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# Handbook of German States

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"Key players in European capital markets"

12 2016

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The cover picture shows the state of NRW's largest city, Cologne and its landmark, the Cologne Cathedral.

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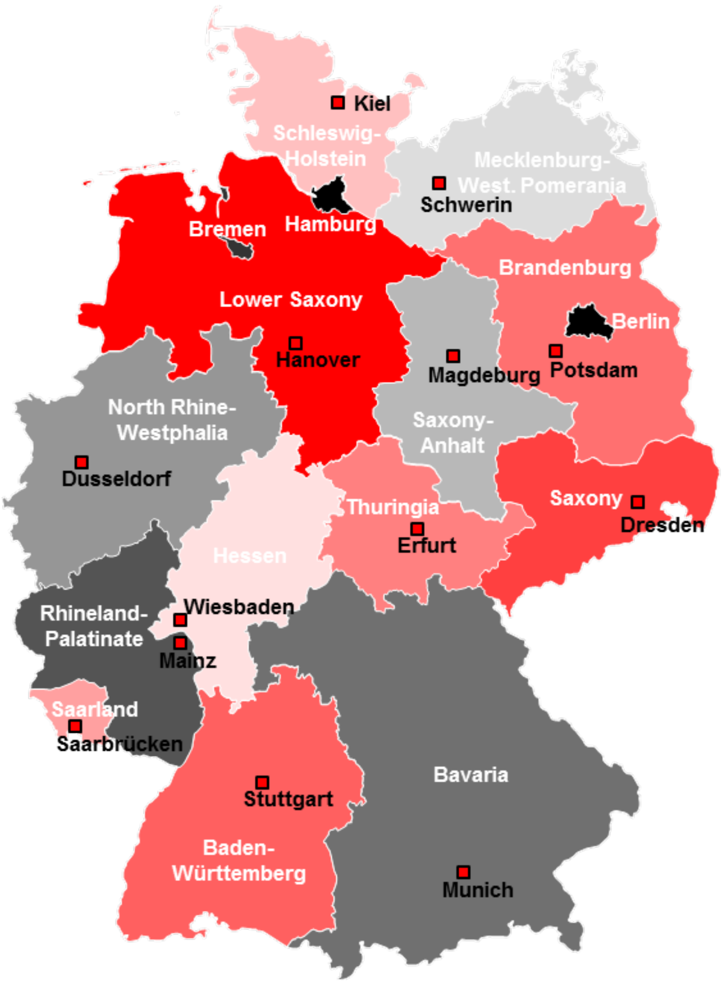
**OVERVIEW OF GERMANY'S 16 FEDERAL STATES**




Source: UniCredit Research

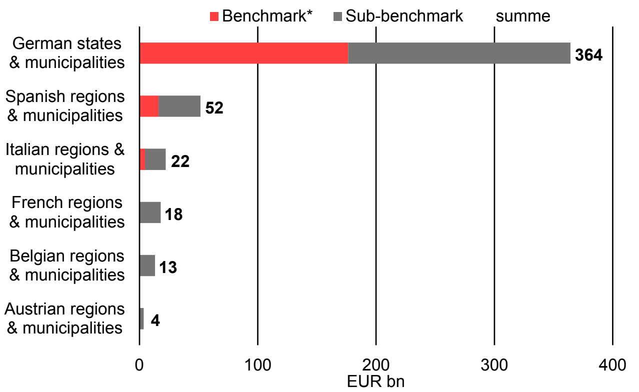
# German States: key players in European Capital Markets

**German states are key players in the European bond markets**

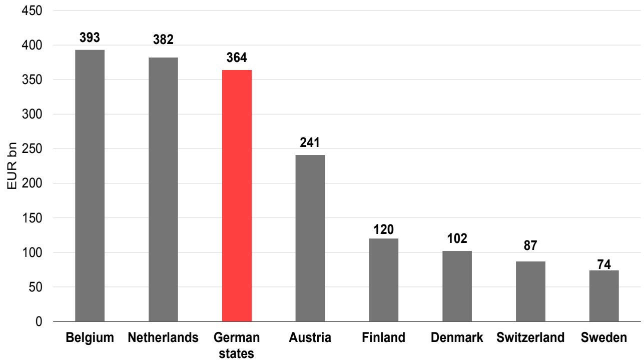
**The German states are key players in the European capital markets.** German states are by far the largest issuer among the European regions. Total bonds outstanding amounted to EUR 364bn in December 2016 (compared to EUR 255bn at the end of 2008), which is more than seven times as much as the second largest group of regional issuers, the Spanish regions (EUR 52bn). Italian regions have EUR 22bn in bonds outstanding and the French regions EUR 18bn (Bloomberg data). Within the European SSA universe, only the largest group – the European supranationals with over EUR 610bn in bonds outstanding (counting the largest issuers EIB, EFSF, EU, ESM, COE, NIBt and EURAT) – have issuance that is significantly larger than the German states. The size of the market for bonds of the German states can be compared to medium-sized semi-core countries such as the Netherlands and Belgium, which have total bonds of EUR 328bn and EUR 393bn outstanding, respectively, according to Bloomberg data.

**GERMAN STATES: KEY PLAYERS IN THE EUROPEAN CAPITAL MARKETS**

European regional governments –bonds outstanding




European sovereigns and German states –bonds outstanding




*Benchmarks are bonds with a minimum issue size of EUR 1bn. Bonds outstanding as of December 2016 at market prices. Source: Bloomberg, UniCredit Research

**Bonds of German states are safe-haven investments**

**Bonds issued by German states have proven their safe-haven status in recent years.** In a period of market uncertainty and spread widening in April 2015 German states have remained stable and spreads were also stable in a recent period of market volatility following the US elections. During the sovereign debt crisis (2010-12), spreads of German states remained almost unaffected by the widening observed among most other asset classes. Bonds issued by German states have clearly outperformed other European SSA issuers – in particular compared to the performance of Spanish and Italian regions – in terms of providing spread stability to investors during that time. Also compared to supranationals and agencies from neighboring European countries (including France, Austria, the Netherlands), German states bond spreads have remained stable during times of the crisis in the past.

**German state spreads have tightened in 2016**

**More recently, German states, have shown a radical spread tightening since June 2016, in line with the broader SSA market.** This came as a result of the UK Brexit referendum , which acted as a catalyst for many investors. Furthermore, the SSA market and German states continue to be supported by ECB purchases, as announced in the last ECB meeting in December 2016.

