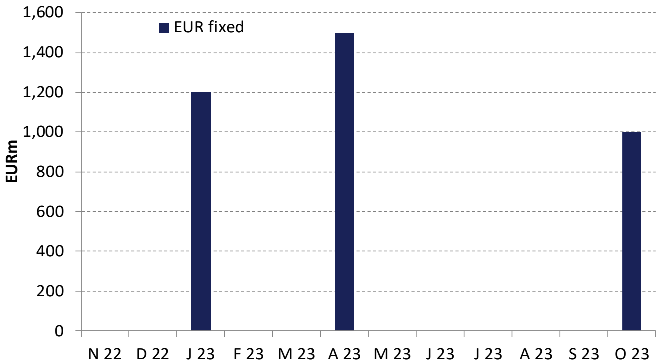
An idiosyncrasy of the bond market in general, and one specific to the German sub-sovereign market, is the Gemeinschaft deutscher Laender issuance vehicle. Within this framework, several Laender issue joint bonds (known as “Laender jumbos”; issuance volumes starting from EUR 1bn), whereby each Bundesland assumes several (but not joint) liability for the issuance overall. As a result, joint and several liability structures do not exist for such deals. The first time that several Bundeslaender grouped together to issue a joint bond of this nature was in 1996. Since then, the Gemeinschaft deutscher Laender has become an established issuer on the bond market, with several Bundeslaender joining forces to place joint bonds on a semi-regular basis (mostly twice per year). The large-volume Laender jumbos enable these Laender, which – prior to the pandemic in particular – otherwise had or continue to have comparatively low refinancing requirements, to generate economies of scale that are reflected in lower interest expenses. An unchanged total of eight Laender participates in the bond issuances currently in circulation. While Saxony-Anhalt, Hesse and NRW ceased to use Laender jumbos as a funding instrument after the first issuance in 1996, with Berlin subsequently opting not to participate in the joint issuing vehicle since 2002, the following Bundeslaender have at times made use of Laender jumbos as key funding instruments: BRABUR, BREMEN, HAMBRG, MECVOR, RHIPAL, SAARLD, SCHHOL and THRGN. In fact, these Laender have raised substantial amounts of their funding volume via bonds from the joint issuing body currently in circulation. As a result of the particular structure of the Gemeinschaft deutscher Laender, there is no issuer rating. Instead, the rating agency Fitch rates each individual issuance in order to take account of the differing participation structures (several – but not joint – liability basis). However, this does not lead to any differences: since series No. 11, Fitch has awarded a rating of AAA to all Laender jumbos. As justification for the rating, Fitch cites the system comprising the principle of federal loyalty and the new system of federal financial equalisation payments (VAT distribution calculated on a per capita basis in full), in which it generally sees an exceptionally low default risk (AAA). In total, the Gemeinschaft deutscher Laender issuance vehicle accounts for an outstanding volume of EUR 19.7bn split across 18 separate bond deals, making it an important player within the German Bundeslaender bond market. The outstanding volume is EUR-denominated in full and features a fixed coupon. Other instruments such as Schuldscheindarlehen (SSD) are not jointly issued. Having issued a Laender jumbo in the form of a floating rate note (FRN; floater) in 2008, Joint Laender have subsequently refrained from using this instrument for joint refinancing. Here, too, the coupon has long since been in the region of between 0.0% and 0.01%. The first year in which a zero preceded the decimal point was 2015. There have now been 62 separate bond deals issued by the Joint Laender. At present, the longest outstanding bond is set to fall due in February 2031 (No. 60), while the largest bonds (No. 47 and No. 50) comprise a volume of EUR 1.5bn.

Overall maturity profile



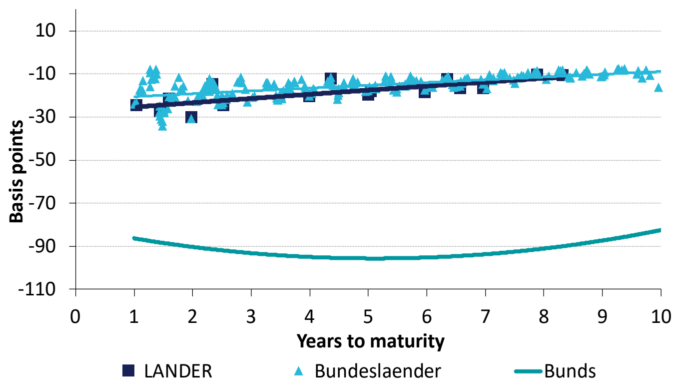
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	>2032
EUR fixed	0	3,700	3,250	2,500	1,000	3,250	1,000	3,000	1,000	1,000	0	0

Bond amounts maturing in the next 12 months

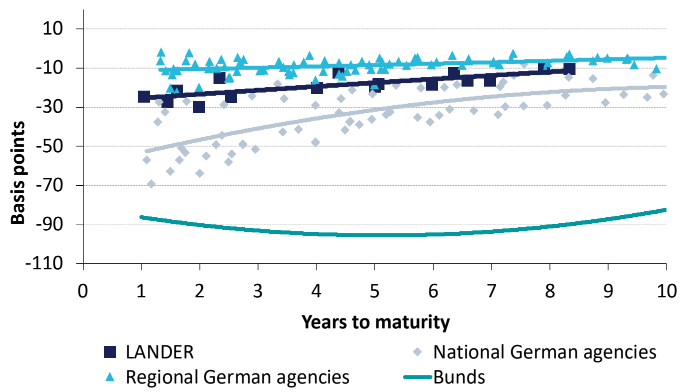


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

ASW spreads vs. Bunds & peers

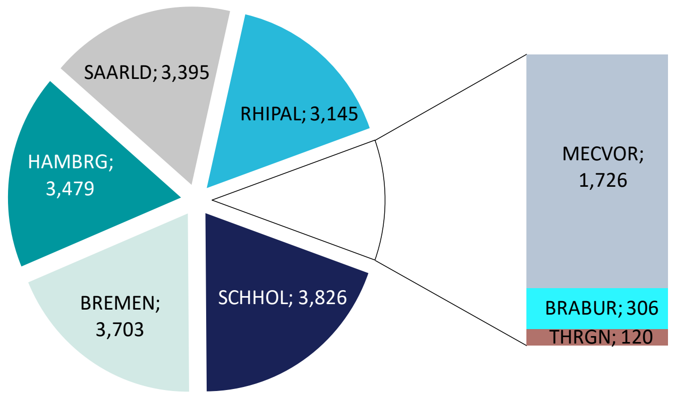


ASW spreads vs. German agencies

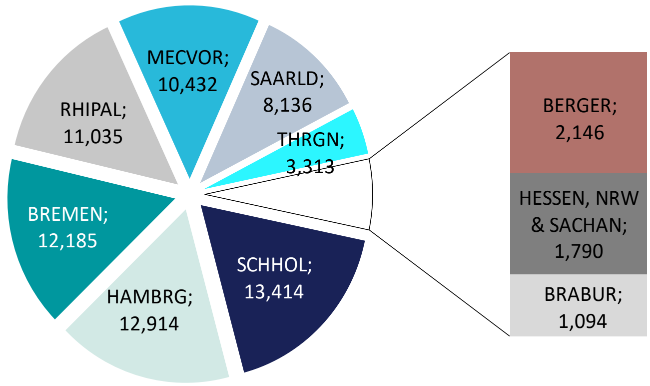


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Share of current outstanding volume attributable to the Bundeslaender (EURbn)



Cumulative share of total volume issued since 1996 (EURbn)