## German states under the effect of QE

**German states bonds in the ECB PSPP**

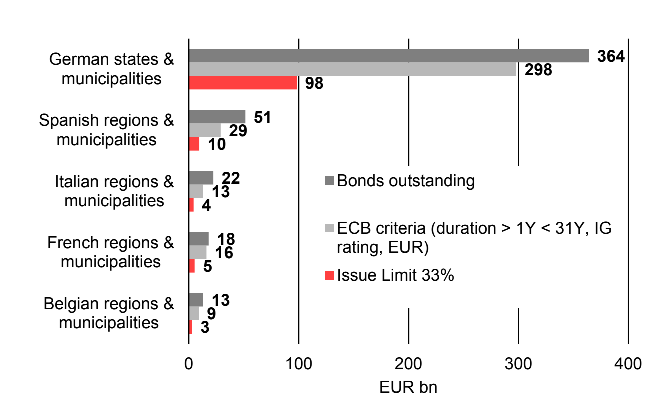
**Spreads of German state bonds have tightened substantially since the summer of 2016 as the ECB has stepped up secondary market purchases of outstanding bonds.** Quantitative easing has been the most important spread driver not only for German states, but for SSA bonds in general in 2H16. Over the past few months, the ECB increased secondary market purchases of German state bonds. In general, SSA spreads have tightened since the Brexit referendum on 23 June, which has acted as a catalyst event for investors in 2016.

**ECB purchases in secondary markets**

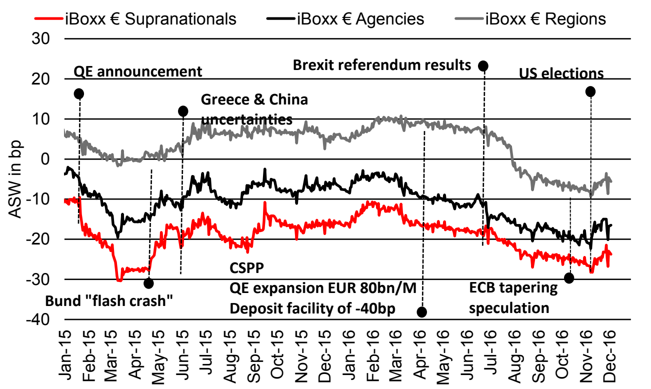
**The ECB, according to the QE criteria, is able to purchase around EUR 100bn of German state bonds in secondary markets.** This compares to a universe of EUR 364bn of outstanding bonds at market prices. Under new criteria the ECB established in December, it can buy those bonds of European regions that have a maturity of between 1Y and 31Y. An ISIN limit of 33% also applies. So far, the ECB, via the Bundesbank, purchased bonds of ten German states in secondary markets. The central bank also purchases LANDER bonds, which are jointly issued by a group of German states, in secondary markets, according to the list of securities it makes available for lending. However, it does not purchase German municipal bonds as they are unrated. Bonds purchased include BERGER, NRW, BADWUR, BRABUR, HESSEN, NIESA, RHIPAL, BREMEN, HAMBURG and THRGN. The ECB targets all maturities ranging from 3Y (NRW 5/2019) to 25Y (NRW 8/2041). However, the purchase volumes are much smaller compared to sovereigns and agency bonds from the public sector purchase program (PSPP), and the ECB manages to buy bonds in sizes of EUR 1mn to EUR 25mn. The ECB needs comparable prices to execute a transaction.

**QE OF EUROPEAN REGIONS**

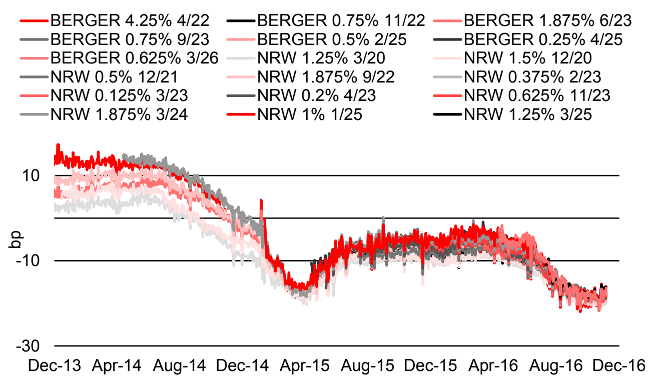
Bond universe of European regions eligible for QE (at market prices)



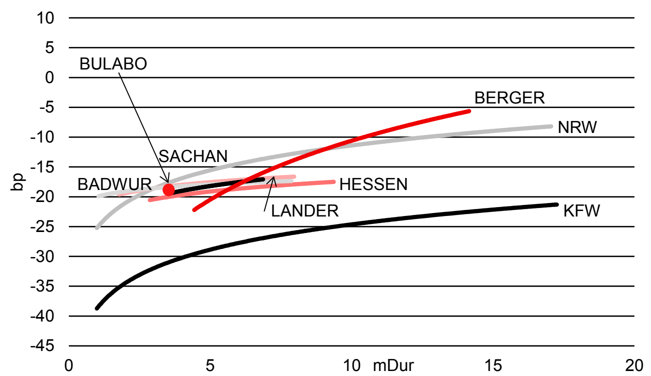

Spread performance of European regions vs. supras & agencies




Spread performance of selected bonds in QE program




Credit curves of German states vs KFW




Source: Bloomberg, iBoxx, UniCredit Research

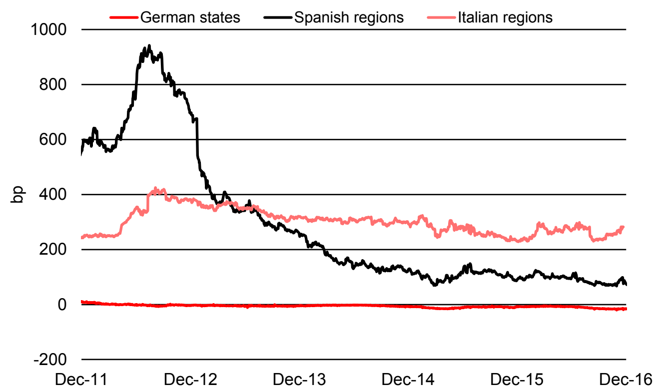
## Fundamental view of German states' bonds

**Spread-supportive factors**

**From a fundamental perspective, we continue to expect a favorable performance of German states' bond spreads over the medium term. There are several factors contributing to this development:**