Source: Ministry of Finance of Rhineland-Palatinate, NORD/LB Markets Strategy & Floor Research

Strengths

+ Includes smaller issuers
+ More liquid bond volumes

Weaknesses

– Participants are primarily Bundeslaender with budgetary problems, high-level dependency on the federal financial equalisation system and/or below-average economic output
– Complex structure
– Several (but not joint) liability

NORD/LB

Appendix

Overview by debt level, Kassenkredite and non-public sector loans* in addition to outstanding bond volumes

Issuer	Ticker	Official debt level** (EUR bn)	Of which outstanding Kassenkredite** (EUR bn)	Of which outstanding loans** (EUR bn)	Outstanding bond volumes (EUR bn)	Number of benchmark bonds
Baden-Wuerttemberg	BADWUR	38.0	-	16.1	19.8	19
Bavaria	BAYERN	19.8	-	9.6	10.2	9
Berlin	BERGER	59.6	-	14.9	46.9	41
Brandenburg	BRABUR	17.8	0.4	3.5	13.5	18
Bremen	BREMEN	36.0	13.9	5.9	13.4	22
Hamburg	HAMBRG	25.4	0.0	5.8	14.6	18
Hesse	HESSEN	40.4	0.3	8.2	32.1	31
Mecklenburg-Western Pomerania	MECVOR	8.5	-	4.5	2.2	3
Lower Saxony	NIESA	61.6	0.2	12.5	49.5	42
North Rhine-Westphalia	NRW	158.6	0.9	32.9	128.8	53
Rhineland-Palatinate	RHIPAL	28.5	0.1	5.6	21.8	22
Saarland	SAARLD	13.5	0.1	6.2	3.9	4
Saxony	SAXONY	4.3	0.7	0.9	4.8	9
Saxony-Anhalt	SACHAN	21.9	-	9.0	13.4	10
Schleswig-Holstein	SCHHOL	31.0	0.1	7.3	18.8	27
Thuringia	THRGN	16.1	0.6	7.1	8.6	14
Joint Laender	LANDER	-	-	-	19.7	18
Bund-Laender bond	BULABO	-	-	-	Fell due: 15 July 2020	0
Sum total	**-**	**581.0**	**17.3**	**150.0**	**422.1**	**360**

* Excludes supplementary budgets
** As reported at the end of the previous year
Source: Bloomberg, issuers, Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

Appendix

Ratings overview

Issuer (Bloomberg ticker)	Fitch		Moody's		S&P	
	Rating	Outlook	Rating	Outlook	Rating	Outlook
BW (BADWUR)	-	-	Aaa	stab	AA+	stab
BY (BAYERN)	-	-	Aaa	stab	AAA	stab
BE (BERGER)	AAA	stab	Aa1	stab	-	-
BB (BRABUR)	-	-	Aaa	neg	-	-
HB (BREMEN)*	AAA	stab	-	-	-	-
HH (HAMBRG)	AAA	stab	-	-	-	-
HE (HESSEN)	-	-	-	-	AA+	stab
MV (MECVOR)*	AAA	stab	-	-	-	-
NI (NIESA)	AAA	stab	-	-	-	-
NW (NRW)	AAA	stab	Aa1	stab	AA	stab
RP (RHIPAL)	AAA	stab	-	-	-	-
SL (SAARLD)	AAA	stab	-	-	-	-
SN (SAXONY)	-	-	-	-	AAA	neg
ST (SACHAN)	AAA	stab	Aa1	stab	AA	stab
SH (SCHHOL)	AAA	stab	-	-	-	-
TH (THRGN)*	AAA	stab	-	-	-	-
Joint Laender (LANDER)**	AAA	-	-	-	-	-

* Ratings for individual bonds (see respective Bundesland profile).
** Ratings for all bonds currently in circulation; no outlook provided.
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Appendix Key figures 2021 – at a glance

Key metrics as at year-end 2021 (EUR m)	Adjusted income	Adjusted expenses	Balance	Debt	GDP	Debt/GDP (in %)	Balance/GDP (in %)
Baden-Wuerttemberg	61,821	60,373	1,447	38,044	536,041	7.10%	0.3%
Bavaria	72,849	71,959	889	19,818	661,541	3.00%	0.1%
Berlin	35,831	36,017	-186	59,644	162,950	36.60%	-0.1%
Brandenburg	13,859	14,667	-808	17,751	78,656	22.57%	-1.0%
Bremen	7,286	7,415	-128	35,966	34,213	105.12%	-0.4%
Hamburg	19,620	19,686	-66	25,386	126,710	20.03%	-0.1%
Hesse	36,705	34,286	2,419	40,406	302,532	13.36%	0.8%
Mecklenburg-Western Pomerania	10,508	10,526	-18	8,452	49,461	17.09%	0.0%
Lower Saxony	36,501	37,924	-1,423	61,639	315,808	19.52%	-0.5%
North Rhine-Westphalia	96,390	99,925	-3,536	158,581	733,257	21.63%	-0.5%
Rhineland-Palatinate	22,985	20,688	2,297	28,514	162,220	17.58%	1.4%
Saarland	4,905	4,715	190	13,534	35,638	37.98%	0.5%
Saxony	20,418	20,424	-6	4,287	134,511	3.19%	0.0%
Saxony-Anhalt	12,464	12,459	5	21,897	67,111	32.63%	0.0%
Schleswig-Holstein	15,725	15,592	133	31,018	104,506	29.68%	0.1%
Thuringia	10,907	11,296	-389	16,095	65,466	24.59%	-0.6%
Total	**478,770**	**477,951**	**818**	**581,032**	**3,570,621**	**16.27%**	**-1.2%**

Source: Federal Ministry of Finance, Federal Statistical Office, NORD/LB Markets Strategy & Floor Research

Appendix Laender budgets 2021

2021 (EUR m)	BW	BY	BE	BB	HB	HH	HE	MV
Adjusted income	**61,821**	**72,849**	**35,831**	**13,859**	**7,286**	**19,620**	**36,705**	**10,508**
Tax income	41,591	50,081	24,653	9,466	4,501	14,066	25,126	5,482
as a % of total income	67.28%	68.75%	68.81%	68.30%	61.78%	71.69%	68.45%	52.17%
BEZ	-	-	1,643	651	382	-	-	759
as a % of total income	-	-	4.59%	4.70	5.24%	-	-	7.22%
Special-need BEZ (SoBEZ)	-	-	59	132	60	-	-	106
as a % of total income	-	-	0.16%	0.95	0.82%	-	-	1.01%
Financial Power Equalisation (FKA)	-	-	3,602	1,370	832	-	-	1,326
as a % of total income	-	-	10.05%	9.88%	11.42%	-	-	12.62%
Total equalisation payments	-	-	5,304	2,153	1,274	-	-	2,191
as a % of total income	-	-	14.80%	15.54%	17.49%	-	-	20.85%
Adjusted expenses	**60,373**	**71,959**	**36,017**	**14,667**	**7,415**	**19,686**	**34,286**	**10,526**
Personnel expenditure	19,136	25,526	10,505	3,273	1,999	5,137	10,940	2,305
in % of total expenditure	31.70%	35.47%	29.17%	22.32%	26.96%	26.10%	31.91%	21.90%
Interest expenditure	1,569	400	1,085	248	595	377	846	166
in % of total expenditure	2.60%	0.56%	3.01%	1.69%	8.03%	1.92%	2.47%	1.58%
Grants to municipalities	16,606	14,665	3	4,819	13	12	8,184	2,785
in % of total expenditure	27.51%	20.38%	0.01%	32.86%	0.18%	0.06%	23.87%	26.46%
Investment expenditure	4,964	8,277	2,915	1,707	814	2,068	2,457	2,007
in % of total expenditure	8.22%	11.50%	8.09%	11.64%	10.98%	10.51%	7.17%	19.07%
Financial Power Equalisation (FKA)	4,015	9,044	-	-	-	230	3,556	-
in % of total expenditure	6.65%	12.57%	-	-	-	1.17%	10.37%	-
Budget balance	1,447	889	-186	-808	-128	-66	2,419	-18
Total debt	38,044	19,818	59,644	17,751	35,966	25,386	40,406	8,452

Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

Appendix Laender budgets 2021 (continued)

2021 (EUR m)	NI	NW	RP	SL	SN	ST	SH	TH
Adjusted income	**36,501**	**96,390**	**22,985**	**4,905**	**20,418**	**12,464**	**15,725**	**10,907**
Tax income	29,140	68,220	16,635	3,534	14,422	7,730	10,966	7,551
as a % of total income	79.84%	70.78%	72.37%	72.06%	70.63%	62.02%	69.74%	69.23%
BEZ	879	-	-	257	1,990	1,180	134	1,143
as a % of total income	2.41%	-	-	5.24%	9.75%	9.47%	0.85%	10.48%
Special-need BEZ (SoBEZ)	-	-	48	66	132	121	66	118
as a % of total income	-	-	0.21%	1.35%	0.65%	0.97%	0.42%	1.08%
Financial Power Equalisation (FKA)	1,911	200	-	514	3,225	1,978	317	1,856
as a % of total income	5.24%	0.21%	-	10.48%	15.80%	15.87%	2.02%	17.02%
Total equalisation payments	2,790	200	48	837	5,347	3,279	517	3,117
as a % of total income	7.64%	0.21%	0.21%	17.06%	26.19%	26.31%	3.29%	28.58%
Adjusted expenses	**37,924**	**99,925**	**20,688**	**4,715**	**20,424**	**12,459**	**15,592**	**11,296**
Personnel expenditure	13,710	28,998	7,300	1,747	5,054	2,773	4,651	3,069
in % of total expenditure	36.15%	29.02%	35.29%	37.04%	24.74%	22.26%	29.83%	27.17%
Interest expenditure	578	1,576	331	252	77	333	337	274
in % of total expenditure	1.52%	1.58%	1.60%	5.34%	0.38%	2.68%	2.16%	2.43%
Grants to municipalities	11,088	26,785	5,836	899	5,688	2,944	4,583	2,937
in % of total expenditure	29.24%	26.80%	28.21%	19.06%	27.85%	23.62%	29.39%	26.00%
Investment expenditure	2,141	8,968	1,145	390	2,873	1,553	1,559	1,634
in % of total expenditure	5.65%	8.97%	5.53%	8.28%	14.07%	12.47%	10.00%	14.47%
Financial Power Equalisation (FKA)	-	-	287	-	-	-	-	-
in % of total expenditure	-	-	1.39%	-	-	-	-	-
Budget balance	-1,423	-3,536	2,297	190	-6	5	133	-389
Total debt	61,639	158,581	28,514	13,534	4,287	21,897	31,018	16,095

Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

Appendix Overview by key economic indicators

Development of nominal GDP (EUR bn)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	414.6	425.4	442.7	463.3	474.9	497.3	516.9	526.4	505.4	536.0	**3**
Bavaria	496.5	511.9	534.1	554.7	577.7	605.8	620.2	643.4	624.4	661.5	**2**
Berlin	109.8	112.9	118.5	124.9	133.2	141.3	150.0	157.5	154.5	163.0	**6**
Brandenburg	58.9	60.5	63.7	65.3	67.5	70.6	72.8	76.2	75.3	78.7	**11**
Bremen	**28.5**	**28.8**	**29.8**	**30.5**	**31.4**	**32.4**	**32.9**	**33.1**	**32.3**	**34.2**	**16**
Hamburg	97.0	101.1	103.4	108.2	110.5	116.6	119.1	124.6	117.9	126.7	**9**
Hesse	238.0	243.5	253.8	260.3	271.2	280.1	286.4	295.4	285.4	302.5	**5**
Mecklenburg-Western Pomerania	36.4	37.6	39.4	40.1	41.1	44.2	44.4	47.7	46.8	49.5	**14**
Lower Saxony	244.8	247.9	259.1	261.4	280.6	287.9	297.7	310.8	301.1	315.8	**4**
North Rhine-Westphalia	**582.7**	**594.4**	**617.5**	**637.3**	**653.4**	**679.0**	**703.3**	**716.5**	**695.1**	**733.3**	**1**
Rhineland-Palatinate	120.5	123.0	127.5	132.9	136.3	140.1	143.3	147.0	143.3	162.2	**7**
Saarland	32.0	31.7	33.3	34.0	34.3	35.3	35.9	35.8	34.1	35.6	**15**
Saxony	101.3	104.1	109.3	113.6	117.2	121.8	125.3	130.5	127.5	134.5	**8**
Saxony-Anhalt	54.1	55.0	56.3	57.4	59.0	60.9	62.2	64.8	63.4	67.1	**12**
Schleswig-Holstein	78.8	80.0	82.9	84.8	87.5	92.6	95.1	99.7	98.6	104.5	**10**
Thuringia	51.4	53.4	56.2	57.5	59.0	61.2	62.3	63.9	62.3	65.5	**13**
Federal government	2,745.3	2,811.4	2,927.4	3,026.2	3,134.7	3,267.2	3,367.9	3,473.3	3,367.6	3,570.6	

Development of nominal GDP in EUR per capita

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	39,334	40,128	41,473	42,910	43,507	45,260	46,793	47,492	45,524	48,247	**4**
Bavaria	39,780	40,754	42,226	43,445	44,829	46,726	47,572	49,109	47,547	50,289	**3**
Berlin	32,762	33,215	34,395	35,741	37,551	39,320	41,325	43,058	42,145	44,472	**6**
Brandenburg	24,029	24,715	25,980	26,442	27,092	28,265	29,037	30,277	29,801	31,062	**13**
Bremen	43,638	43,934	45,173	45,739	46,450	47,638	48,311	48,590	47,489	50,673	**2**
Hamburg	**56,197**	**58,119**	**58,950**	**60,935**	**61,449**	**64,042**	**64,876**	**67,547**	**63,730**	**68,483**	**1**
Hesse	39,625	40,368	41,809	42,422	43,773	44,972	45,798	47,064	45,377	48,164	**5**
Mecklenburg-Western Pomerania	**22,712**	**23,540**	**24,663**	**24,954**	**25,497**	27,428	**27,559**	29,626	29,077	**30,704**	**16**
Lower Saxony	31,481	31,842	33,176	33,186	35,359	36,195	37,341	38,903	37,647	39,401	**9**
North Rhine-Westphalia	33,204	33,841	35,074	35,899	36,547	37,929	39,244	39,940	38,756	40,951	**7**
Rhineland-Palatinate	30,197	30,813	31,858	32,966	33,576	34,428	35,125	35,943	34,981	39,555	**8**
Saarland	32,144	31,955	33,594	34,302	34,397	35,510	36,168	36,253	34,646	36,242	**10**
Saxony	25,006	25,724	26,989	27,908	28,711	29,852	30,711	32,029	31,363	33,254	**12**
Saxony-Anhalt	23,862	24,445	25,141	25,617	26,325	**27,317**	28,053	**29,432**	**28,967**	30,890	**15**
Schleswig-Holstein	28,087	28,460	29,350	29,809	30,488	32,094	32,876	34,385	33,914	35,854	**11**
Thuringia	23,604	24,658	26,031	26,563	27,263	28,394	29,014	29,898	29,304	30,988	**14**
Federal government	34,135	34,861	36,149	37,046	38,067	39,527	40,623	41,801	40,495	42,953	