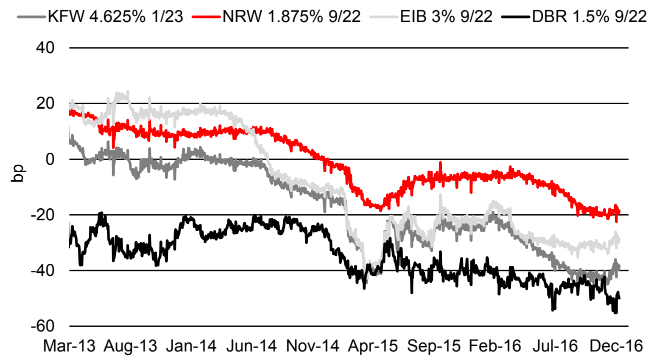
**GERMAN STATES: STABLILITY DURING THE CRISIS…**

German states vs. other European regions (based on iBoxx data)




**… AND LESS VOLATILE THAN SUPRAS & AGENCIES**

Credit curves of the German states vs KFW




Source: iBoxx, UniCredit Research

**Key factors for favorable spread performance**

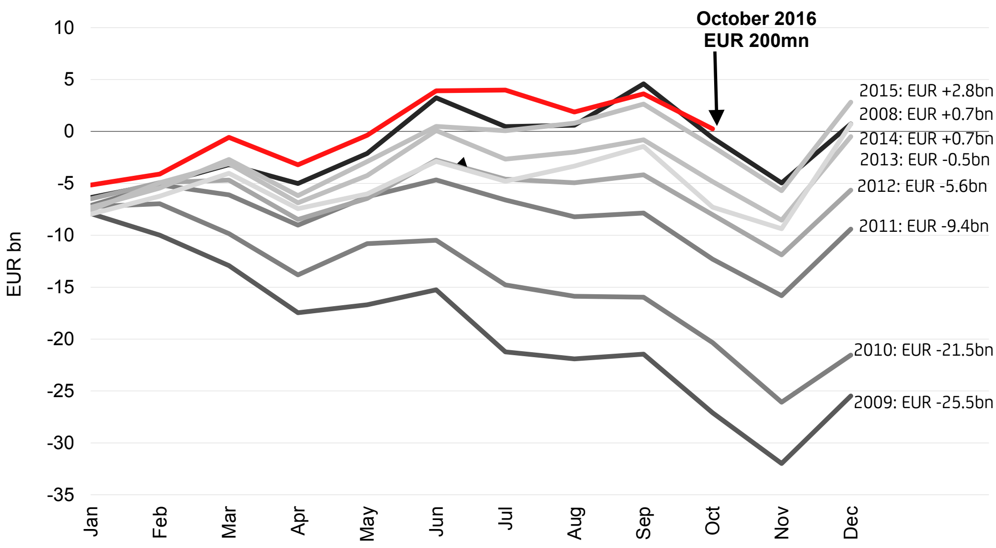
- **Germany is rated AAA:** The top credit quality of the German sovereign (the only one of the euro area member states that has kept its AAA rating from all three major rating agencies throughout the sovereign debt crisis).
- **Strong support mechanism:** The unparalleled strength of the support system under which the German states operate (a high degree of financial equalization among the states coupled with the federal solidarity principle).
- **Shrinking universe**: A lack of investment alternatives for investors seeking safe-haven investments. Due to a shrinking universe of top-rated bonds (rating migration as well as lower supply from highly rated issuers), investors are looking for 0% risk-weighted investment alternatives with relative spread stability. This inevitably leads to strong demand for bonds issued by German states.
- **Shrinking bond supply:** Structurally decreasing supply of bonds issued by German states. Funding requirements are on a declining trend due to continued strong tax collection as well as shrinking deficits of the states. Moreover, the states will have to comply with zero-borrowing rules by 2020, which is another reason why annual funding requirements and thereby the supply of new bonds from German states will decrease.
- **Favorable regulatory environment:** The regulatory environment is favorable for bonds issued by German states which enjoy a 0% risk weight, have very high credit ratings (ranging from AAA to AA-) and a high level of liquidity, all of which are factors favored by the current regulatory regime. Thus, German states are classified as Level 1 for the Liquidity Coverage Ratio and receive a stress factor of 0% for the spread and concentration risk under Solvency II.
- **New investors**: New groups of investors have invested in bonds issued by German states. In addition to traditional investors, the market saw new investors turning to this market segment. These include bank treasuries preparing to fulfill LCR regulation, but also other investors (funds, insurance companies, central banks). This is a result of lower supply from other top rated issuers as well as the need to fulfill strict quality and liquidity criteria in investment decisions (including LCR regulation).

## Budget & debt levels

**2016 to deliver fourth surplus since 2008**

**The budgetary performance of German states has continuously improved in recent years.** The cumulative fiscal balance of the 16 German states stands at EUR 200mn as of October (most recent available data), an increase of EUR 1.7bn compared to the year before. German states expect a EUR 10.6bn budget deficit for 2016 as a whole, according to the states' budget plans, published in June 2016. However, we estimate that the states will record a budget surplus this year. Revenues are rising at a faster pace (+6.4% year-on-year) than expenditures (+4.2%), the states said in June 2016. This comes despite increased expenditures in relation to migration and refugees. The 2016 budget surplus would represent the seventh consecutive improvement in the budget deficit. German states recorded a EUR 2.8bn budget surplus in 2015, which marked the third surplus since 2008. In fact, at EUR 2.8bn it was four times bigger than the surplus of the previous year (EUR 0.7bn).

**GERMAN STATES WITH SOLID BUDGET PERFORMANCE IN 2016 (RED LINE)**




Source: German Ministry of Finance, UniCredit Research

**Large differences among the states**

**Differences among the states in terms of performance persisted in 2016.** Nine of the sixteen states recorded a surplus by October 2016, led by Bavaria with a EUR 1.1bn surplus, followed by Mecklenburg-Western Pomerania (EUR 0.6bn surplus) Berlin and Saxony (EUR 0.5bn surplus). Baden-Württemberg, Berlin, Brandenburg, Hamburg, Hessen, Saxony and Thuringia also recorded a surplus. Six states recorded a deficit, led by NRW with a EUR 0.7bn deficit (in addition to Bremen, Lower Saxony, Rhineland-Palatinate, Saarland and Schleswig-Holstein).

**Healthy performance in 2016**

**The fiscal performance in 2016 improved compared to previous years.** The cumulative budget surplus increased to EUR 200mn as of October 2016 (October 2015: EUR -1.4bn), and 2016 marks the best budgetary performance of German states in the past 10 years (see red line in the chart above), putting German states on track for a record high budget surplus. Having said that – it is worth remembering that the monthly budgetary data still tend to be rather volatile and should be treated with caution when used as a signal for the full year. Nevertheless, the data give us at least a hint of what will likely be a positive budgetary performance of German states in 2016. Regarding individual states, 11 states recorded an improvement in their fiscal balance in October 2016 compared to October 2015; while the budget deficit increased for five states (Baden-Wuerttemberg, Hamburg, NRW, Saxony and Saxony-Anhalt).

### FINANCIAL BALANCE OF GERMAN STATES (EUR BN)

| EUR bn | Jan-Dec 13 | Jan-Dec 14 | Jan-Dec 15 | Difference 2015 vs. 2014 | Oct 2015 | Oct 2016 | Difference 10/16 vs. 10/15 |
|---|---|---|---|---|---|---|---|
| Baden-Württemberg | 0.2 | 0.7 | 0.4 | -0.3 | -0.9 | -1.3 | -0.5 |
| Bavaria | 2.1 | 1.6 | 2.2 | 0.6 | 0.6 | 1.1 | 0.6 |
| Berlin | 0.5 | 0.8 | 0.4 | -0.4 | -0.1 | 0.5 | 0.6 |
| Brandenburg | 0.7 | 0.3 | 0.4 | 0.0 | 0.2 | 0.3 | 0.1 |
| Bremen | -0.5 | -0.4 | -0.3 | 0.2 | -0.3 | -0.1 | 0.1 |
| Hamburg | -0.6 | 0.4 | 0.2 | -0.2 | 0.0 | -0.4 | -0.4 |
| Hessen | -0.5 | -0.7 | 0.0 | 0.7 | -0.3 | -0.1 | 0.2 |
| Lower Saxony | -0.4 | -0.2 | -0.3 | -0.1 | -0.3 | 0.3 | 0.5 |
| Mecklenburg-Western P. | 0.3 | 0.3 | 0.5 | 0.2 | 0.4 | 0.6 | 0.2 |
| NRW | -2.5 | -1.9 | -0.7 | 1.2 | -1.2 | -1.5 | -0.3 |
| Rhineland-Palatinate | -0.5 | -0.6 | -0.6 | 0.0 | -0.8 | -0.7 | 0.1 |
| Saarland | -0.5 | -0.3 | -0.1 | 0.2 | -0.2 | -0.2 | 0.1 |
| Saxony | 0.8 | 0.7 | -0.1 | -0.8 | 0.8 | 0.5 | -0.2 |
| Saxony-Anhalt | 0.2 | 0.1 | 0.5 | 0.4 | 0.3 | 0.2 | -0.1 |
| Schleswig-Holstein | 0.1 | -0.2 | 0.1 | 0.3 | 0.1 | 0.5 | 0.4 |
| Thuringia | 0.3 | 0.2 | 0.2 | 0.1 | 0.3 | 0.5 | 0.3 |
| **All federal states** | **-0.5** | **0.7** | **2.8** | **-0.3** | **-1.4** | **0.2** | **1.7** |

Differences due to rounding.

Source: German Ministry of Finance, UniCredit Research

**Upwards revision of expected tax revenues is a positive sign**

**Another highly positive signal regarding the budgetary performance of German states in 2016 is a recent release of estimated tax revenues.** Expected tax revenues for German states in 2016 have been revised upwards by the tax projection working group ("Arbeitskreis Steuerschätzung"). Tax revenues for 2017 and 2019 are estimated to be slightly higher. On 4 November 2016, the group of experts, which meets twice a year in May and in November, announced its semiannual adjustment of tax estimates for the Bund, German states and municipalities. The forecasting horizon included the years 2016 to 2021. Expected tax revenues for the year 2016 have been revised up by EUR 3.2bn (+1.2%) for German states. Tax estimates for the years 2017 and 2019 have also been raised upwards (see table).

**Strong fundamentals**

**In the November press release, which was basically unchanged from May, there is reference to the favorable economic development in Germany, which is resulting in continuously higher employment.** This is beneficial for companies and private households, because it results in higher incomes and increased revenues. German states and municipalities benefit over-proportionally from rising tax revenues, the working group argues, because state and municipal taxes are rising faster than federal taxes. Interestingly, the economic assumptions on which the estimates are based are only moderate: the Ministry of Finance expects a real GDP growth rate of 1.8% for Germany in 2016, which is below the forecast of our economists of 1.9%. Thus, we expect an outperformance of tax revenue even above the newly published figures.

### ESTIMATES OF ANNUAL TAX REVENUES – GERMAN STATES (EUR BN)

| | Nov 2015 estimate | May 2016 estimate | November 2016 estimate | Revision |
|---|---|---|---|---|
| **2016** | 275.3 | 277.7 | 280.9 | +3.2 |
| **2017** | 284.8 | 287.5 | 288.3 | +0.8 |
| **2018** | 295.4 | 299.2 | 299.2 | Unchanged |
| **2019** | 304.1 | 308.7 | 309.0 | +0.3 |
| **2020** | 314.9 | 320.5 | 320.5 | unchanged |
| **2021** | - | - | 332.4 | - |

Source: German Ministry of Finance, UniCredit Research

**Surplus expected for 2016**

**Several indicators point to a budget surplus in 2016 after German states recorded a surplus in the previous two years.** First, the performance in the year through October 2016 looks promising – even if it has to be taken with a pinch of salt due to the volatile nature of the data at the beginning of the year. Second, the strong upward revision of expected tax revenues for this year, as well as the years to come, serve as another indication of a positive performance. Third, the tax estimate is based on relatively conservative growth expectations, which are below our economists' forecasts. Thus, another round of upward revisions to tax revenues at the next adjustment of tax estimates in May 2017 would not be a surprise. Fourth, the current low to negative interest rate environment bodes well for a favorable budgetary performance due to low interest costs, leaving German states relatively cash rich. Last but not least, German states are continuously stepping up their efforts to consolidate their budgets in the run up to meeting the zero-borrowing targets by 2020.

**Small decrease in nominal debt levels in 2015**

**In 2015, debt levels of German states decreased for the first time since 2008.** The total nominal debt of German states dropped by EUR 6.5bn( -1.19%) to EUR 540.6bn at the end of 2015. This compares to an increase of EUR 2.9bn (+0.5%) at the end of 2014, EUR 5.8bn (+1.1%) in 2013 and EUR 7.6bn (+1.4%) in 2012. The individual states show wide differences in performance, with nine states reducing their debt levels (Baden-Württemberg, Bavaria, Berlin, Brandenburg, Bremen, Mecklenburg-Western Pomerania, Rhineland-Palatinate, Saxony and Thuringia), two states maintained the same debt level while the remaining five states recorded rising debt levels in 2015.