NB: Lowest values in orange, highest values in blue.
Source: Federal Statistical Office, national accounts produced by the Laender (VGRdL), NORD/LB Markets Strategy & Floor Research

Real GDP growth Y/Y in %

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	0.7	0.7	2.2	2.5	1.1	3.6	2.2	-0.2	-5.4	3.4	**2**
Bavaria	1.0	1.3	2.4	1.8	2.5	3.7	0.4	1.7	-4.3	3.0	**5**
Berlin	-0.2	0.3	2.7	**3.6**	5.1	4.3	**3.9**	2.9	-3.8	3.3	**3**
Brandenburg	1.2	0.5	**3.8**	0.9	2.1	2.6	0.7	1.9	-3.2	**0.9**	**16**
Bremen	**3.0**	-1.0	1.2	0.4	1.9	1.4	-0.2	-1.5	-4.1	2.7	**6**
Hamburg	0.5	**3.0**	**-0.4**	2.0	2.1	1.8	0.1	**3.0**	**-6.7**	2.0	**11**
Hesse	-0.9	0.5	1.7	0.5	2.7	2.2	0.6	1.3	-4.7	3.1	**4**
Mecklenburg-Western Pomerania	-0.5	0.2	3.1	0.3	1.4	**4.3**	-1.8	4.6	-3.7	1.7	**14**
Lower Saxony	0.6	-0.9	2.9	**-0.6**	**6.0**	**0.9**	1.3	2.1	-4.6	1.7	**13**
North Rhine-Westphalia	-0.4	0.2	2.0	1.5	1.2	2.5	1.4	-0.1	-4.5	2.2	**8**
Rhineland-Palatinate	1.3	-0.1	2.1	2.5	1.1	1.4	0.3	0.4	-4.0	**9.6**	**1**
Saarland	**-1.5**	**-2.5**	3.2	0.3	**-0.5**	1.9	**-0.5**	**-2.0**	-6.4	1.4	**15**
Saxony	0.6	0.2	3.2	2.2	1.8	2.3	0.8	1.6	-4.2	2.5	**7**
Saxony-Anhalt	2.6	-0.7	1.1	0.4	1.5	1.0	-0.2	1.6	-3.8	2.1	**10**
Schleswig-Holstein	2.7	-0.8	1.7	0.8	2.3	2.9	0.6	2.5	**-3.0**	2.2	**9**
Thuringia	0.0	1.3	3.6	0.8	1.2	2.0	-0.2	0.1	-4.3	2.0	**12**
Federal government	0.4	0.4	2.2	1.5	2.2	2.7	1.1	1.1	-4.6	2.9	

Unemployment rate (%)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	3.9	4.1	4.0	3.8	3.8	3.5	3.2	3.2	4.1	3.9	**2**
Bavaria	**3.7**	**3.8**	**3.8**	**3.6**	**3.5**	**3.2**	**2.9**	**2.8**	**3.6**	**3.5**	**1**
Berlin	**12.3**	**11.7**	11.1	10.7	9.8	9.0	8.1	7.8	9.7	9.8	**15**
Brandenburg	10.2	9.9	9.4	8.7	8.0	7.0	6.3	5.8	6.2	5.9	**8**
Bremen	11.2	11.1	10.9	**10.9**	**10.5**	**10.2**	**9.8**	**9.9**	**11.2**	**10.7**	**16**
Hamburg	7.5	7.4	7.6	7.4	7.1	6.8	6.3	6.1	7.6	7.5	**13**
Hesse	5.7	5.8	5.7	5.5	5.3	5.0	4.6	4.4	5.4	5.2	**4**
Mecklenburg-Western Pomerania	12.0	**11.7**	**11.2**	10.4	9.7	8.6	7.9	7.1	7.8	7.6	**14**
Lower Saxony	6.6	6.6	6.5	6.1	6.0	5.8	5.3	5.0	5.8	5.5	**5**
North Rhine-Westphalia	8.1	8.3	8.2	8.0	7.7	7.4	6.8	6.5	7.5	7.3	**11**
Rhineland-Palatinate	5.3	5.5	5.4	5.2	5.1	4.8	4.4	4.3	5.2	5.0	**3**
Saarland	6.7	7.3	7.2	7.2	7.2	6.7	6.1	6.2	7.2	6.8	**10**
Saxony	9.8	9.4	8.8	8.2	7.5	6.7	6.0	5.5	6.1	5.9	**8**
Saxony-Anhalt	11.5	11.2	10.7	10.2	9.6	8.4	7.7	7.1	7.7	7.3	**11**
Schleswig-Holstein	6.9	6.9	6.8	6.5	6.3	6.0	5.5	5.1	5.8	5.6	**6**
Thuringia	8.5	8.2	7.8	7.4	6.7	6.1	5.5	5.3	6.0	5.6	**6**
Federal government	6.8	6.9	6.7	6.4	6.1	5.7	5.2	5.0	5.9	6.3	

NB: Lowest values in orange, highest values in blue. Reversed for unemployment rate figures.
Source: Federal Statistical Office, national accounts produced by the Laender (VGRdL), NORD/LB Markets Strategy & Floor Research

NORD/LB

Appendix Overview by budget indicators

Official debt level (EUR bn)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	42.2	44.2	45.6	40.7	40.6	37.6	35.4	35.3	38.9	38.0	**12**
Bavaria	28.1	26.4	25.1	22.6	19.4	16.9	14.6	12.9	17.8	19.8	**6**
Berlin	61.0	60.4	59.8	58.6	58.0	56.5	54.4	53.9	59.6	59.6	**14**
Brandenburg	18.0	17.2	16.7	16.7	16.2	15.4	14.8	15.3	17.3	17.8	**5**
Bremen	19.0	19.6	19.5	21.2	21.0	20.5	21.5	29.7	39.0	36.0	**11**
Hamburg	20.9	23.2	23.2	23.2	22.9	22.3	23.9	23.2	24.9	25.4	**8**
Hesse	40.4	39.9	41.0	42.6	42.7	40.9	39.9	40.4	43.0	40.4	**13**
Mecklenburg-Western Pomerania	9.6	9.5	9.4	9.2	8.3	7.8	7.5	7.4	8.4	8.5	**2**
Lower Saxony	55.3	56.5	57.2	58.1	57.2	57.2	56.6	56.4	61.8	61.6	**15**
North Rhine-Westphalia	**129.9**	**133.9**	**136.8**	**136.9**	**137.0**	**138.8**	**135.6**	**142.9**	**153.8**	**158.6**	**16**
Rhineland-Palatinate	32.2	32.8	32.6	32.1	32.5	31.1	30.5	29.8	30.8	28.5	**9**
Saarland	13.0	13.7	14.0	14.1	13.8	13.8	13.6	13.7	13.9	13.5	**3**
Saxony	**5.0**	**4.1**	**3.2**	**2.3**	**1.9**	**1.6**	**1.4**	**1.1**	**3.6**	**4.3**	**1**
Saxony-Anhalt	20.6	20.4	20.5	20.0	20.2	20.8	19.9	20.9	21.2	21.9	**7**
Schleswig-Holstein	27.0	26.4	26.8	26.7	26.5	25.7	27.4	27.8	29.1	31.0	**10**
Thuringia	16.2	15.8	15.7	15.6	14.8	15.3	14.3	14.3	15.4	16.1	**4**