**Decrease of debt levels in 2Q16**

**In 3Q16, nominal debt of German states recorded a decrease.** At EUR 538.2bn, total nominal debt was EUR 11.6bn below that of 3Q15 (EUR 549.8bn). This is a clear reflection of the continuously improving fiscal situation of the German states and is highly credit positive. All but five of the sixteen German states reduced their nominal debt levels in 3Q16 compared to the end of last year. In general, quarterly debt numbers are not a very good indicator compared to the end of year numbers. In the past figures of third quarter were below the year end numbers.

**NOMINAL DEBT OF GERMAN STATES (EUR BN)**

| | 2012 | 2013 | 2014 | 2015 | Difference 2015 vs. 2014 | 3Q16 |
|---|---|---|---|---|---|---|
| Baden-Württemberg | 42.2 | 44.2 | 45.6 | 40.7 | -4.9 | 39.6 |
| Bavaria | 28.1 | 26.4 | 25.1 | 22.6 | -2.5 | 20.4 |
| Berlin | 61.0 | 60.4 | 59.8 | 58.6 | -1.2 | 58.2* |
| Brandenburg | 18.0 | 17.2 | 16.7 | 16.7 | +/-0 | 16.1 |
| Bremen | 19.0 | 19.6 | 19.5 | 21.2 | 1.7 | 22.2 |
| Hamburg | 20.9 | 23.2 | 23.2 | 23.2 | +/-0 | 23.3 |
| Hessen | 40.4 | 39.9 | 41.0 | 42.6 | 1.6 | 46.4 |
| Lower Saxony | 55.3 | 56.5 | 57.2 | 58.1 | 0.9 | 57.5 |
| Mecklenburg-Western. P. | 9.6 | 9.5 | 9.4 | 9.2 | -0.2 | 8.6 |
| NRW | 129.9 | 133.9 | 136.8 | 136.9 | 0.1 | 136.2 |
| Rhineland-P. | 32.2 | 32.8 | 32.6 | 32.1 | -0.5 | 32.3 |
| Saarland | 13.0 | 13.7 | 14.0 | 14.1 | 0.1 | 14.1 |
| Saxony | 5.0 | 4.1 | 3.2 | 2.3 | -0.9 | 2.0 |
| Saxony-Anhalt | 20.6 | 20.4 | 20.5 | 20.0 | -0.5 | 21.2 |
| Schleswig-Holstein | 27.0 | 26.4 | 26.8 | 26.7 | -0.1 | 26.3 |
| Thuringia | 16.1 | 15.8 | 15.7 | 15.6 | -0.1 | 14.5 |
| **Total States** | **538.4** | **544.1** | **547.1** | **540.6** | **-6.5** | **538.2** |

Differences due to rounding; 3Q16 data are the latest available

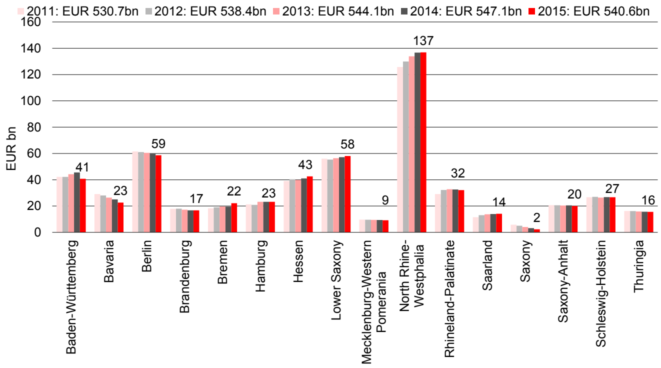
Source: German Ministry of Finance, UniCredit Research

**Relative debt levels have declined**

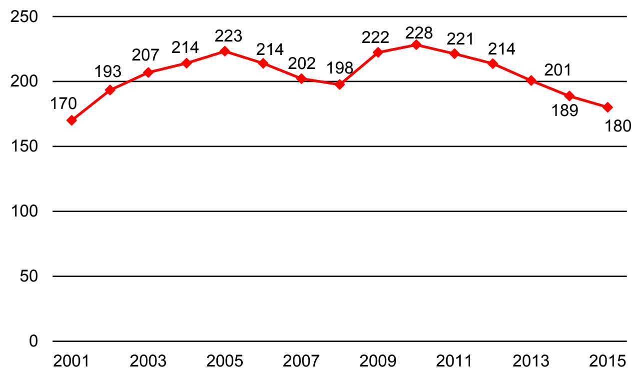
**In relative terms, debt levels have declined for five consecutive years.** In order to assess the relative performance of indebtedness among the states, we use an indicator provided by S&P. This indicator is "tax-supported debt as a percentage of consolidated operating revenues" (tax-supported debt includes direct debt of a state, debt which is guaranteed by the state, non-guaranteed debt of government-related entities and debt of satellite companies that rely – at least partially – on the state for their financial standing). We have used the figures provided by S&P for each state and have calculated the weighted average (by operating revenues). This indicator, which we consider one of the best against which to compare debt levels among the German states, decreased to 180% in 2015 from 200% in 2013. In terms of individual debt levels, the figure ranges from 448% for Bremen at the upper end of the range, to 44% for Saxony at the lower end of the range. Please refer to the individual profiles of the states for the relative and absolute performance of this indicator.

**DEBT LEVELS OF THE GERMAN STATES**

Nominal debt levels




Tax-supported debt as a percentage of consolidated operating revenue*




*Weighted by operating revenues

Source: German Ministry of Finance, S&P, UniCredit Research

**Zero-borrowing rules lead to stepping-up of consolidation efforts…**

**Consolidation efforts in terms of fiscal stance, as well as debt levels, will be strongly influenced by the constitutional requirement for German states to comply with the zero-borrowing rules by 2020.** 2010 was the first year in which the states were monitored on their progress towards achieving balanced budgets by the end of this decade. This resulted in four states (Berlin, Bremen, Saarland and Schleswig-Holstein) receiving early warnings and being put under special supervision (see section Stability Board for details). Consequently, these states had to present five-year plans on how they intend to achieve a sustainable reduction in their annual net new borrowing. The progress in sticking to those targets is monitored on a semiannual basis, which we consider positive from a credit perspective as it exerts further pressure to exercise fiscal restraint. At the last assessment of the five-year plans, all three out of four states received positive feedback on the implementation of restructuring plans. In particular, Berlin and Schleswig-Holstein have managed to outperform the already strict consolidation targets.

**...with varying results**

The progress towards achieving the zero-borrowing target varies among states. Higher-rated states appear to have used their budgetary flexibility – particularly on operating expenditure – to speed up their return to operating surpluses, or even increase them. These states should be able to comply with the balanced budget requirement laws ahead of the 2020 target. S&P believes that other states may have to implement deeper, politically more sensitive cuts to achieve this goal. The rating agency thinks that a few states might find it very difficult to achieve the 2020 target.