Debt per capita in EUR

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	3,901	4,174	4,286	3,791	3,734	3,441	3,224	3,180	3,504	3,427	**3**
Bavaria	2,223	2,105	1,991	1,781	1,509	1,315	1,124	985	1,354	1,510	**2**
Berlin	17,344	17,804	17,468	16,844	16,477	15,917	15,137	14,769	16,286	16,285	**15**
Brandenburg	7,206	7,032	6,826	6,785	6,507	6,190	5,911	6,098	6,867	7,031	**7**
Bremen	**28,768**	**30,012**	**29,736**	**32,044**	**31,275**	**30,384**	**31,617**	**43,542**	**57,443**	**52,927**	**16**
Hamburg	11,557	13,319	13,300	13,116	12,810	12,391	13,132	12,583	13,510	13,758	**14**
Hesse	6,619	6,617	6,788	6,978	6,909	6,625	6,406	6,435	6,845	6,425	**5**
Mecklenburg-Western Pomerania	5,875	5,937	5,870	5,782	5,175	4,872	4,676	4,625	5,203	5,252	**4**
Lower Saxony	6,984	7,248	7,339	7,414	7,210	7,191	7,111	7,049	7,725	7,709	**9**
North Rhine-Westphalia	7,285	7,633	7,783	7,753	7,669	7,763	7,580	7,970	8,576	8,844	**10**
Rhineland-Palatinate	8,064	8,213	8,170	7,983	8,011	7,666	7,489	7,294	7,537	6,967	**6**
Saarland	12,884	13,853	14,100	14,272	13,904	13,850	13,628	13,830	14,121	13,742	**13**
Saxony	**1,218**	**1,004**	**783**	**566**	**453**	**381**	**346**	**279**	**874**	**1,055**	**1**
Saxony-Anhalt	8,959	9,068	9,142	8,976	9,006	9,272	8,938	9,495	9,703	10,014	**11**
Schleswig-Holstein	9,504	8,415	9,533	9,423	9,270	8,925	9,499	9,587	10,015	10,673	**12**
Thuringia	7,293	7,325	7,254	7,223	6,837	7,101	6,630	6,689	7,231	7,573	**8**

NB: Lowest values in blue, highest values in orange
Source: Federal Ministry of Finance, NORD/LB Markets Strategy & Floor Research

NORD/LB

Official debt level as a % of GDP

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	10.17	10.40	10.29	8.78	8.56	7.56	6.86	6.70	7.70	7.10	**3**
Bavaria	5.65	5.16	4.70	4.08	3.36	2.80	2.35	2.00	2.85	**3.00**	**1**
Berlin	55.58	53.53	50.43	46.91	43.54	39.99	36.25	34.26	38.60	36.60	**14**
Brandenburg	30.49	28.43	26.23	25.55	23.97	21.80	20.27	20.13	23.03	22.57	**8**
Bremen	**66.68**	**68.15**	**65.60**	**69.61**	**66.97**	**63.44**	**65.17**	**89.75**	**120.76**	**105.12**	**16**
Hamburg	21.50	22.95	22.46	21.47	20.71	19.12	20.08	18.62	21.15	20.03	**11**
Hesse	16.97	16.37	16.17	16.36	15.74	14.61	13.93	13.67	15.08	13.36	**4**
Mecklenburg-Western Pomerania	26.30	25.19	23.78	23.07	20.30	17.74	16.97	15.61	17.89	17.09	**5**
Lower Saxony	22.60	22.77	22.07	22.23	20.37	19.85	19.02	18.13	20.51	19.52	**7**
North Rhine-Westphalia	22.30	22.53	22.15	21.48	20.97	20.44	19.28	19.94	22.12	21.63	**9**
Rhineland-Palatinate	26.76	26.63	25.59	24.11	23.82	22.22	21.27	20.29	21.53	17.58	**6**
Saarland	40.68	43.32	42.01	41.45	40.40	39.10	37.80	38.13	40.73	37.98	**15**
Saxony	**4.96**	**3.90**	**2.90**	**2.02**	**1.58**	**1.28**	**1.12**	**0.87**	**2.79**	3.19	**2**
Saxony-Anhalt	38.12	37.05	36.44	34.91	34.28	34.09	32.06	32.24	33.48	32.63	**13**
Schleswig-Holstein	34.25	33.05	32.39	31.50	30.28	27.72	28.83	27.88	29.52	29.68	**12**
Thuringia	31.44	29.68	27.89	27.08	25.15	25.08	22.92	22.36	24.66	24.59	**10**

Official debt level/tax income

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	1.42x	1.47x	1.43x	1.23x	1.12x	1.00x	0.87x	0.86x	1.03x	0.91x	**3**
Bavaria	0.80x	0.70x	0.63x	0.54x	0.42x	0.36x	0.29x	0.25x	0.40x	0.40x	**2**
Berlin	5.25x	5.07x	4.55x	4.30x	3.93x	3.67x	3.19x	3.08x	2.88x	2.42x	**12**
Brandenburg	3.10x	2.78x	2.72x	2.50x	2.24x	2.02x	1.81x	1.84x	2.12x	1.88x	**8**
Bremen	**8.31x**	**8.15x**	**7.62x**	**7.82x**	**6.89x**	**6.57x**	**6.42x**	**8.82x**	**10.15x**	**7.99x**	**16**
Hamburg	2.34x	2.56x	2.35x	2.29x	2.12x	1.92x	1.90x	1.78x	2.13x	1.80x	**7**
Hesse	2.46x	2.27x	2.21x	2.17x	1.93x	1.80x	1.74x	1.66x	2.02x	1.61x	**5**
Mecklenburg-Western Pomerania	2.52x	2.43x	2.23x	2.10x	1.84x	1.62x	1.50x	1.39x	1.54x	1.54x	**4**
Lower Saxony	2.93x	2.83x	2.84x	2.64x	2.40x	2.37x	2.20x	2.07x	2.34x	2.12x	**9**
North Rhine-Westphalia	2.99x	3.00x	2.95x	2.75x	2.55x	2.49x	2.29x	2.30x	2.52x	2.32x	**11**
Rhineland-Palatinate	3.32x	3.21x	3.09x	2.92x	2.71x	2.43x	2.39x	2.14x	2.26x	1.71x	**6**
Saarland	5.61x	5.59x	5.33x	5.14x	4.75x	4.56x	4.24x	4.16x	4.16x	3.83x	**15**
Saxony	**0.52x**	**0.41x**	**0.31x**	**0.21x**	**0.16x**	**0.13x**	**0.11x**	**0.09x**	**0.27x**	**0.30x**	**1**
Saxony-Anhalt	3.81x	3.65x	3.62x	3.31x	3.11x	3.13x	2.84x	2.87x	3.02x	2.83x	**14**
Schleswig-Holstein	3.98x	3.61x	3.74x	3.31x	3.03x	2.83x	2.90x	2.78x	2.98x	2.83x	**13**
Thuringia	3.16x	2.95x	2.84x	2.67x	2.39x	2.38x	2.10x	2.02x	2.22x	2.13x	**10**

NB: Lowest values in blue, highest values in orange
Source: Federal Ministry of Finance, Federal Statistical Office, NORD/LB Markets Strategy & Floor Research