**We consider the existence of the zero-borrowing rules to be highly credit positive. They support continued improvement of the fiscal stance as well as the reduction of the debt levels of the German states. Moreover, they will lead to lower funding requirements as well as a reduced supply of bonds issued by German states, both of which are spread-supportive.**

## Funding outlook for German states

**Funding volumes on declining trend**

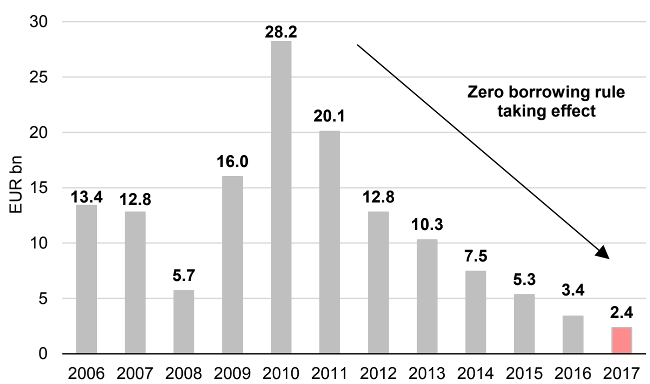
**The funding needs of German states are set to continue their downward trend in 2017.** Net funding requirements of German states are expected to decrease to EUR 2.4bn in 2017 from EUR 3.4bn this year, according to data from the individual states which was recently published by Reuters (see table).

**Decreasing net supply of bonds from German states**

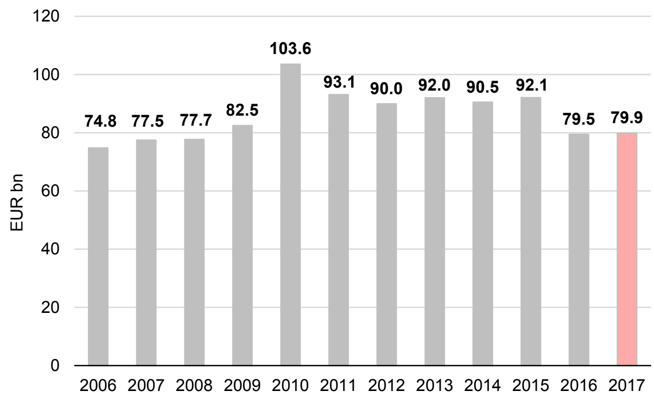
**The net funding requirements, as opposed to gross funding, indicate the total funding net of the refinancing of outstanding debt.** A decline in net funding had been expected and marks the seventh straight decrease in a row. A trend of shrinking net supply of German state bonds has been in place since 2010 (net funding needs of EUR 28.2bn) and this trend remains intact. This is – at least partly – a result of the German states' consolidation efforts in the run-up to zero borrowing rules, which they will have to fulfill by 2020. Note however that two German states have not yet published their 2017 requirements: Hessen and Schleswig-Holstein. For these states we assume that the numbers remain unchanged compared to 2016. Bremen already indicated its 2017 funding requirements in its June budget plan.

**FUNDING NEEDS OF GERMAN STATES (KREDITERMÄCHTIGUNGEN*)**

Net funding requirements of German states extend downward trend




2017 gross funding of German states remains flat*




*The figures are the maximum amount the states are authorized to borrow in the capital markets

Source: Reuters, Bloomberg, UniCredit Research

**Official funding forecast**

**The figures are the official funding forecasts ("Kreditermächtigungen") authorized by the budget plans of the respective states.** They indicate how much each state is legally allowed to borrow in the capital market to repay maturing debt and to cover budget deficits. Not all states fully use the total amounts allowed, which means that actual total funding is lower.

**Five states reduce debt levels**

Five German states plan to repay debt in 2017: **Bavaria** continues to stand out with the highest reduction of net borrowing needs (EUR -0.5bn), followed by **Saxony-Anhalt** (EUR -0.1bn), **Berlin, Saxony** (EUR -0.08bn each) and **Hamburg** (EUR -0.03bn). In gross funding terms, the German states expect to raise a maximum of EUR 80bn in 2017 (2016: EUR 79.5bn). Bavaria and Rhineland-Palatinate indicated that their gross funding will rise by EUR 1bn each. However we don't expect any new bond issuance from Bavaria in 2017.

The funding forecasts indicate how much each state is legally allowed to borrow in capital markets to repay maturing debt and to cover budget deficits. The actual borrowing needs will be lower depending on economic developments and the amount of tax collection. Thus, the total amounts possible will not be fully used by all states.

**Capital market funding in 2017**

Given the declining net funding, capital market funding volumes should be lower in 2017 compared to 2016. This also continues a trend from the previous two years. All German states, including municipalities but excluding joint Laender bonds, have raised a combined EUR 49.4bn through public bond issues this year to date, a 5.4% decline (2015 YTD: EUR 52.2bn), according to dealogic.

**Our view**

The decrease in the levels of German states' net funding is in line with our expectations. It comes as German states have to comply with the zero-borrowing rule by 2020, which prohibits them from taking on new debt. German states should succeed in bringing net funding to zero over the coming three years as they benefit from: **1.** Strong economic growth in Germany, and **2.** Consequently, high tax revenues. This leads to a number of states currently being "cash rich". Issuers are further supported by the low interest rate environment, which allows them to reduce interest expenses. The release of funding plans did not have an effect on secondary market spreads. Still, we expect the decline in funding to be supportive for spreads of German states in 2017 because it leads to a scarcity effect. Spreads of outstanding bonds are further supported by the ECB's quantitative easing. As secondary market spreads of German states have tightened significantly since the summer, we only expect a sideways movement of spreads in 1H17.