NORD/LB

Tax income/interest expenditure

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	17.7x	17.4x	20.1x	21.5x	24.7x	27.2x	29.1x	33.3x	32.2x	26.5x	**12**
Bavaria	**33.8x**	**39.6x**	**44.8x**	**50.5x**	**60.9x**	65.2x	**86.3x**	98.5x	92.9x	125.3x	**2**
Berlin	5.5x	6.2x	7.5x	8.5x	10.7x	11.8x	13.8x	15.1x	21.4x	22.7x	**14**
Brandenburg	10.1x	13.3x	14.4x	18.4x	21.7x	25.5x	29.1x	30.8x	41.1x	38.1x	**6**
Bremen	**3.5x**	**3.8x**	**4.6x**	**4,2x**	**5.1x**	**5.1x**	**5.7x**	**5.6x**	**6.3x**	**7.6x**	**16**
Hamburg	10.8x	11.9x	14.4x	17.0x	19.5x	23.3x	28.1x	29.1x	29.1x	37.3x	**7**
Hesse	11.7x	13.8x	15.6x	16.7x	21.6x	22.7x	23.9x	27.0x	24.3x	29.7x	**10**
Mecklenburg-Western Pomerania	10.4x	11.4x	13.3x	15.5x	18.1x	21.4x	23.6x	27.1x	28.1x	33.0x	**8**
Lower Saxony	10.0x	12.0x	13.2x	15.8x	18.8x	20.9x	24.2x	27.6x	43.8x	50.4x	**3**
North Rhine-Westphalia	10.5x	11.3x	13.0x	15.0x	19.2x	21.0x	24.2x	31.0x	44.1x	43.3x	**5**
Rhineland-Palatinate	10.0x	10.4x	11.2x	13.4x	14.6x	17.1x	22.1x	29.4x	36.6x	50.3x	**4**
Saarland	4.6x	5.1x	5.6x	6.4x	7.4x	8.0x	8.9x	10.4x	11.6x	14.0x	**15**
Saxony	29.4x	33.2x	40.0x	50.0x	60.8x	**69.9x**	79.7x	**108.2x**	**171.4x**	**186.6x**	**1**
Saxony-Anhalt	7.6x	8.8x	9.5x	11.0x	12.8x	14.6x	19.1x	20.3x	21.5x	23.2x	**13**
Schleswig-Holstein	7.5x	8.5x	9.3x	12.4x	14.8x	18.4x	20.5x	24.3x	30.0x	32.6x	**9**
Thuringia	8.3x	9.3x	10.1x	11.6x	14.3x	16.7x	20.5x	22.7x	24.0x	27.6x	**11**

Adjusted income (EUR m)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	38,977	40,478	42,952	44,054	47,670	49,888	53,335	54,999	55,139	61,821	**3**
Bavaria	45,244	48,869	51,786	54,048	56,989	59,917	63,792	65,949	62,468	72,849	**2**
Berlin	22,569	22,746	23,799	24,713	26,283	27,701	29,340	29,812	31,116	35,831	**6**
Brandenburg	10,074	10,829	10,537	10,764	11,198	11,612	12,279	12,334	12,572	13,859	**11**
Bremen	4,136	4,368	4,658	4,839	5,277	5,491	5,734	5,961	6,288	7,286	**15**
Hamburg	11,188	11,219	12,297	12,851	13,757	14,541	15,641	16,200	16,211	19,620	**9**
Hesse	20,478	22,004	23,011	24,512	27,083	28,043	28,826	29,936	31,937	36,705	**4**
Mecklenburg-Western Pomerania	7,284	7,335	7,394	7,737	7,863	8,063	8,301	8,583	9,284	10,508	**14**
Lower Saxony	25,730	26,352	27,140	28,893	30,131	30,753	33,420	34,188	35,494	36,501	**5**
North Rhine-Westphalia	**54,574**	**56,770**	**59,881**	**63,688**	**68,432**	**71,801**	**75,534**	**78,369**	**93,192**	**96,390**	**1**
Rhineland-Palatinate	13,349	13,819	14,578	15,284	16,343	17,287	17,289	18,470	18,984	22,985	**7**
Saarland	**3,273**	**3,425**	**3,590**	**3,745**	**3,968**	**4,265**	**4,381**	**4,438**	**4,728**	**4,905**	**16**
Saxony	17,318	17,156	17,318	18,041	17,640	18,268	20,268	19,385	20,025	20,418	**8**
Saxony-Anhalt	9,921	10,118	9,986	10,795	10,811	10,888	11,033	11,313	11,455	12,464	**12**
Schleswig-Holstein	9,129	9,760	9,621	10,649	11,544	12,223	12,493	13,256	14,706	15,725	**10**
Thuringia	9,107	9,297	9,143	9,344	9,772	10,087	10,399	10,473	10,195	10,907	**13**

NB: Lowest values in blue, highest values in orange Reversed for tax income/interest expenses as well as adjusted income.
Source: Federal Ministry of Finance, Federal Statistical Office, NORD/LB Markets Strategy & Floor Research

Adjusted income in EUR per capita

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	3,688	3,807	4,008	4,049	4,353	4,555	4,818	4,955	4,966	5,557	**8**
Bavaria	3,614	3,877	4,080	4,208	4,407	4,634	4,878	5,025	4,754	5,528	**9**
Berlin	**6,687**	**6,647**	6,859	7,021	7,352	7,749	8,050	8,124	8,492	9,743	**3**
Brandenburg	4,112	4,421	4,287	4,332	4,489	4,655	4,888	4,891	4,967	5,461	**10**
Bremen	6,316	6,644	**7,037**	**7,206**	**7,774**	**8,090**	8,395	8,751	**9,245**	**10,771**	**1**
Hamburg	6,451	6,424	6,976	7,190	7,599	8,032	**8,495**	**8,770**	8,751	10,583	**2**
Hesse	3,404	3,640	3,776	3,969	4,359	4,514	4,601	4,761	5,075	5,831	**5**
Mecklenburg-Western Pomerania	4,551	4,594	4,623	4,799	4,882	5,006	5,157	5,337	5,764	6,522	**4**
Lower Saxony	3,308	3,383	3,468	**3,519**	**3,792**	**3,870**	**4,187**	**4,277**	**4,435**	**4,547**	**16**
North Rhine-Westphalia	**3,109**	**3,231**	**3,395**	3,565	3,825	4,013	4,212	4,367	5,199	5,378	**12**
Rhineland-Palatinate	3,345	3,460	3,634	3,771	4,019	4,251	4,232	4,511	4,632	5,597	**7**
Saarland	3,292	3,457	3,630	3,761	3,982	4,279	4,423	4,497	4,805	4,993	**15**
Saxony	4,276	4,240	4,271	4,417	4,322	4,475	4,970	4,761	4,936	5,050	**14**
Saxony-Anhalt	4,391	4,508	4,467	4,808	4,835	4,869	4,996	5,155	5,253	5,746	**6**
Schleswig-Holstein	3,253	3,466	3,399	3,725	4,006	4,241	4,313	4,565	5,052	5,381	**11**
Thuringia	4,196	4,303	4,239	4,304	4,528	4,674	4,852	4,909	4,808	5,172	**13**

Adjusted expenditure (EUR m)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking*
Baden-Wuerttemberg	39,047	40,688	42,254	44,050	47,483	48,173	50,312	51,608	58,430	60,373	-
Bavaria	43,879	46,759	50,178	51,966	55,178	56,938	59,579	64,680	68,602	71,959	-
Berlin	21,892	22,266	22,961	24,507	26,147	26,691	26,918	28,222	32,889	36,017	-
Brandenburg	10,066	10,119	10,210	10,527	10,778	11,114	11,619	13,350	13,313	14,667	-
Bremen	4,675	4,852	5,097	5,100	5,271	5,508	5,668	5,867	6,598	7,415	-
Hamburg	11,753	11,815	11,873	12,628	13,470	13,532	16,771	15,508	16,868	19,686	-
Hesse	22,242	22,512	23,677	24,738	26,609	27,827	27,750	28,389	32,775	34,286	-
Mecklenburg-Western Pomerania	7,124	7,017	7,131	7,402	7,546	7,387	8,064	8,557	12,382	10,526	-
Lower Saxony	26,551	26,733	27,346	28,049	29,155	29,917	30,631	32,391	40,405	37,924	-
North Rhine-Westphalia	**58,408**	**59,220**	**61,784**	**65,635**	**68,398**	**73,025**	**74,466**	**76,648**	**104,807**	**99,925**	-
Rhineland-Palatinate	14,492	14,364	15,192	15,852	16,019	16,430	16,422	17,211	20,329	20,688	-
Saarland	**3,964**	**3,883**	**3,891**	**3,986**	**4,119**	**4,227**	**4,236**	**4,321**	**4,752**	**4,715**	-
Saxony	16,022	16,334	16,655	18,193	17,782	17,585	19,017	19,383	21,449	20,424	-
Saxony-Anhalt	9,868	9,869	9,916	10,369	10,348	10,704	10,718	11,269	12,351	12,459	-
Schleswig-Holstein	9,299	9,645	9,865	10,563	11,160	12,099	14,409	13,019	15,133	15,592	-
Thuringia	8,813	8,956	8,957	9,106	9,181	9,171	9,776	10,025	11,362	11,296	-

NB: Lowest values in orange, highest values in blue. Reversed for adjusted expenditure figures.
* No ranking, as low/high expenditure values are neither positive or negative per se.
Source: Federal Statistical Office, national accounts produced by the Laender (VGRdL), NORD/LB Markets Strategy & Floor Research

Adjusted expenditure in EUR per capita

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking*
Baden-Wuerttemberg	3,694	3,827	3,943	4,049	4,336	4,399	4,545	4,649	5,262	5,427	-
Bavaria	3,505	3,710	3,954	4,046	4,267	4,403	4,556	4,928	5,221	5,461	-
Berlin	6,486	6,507	6,617	6,962	7,314	7,466	7,385	7,691	8,976	9,794	-
Brandenburg	4,109	4,131	4,154	4,237	4,320	4,455	4,626	5,294	5,260	5,779	-
Bremen	7,140	7,380	7,701	7,594	7,766	8,115	8,299	8,613	9,701	10,961	-
Hamburg	6,777	6,765	6,735	7,065	7,440	7,474	9,109	8,395	9,106	10,618	-
Hesse	3,697	3,724	3,885	4,005	4,283	4,479	4,429	4,515	5,208	5,447	-
Mecklenburg-Western Pomerania	4,452	4,395	4,459	4,591	4,685	4,586	5,010	5,321	7,687	6,533	-
Lower Saxony	3,413	3,431	3,494	3,539	3,669	3,765	3,837	4,052	5,049	4,724	-
North Rhine-Westphalia	3,327	3,370	3,503	3,674	3,823	4,082	4,153	4,271	5,847	5,575	-
Rhineland-Palatinate	3,632	3,596	3,787	3,911	3,940	4,041	4,020	4,204	4,960	5,038	-
Saarland	3,986	3,919	3,934	4,003	4,133	4,291	4,227	4,378	4,829	4,800	-
Saxony	3,956	4,037	4,107	4,454	4,356	4,308	4,663	4,760	5,287	5,052	-
Saxony-Anhalt	4,368	4,397	4,436	4,618	4,627	4,786	4,854	4,854	5,664	5,744	-
Schleswig-Holstein	3,313	3,425	3,485	3,695	3,872	4,198	4,974	4,484	5,199	5,336	-
Thuringia	4,060	4,145	4,153	4,195	4,254	4,249	4,561	4,699	5,359	5,356	-

Budget balance (EUR m)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	-70	-210	697	4	187	1,715	3,023	3,391	-3,291	1,447	**3**
Bavaria	1,366	2,110	1,608	2,081	1,811	2,979	4,213	1,269	-6,135	889	**4**
Berlin	677	480	838	206	137	1,009	2,422	1,590	-1,773	-186	**12**
Brandenburg	8	710	327	237	420	498	660	-1,016	-741	-808	**14**
Bremen	-539	-484	-440	-266	5	-17	66	94	-310	-128	**11**
Hamburg	-565	-596	424	223	287	1,009	-1,130	692	-657	-66	**10**
Hesse	-1,764	-508	-666	-226	474	217	1,076	1,547	-838	2,419	**1**
Mecklenburg-Western Pomerania	160	318	263	335	317	676	237	26	-3,098	-18	**9**
Lower Saxony	-821	-381	-205	-156	976	836	2,789	1,798	-4,911	-1,423	**15**
North Rhine-Westphalia	-3,834	-2,450	-1,903	-1,947	34	-1,225	1,069	1,722	-11,615	-3,536	**16**
Rhineland-Palatinate	-1,143	-546	-614	-568	324	857	867	1,258	-1,346	2,297	**2**
Saarland	-690	-458	-301	-241	-151	-12	145	117	-24	190	**5**
Saxony	1,295	822	663	-152	-142	683	1,251	2	-1,425	-6	**8**
Saxony-Anhalt	53	249	70	426	464	185	315	44	-896	5	**7**
Schleswig-Holstein	-170	115	-244	87	384	125	-1,917	237	-427	133	**6**
Thuringia	294	341	186	238	592	917	624	448	-1,167	-389	**13**

NB: Highest values in orange, lowest values in blue Reversed for budget balance figures.
* No ranking, as low/high expenditure values are neither positive or negative per se.
Source: Federal Statistical Office, national accounts produced by the Laender (VGRdL), NORD/LB Markets Strategy & Floor Research

Budget balance per capita in EUR

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	-6	-20	65	3	22	160	273	305	-296	130	**4**
Bavaria	109	167	127	162	140	230	322	97	-467	67	**5**
Berlin	201	140	**241**	59	38	283	**664**	**433**	-484	-51	**11**
Brandenburg	3	**290**	133	95	168	200	163	**-403**	-293	**-318**	**16**
Bremen	**-823**	**-736**	**-664**	**-389**	8	-25	96	138	-456	-190	**14**
Hamburg	-319	-341	**241**	126	158	**558**	-614	374	-354	-36	**10**
Hesse	-293	-84	-109	-38	76	35	172	246	-133	384	**2**
Mecklenburg-Western Pomerania	100	199	164	**208**	197	420	147	16	**-1,923**	-11	**9**
Lower Saxony	-106	-49	-26	-20	123	105	349	225	-614	-177	**12**
North Rhine-Westphalia	-218	-139	-108	-109	2	**-68**	60	96	-648	-197	**15**
Rhineland-Palatinate	-287	-137	-153	-140	78	211	212	307	-328	**559**	**1**
Saarland	-694	-462	-304	-242	**-151**	-11	147	119	**-24**	193	**3**
Saxony	**320**	203	163	-34	-30	173	307	0	-351	-2	**8**
Saxony-Anhalt	23	111	31	190	207	83	142	20	-411	2	**7**
Schleswig-Holstein	-61	41	-86	30	133	43	**-662**	82	-147	45	**6**
Thuringia	136	158	86	109	**274**	425	291	210	-550	-185	**13**