**GERMAN STATES' 2017 FUNDING REQUIREMENTS* (EUR BN)**

| | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Net | Gross | Net | Gross | Net | Gross | Net | Gross | Net | Gross |
| Baden-Württemberg | 1.8 | 9.3 | 1.2 | 10.3 | 0.8 | 13.1 | 0.0 | 8.9 | 0.0 | 8.8 |
| Bavaria | -0.5 | 2.7 | -0.5 | 2.5 | -0.9 | 2.5 | -0.6 | 2.4 | -0.5 | 3.4 |
| Berlin | 0.5 | 8.3 | -0.1 | 7.9 | -0.2 | 7.6 | -0.1 | 7.2 | -0.1 | 7.0 |
| Brandenburg | 0.3 | 3.6 | 0.0 | 2.2 | 0.0 | 2.9 | 0.0 | 2.4 | 0.0 | 2.0 |
| Bremen** | 0.5 | 9.1 | 0.4 | 8.6 | 0.3 | 7.9 | 0.0 | 3.1 | 0.0 | 2.6 |
| Hamburg | 0.5 | 4.3 | 0.3 | 3.4 | 0.2 | 3.6 | 0.1 | 2.2 | 0.0 | 2.1 |
| Hessen*** | 1.3 | 6.4 | 1.1 | 6.3 | 0.7 | 5.8 | 0.6 | 6.2 | 0.6 | 6.2 |
| Lower Saxony | 0.6 | 7.1 | 0.7 | 8.5 | 0.6 | 7.8 | 0.5 | 8.0 | 0.0 | 8.2 |
| Mecklenburg-Western P. | 0.0 | 1.3 | 0.0 | 1.5 | 0.0 | 1.1 | 0.0 | 1.2 | 0.0 | 0.5 |
| NRW | 3.5 | 22.0 | 2.6 | 20.4 | 2.4 | 20.9 | 2.0 | 20.0 | 1.8 | 20.2 |
| Rhineland-Palatinate | 1.0 | 7.1 | 1.1 | 8.4 | 1.0 | 7.7 | 0.5 | 7.0 | 0.3 | 8.2 |
| Saarland | 0.5 | 1.7 | 0.6 | 1.9 | 0.4 | 1.3 | 0.3 | 1.8 | 0.2 | 1.5 |
| Saxony | -0.1 | 1.8 | -0.1 | 0.9 | -0.1 | 1.4 | -0.1 | 0.6 | -0.1 | 0.3 |
| Saxony-Anhalt | 0.0 | 2.2 | -0.1 | 2.4 | -0.1 | 2.6 | -0.1 | 2.6 | -0.1 | 2.6 |
| Schleswig-Holstein*** | 0.5 | 3.2 | 0.3 | 3.7 | 0.3 | 4.0 | 0.3 | 4.2 | 0.3 | 4.2 |
| Thuringia | -0.1 | 1.6 | -0.1 | 1.9 | 0.0 | 1.9 | 0.0 | 1.9 | 0.0 | 1.9 |
| **Total** | **10.3** | **92.0** | **7.5** | **90.5** | **5.3** | **92.1** | **3.4** | **79.5** | **2.4** | **79.9** |

*Gross figures are the maximum the states are authorized to borrow on the capital markets as announced in the budgets.
The actual figures might turn out lower as a result of actual tax collection and financing needs. **according to June budget plan; *** 2017 numbers estimated by assuming unchanged requirements compared to the year before.
Source: issuers, Reuters, UniCredit Research

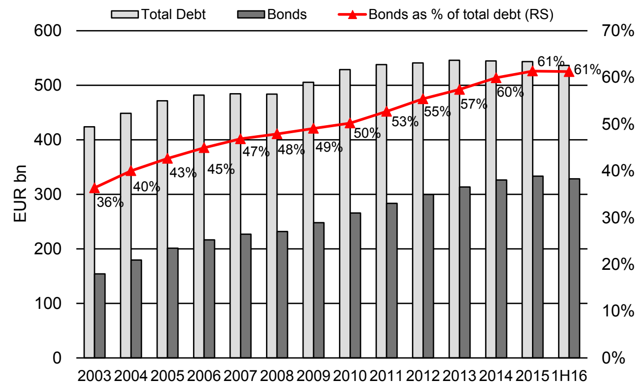
## Funding strategies

**Bonds and Schuldschein loans are the main funding instruments**

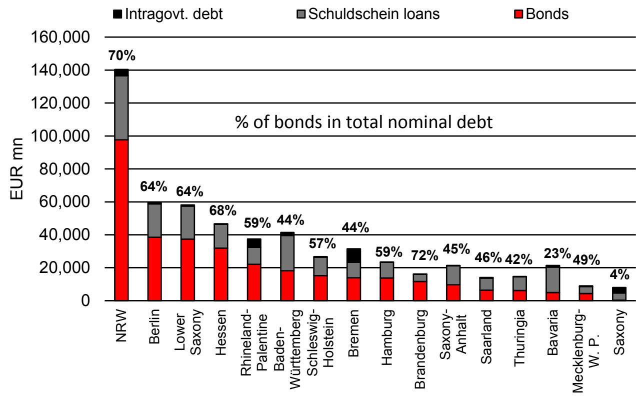
**Traditionally, German states raise funds through bonds and Schuldschein loans.** In terms of relevance, the role of bond financing has increased over the years. The share of bond financing as a percentage of total debt had risen to 61% by 1H16, from 25% at the end of 2001. There are large differences among states in terms of funding instruments used. At the end of 3Q16, the share of bond financing ranged from 70% for Hessen at the upper end of the range down to just 4% for Saxony. Due to a more subdued role of bank funding, we expect the share of bond financing to rise further. Please also refer to the profiles of the individual states in the second half of this report for further details on funding strategies and debt composition.

**SHARE OF BOND FINANCING BY GERMAN STATES ON THE RISE**

Historical development of bonds as a percentage of debt




Stock of debt at end-3Q16 by instrument.
Label: Bonds as a percentage of total debt




Source: Bundesbank, Ministry of Finance, UniCredit Research

**Schuldschein loans**

**In recent years, funding through Schuldschein loans has become less important for the German states.** While historically the central funding instrument, their relevance has decreased considerably. So far in 2016, Schuldschein loans have played a very minor role as a funding instrument for the German states. Moreover, the attractiveness of structured Schuldschein loans has decreased in the current low-interest environment, which is part of the reason for lower Schuldschein loan issuance. In 2013, there was a temporary uptick in interest in this instrument, but it has clearly remained below what we used to see in this market segment. Generally, many German states are highly flexible in their funding strategies, often responding to reverse inquiries, thereby adapting their issuance patterns to investors' needs and the prevailing market environment.

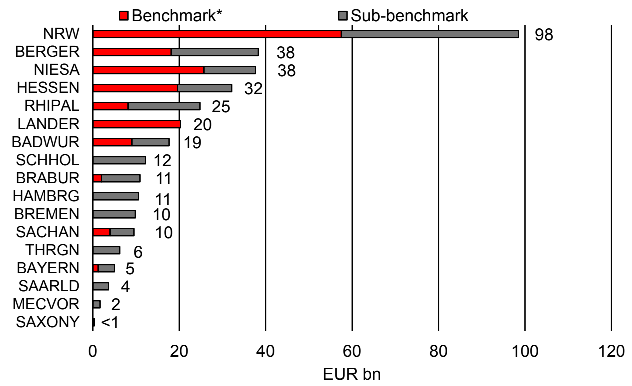
**Joint benchmark issues**

**A number of German states raise funds in the form of joint benchmark bonds ("Ländergemeinschafts-bonds", Ticker: LANDER).** These issues represent large and liquid bonds for investors looking for exposure to various German states. For the states, the issues are a good funding source if current funding needs are not particularly large. There is a several but not joint liability of the participating states, according to their respective share in the issue. They are senior unsecured and rank pari passu with previous and future obligations of the issuers.