Budget balance as a % of GDP

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Ranking
Baden-Wuerttemberg	-0.02	-0.05	0.16	0.00	0.04	0.34	0.58	0.64	-0.65	0.27	**4**
Bavaria	0.28	0.41	0.30	0.38	0.31	0.49	0.68	0.20	-0.98	0.13	**5**
Berlin	0.62	0.43	**0.71**	0.16	0.10	0.71	**1.61**	1.01	-1.15	-0.11	**11**
Brandenburg	0.01	**1.17**	0.51	0.36	0.62	0.71	0.91	**-1.33**	-0.98	**-1.03**	**16**
Bremen	-1.89	**-1.68**	**-1.48**	**-0.86**	0.02	-0.05	0.20	0.28	-0.96	-0.38	**12**
Hamburg	-0.58	-0.59	0.41	0.21	0.26	0.87	-0.95	0.56	-0.56	-0.05	**10**
Hesse	-0.74	-0.21	-0.26	-0.09	0.17	0.08	0.38	0.52	-0.29	0.80	**2**
Mecklenburg-Western Pomerania	0.44	0.85	0.67	**0.84**	0.77	**1.53**	0.53	0.06	**-6.62**	-0.04	**9**
Lower Saxony	-0.34	-0.15	-0.08	-0.06	0.35	0.29	0.94	0.58	-1.63	-0.45	**13**
North Rhine-Westphalia	-0.66	-0.41	-0.31	-0.31	0.01	**-0.18**	0.15	0.24	-1.67	-0.48	**14**
Rhineland-Palatinate	-0.95	-0.44	-0.48	-0.43	0.24	0.61	0.61	**0.86**	-0.94	**1.42**	**1**
Saarland	**-2.16**	-1.44	-0.90	-0.71	**-0.44**	-0.03	0.40	0.33	**-0.07**	0.53	**3**
Saxony	**1.28**	0.79	0.61	-0.13	-0.12	0.56	1.00	0.00	-1.12	0.00	**8**
Saxony-Anhalt	0.10	0.45	0.12	0.74	0.79	0.30	0.51	0.07	-1.41	0.01	**7**
Schleswig-Holstein	-0.22	0.14	-0.29	0.10	0.44	0.13	**-2.02**	0.24	-0.43	0.13	**6**
Thuringia	0.57	0.64	0.33	0.41	**1.00**	1.50	1.00	0.70	-1.87	-0.59	**15**

NB: Highest values in blue, lowest values in orange.
Source: Federal Ministry of Finance, Federal Statistical Office, NORD/LB Markets Strategy & Floor Research

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Appendix Age structure of the Laender populations

Share of different age groups in the population

	Under the age of 6	6 to 15 years old	15 to 25 years old	25 to 45 years old	45 to 65 years old	Aged 65+
Baden-Wuerttemberg	6.0%	8.3%	10.6%	25.8%	28.5%	20.8%
Bavaria	5.9%	8.1%	10.2%	26.0%	28.8%	20.9%
Berlin	6.2%	8.2%	9.5%	31.4%	25.5%	19.2%
Brandenburg	5.2%	8.3%	8.0%	22.2%	30.8%	25.5%
Bremen	6.0%	8.1%	11.0%	26.8%	26.8%	21.3%
Hamburg	6.3%	8.1%	10.3%	30.7%	26.3%	18.2%
Hesse	5.8%	8.3%	10.4%	25.5%	28.8%	21.2%
Mecklenburg-Western Pomerania	4.9%	8.0%	8.3%	22.7%	29.9%	26.3%
Lower Saxony	5.8%	8.2%	10.5%	23.8%	29.2%	22.5%
North Rhine-Westphalia	5.9%	8.3%	10.5%	24.9%	28.9%	21.6%
Rhineland-Palatinate	5.7%	8.1%	10.0%	24.2%	29.5%	22.5%
Saarland	5.1%	7.4%	9.4%	23.5%	29.9%	24.7%
Saxony	5.3%	8.2%	8.7%	23.6%	27.4%	26.8%
Saxony-Anhalt	4.9%	7.7%	8.3%	21.8%	29.7%	27.6%
Schleswig-Holstein	5.4%	8.1%	10.0%	23.2%	29.8%	23.5%
Thuringia	4.9%	8.0%	8.4%	22.3%	29.4%	27.0%
Federal government	5.8%	8.2%	10.0%	25.1%	28.7%	22.1%

Source: Federal Statistical Office, NORD/LB Markets Strategy & Floor Research

Appendix Election calendar

Provisional dates for the next Laender parliamentary (Landtag) elections (and frequency)

Baden-Wuerttemberg	Spring 2026	5 years
Bavaria	Autumn 2023	5 years
Berlin	Autumn 2026	5 years
Brandenburg	Autumn 2024	5 years
Bremen	14 May 2023	4 years
Hamburg	Spring 2025	5 years
Hesse	Autumn 2023	5 years
Mecklenburg-Western Pomerania	Autumn 2026	5 years
Lower Saxony	Autumn 2027	5 years
North Rhine-Westphalia	Spring 2027	5 years
Rhineland-Palatinate	Spring 2026	5 years
Saarland	Spring 2027	5 years
Saxony	Summer 2024	5 years
Saxony-Anhalt	Summer 2026	5 years
Schleswig-Holstein	Spring 2027	5 years
Thuringia	Autumn 2024	5 years

Source: German Federal Council (Bundesrat), NORD/LB Markets Strategy & Floor Research

Appendix

Data and definitions used

Data source and actuality for securities

Nearly all of the data on securities used within this Issuer Guide is based on the Bloomberg financial information system, whereby our own trading (NOLB) was used as the primary source of price information. Information with regard to the respective composition of the iBoxx indices was obtained from data provider Markit.

Data source and actuality for Schuldscheindarlehen (SSD)

To determine the issuance volume of SSD, the data was requested directly from the individual Bundeslaender. The portion of Laender debt attributable to SSD deals was also ascertained via a survey, although approximate estimations were used in some cases.

Data source and assumptions for assessment of budget situation

Federal Ministry of Finance cash statistics were used to analyse Laender budgets for financial year 2021. It should be noted that these figures do not necessarily reflect the actual budgets. Rather, the cash statistics relate to payments actually made in 2021. In our opinion, this does not appropriately illustrate the movements in funds connected to the system of financial equalisation among the Laender (FKA) for the 2021 budget year. For instance, a payment claim can arise in one financial year but actual payments can take place in part in the following year. Payments from federal supplementary grants (BEZ) are similar in this regard, which is why we use the provisional annual financial statements for 2021 of the Federal Ministry of Finance to illustrate the figures relating to the federal financial equalisation system. The historical data for the Bundeslaender budgets is based on the final results of the development of the Laender budgets.

Terminology: debt sustainability and interest coverage

Determining the debt sustainability and interest coverage represents an important part of our analysis of the budgets of the Bundeslaender. These terms relate to the various key indicators that measure debt and interest expenses against other variables. Here, we use debt in relation to economic output or the total revenue of a Bundesland as one example of debt sustainability. In our debt sustainability analysis, we also look at debt per capita. When determining interest coverage, we focus primarily on the ratio of revenue or taxes to the interest expenses during a given period.

Data source and assumptions for assessment of economic situation

When analysing the economic situation in a Bundesland, we used data from the Federal Statistical Office (Destatis) and from the respective statistical offices in the Laender. In some instances, we also used data from other sources, such as the German Patent and Trade Mark Office (DPMA). The data used is in part based on analyses by our NORD/LB Regional Economy or Sector Strategy (formerly known as Regional Research) team.

Special thanks to David Neudeck and Felix Fentzahn

We would like to thank David Neudeck and Felix Fentzahn for their assistance in compiling this report. Their commitment and ideas have resulted in a highly differentiated presentation of the market for bonds issued by German Laender in a slightly adapted format.

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