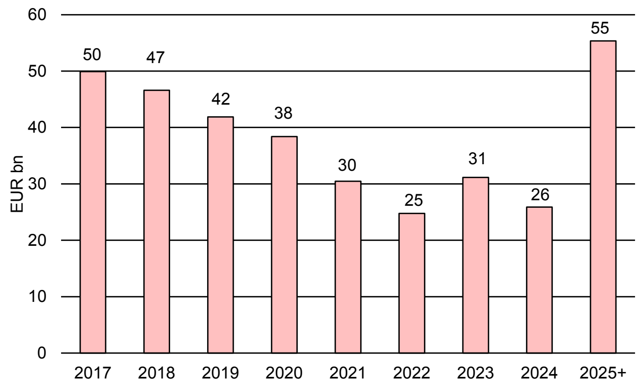
**Excellent capital market access**

**The excellent capital market access of the German states has become even more important for the credit fundamentals of the states.** The first test case for the states was the aftermath of the Lehman default in 4Q08. The German states had no trouble raising funds in the capital market at a time when the market was closed for many issuers. Similarly, in 4Q11, when market access was again difficult for many issuers at the peak of the sovereign debt crisis, German states could easily tap the markets. This highlighted, once again, the exceptional capital market access enjoyed by this group of issuers – an aspect repeatedly emphasized by the rating agencies in their rationale for the top-class ratings assigned to the German states.

**GERMAN STATES IN CAPITAL MARKETS (EUR BN)**




**MATURITY PROFILE (EUR BN)**




*Benchmarks are bonds with a minimum issue size of EUR 1bn. Data as of November 2016.

Source: Bloomberg, UniCredit Research

**Largest issuers: NRW, Berlin, Lower Saxony**

**NRW has the largest amount outstanding at EUR 98bn, followed by Berlin with EUR 38bn, Lower Saxony with EUR 38bn, and Hessen with EUR 32bn.** The joint issues ("Ländergemeinschaft") amount to EUR 20bn. We have included the new joint issue between German states and the Bund (Bund-Länder Bond, Ticker: BULABO – see next section for details) in this overview, although there is some Bund funding (13.5%) included in the total issue size of EUR 3bn. We consider the bond to be predominantly a German states product, given that the Bund share amounts to just EUR 405mn.

**Smooth maturity profile**

**The aggregate maturity profile of the German states bonds is relatively smooth.** Between EUR 42bn and EUR 50bn will mature annually in the next three years, with 2017 marking the largest maturities.

**Benchmark funding**

**The general trend towards smaller issue sizes among European SSA issuers can also be observed among the German states.** Traditional benchmark bonds (issue size EUR 1bn and above) have been used less. This is representative of the general trend among German states (and indeed many other SSA issuers as well) towards smaller bonds below benchmark format.

## Schuldschein funding for German states & municipalities

*Source: October 2016 monthly report by Germany's Bundesbank and Federal Statistical Office 2015 data on public-sector debt*

**Municipal Schuldschein market reaches record size**

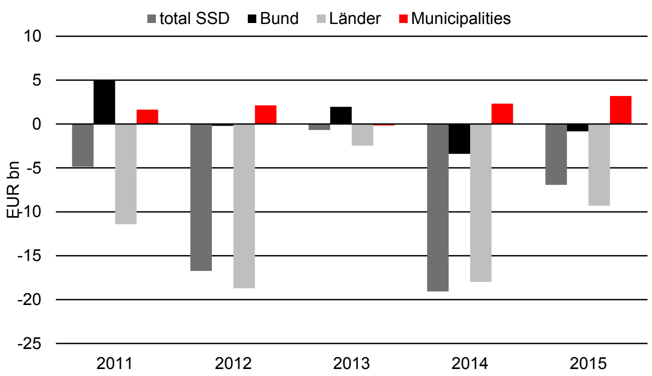
**German municipalities are increasingly turning to the Schuldschein market to raise funding.** They are making use of the good funding conditions and the relatively simple process of issuing Schuldschein loans. The market reached a record volume of EUR 91.8bn at the end of 2015, according to data from the Bundesbank and the latest available data from Germany's Federal Statistical Office. This marks an increase of EUR 9.1bn since 2010, when the municipal Schuldschein market had reached a size of EUR 82.7bn.

**Positive net issuance**

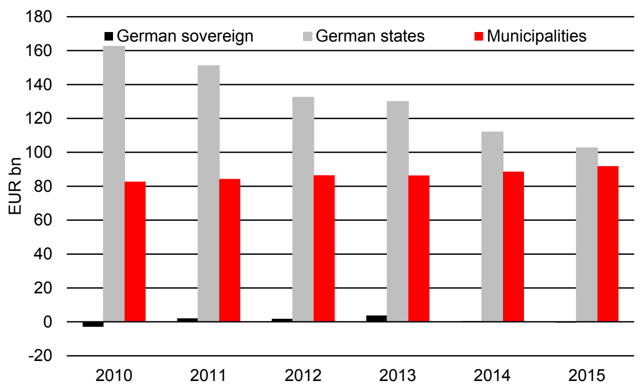
Data from the Bundesbank and Germany's Federal Statistical Office show net new issuance of Schuldschein loans, i.e. issuance minus redemptions, has increased by 38% in the period 2014-15 (from EUR 2.3bn in 2014 to EUR 3.2bn in 2015). Nevertheless, the overall German public Schuldschein market has been shrinking continuously for the past five years (see chart below). Germany's public Schuldschein market comprises issues from the German sovereign and German states and municipalities, and it is the largest segment issuing Schuldschein loans in terms of (at EUR 194bn). It is much larger than the outstanding volume of the CSL market, which we estimate is around EUR 70bn.

**GERMANY'S PUBLIC SCHULDSCHEIN MARKET**

Net new issuance from Germany's public sector




Germany's public Schuldschein market by outstanding volume




Source: Bundesbank, Federal Statistical Office of Germany, UniCredit Research

**Municipalities vs. German states**

While the market for Schuldschein loans issued by municipalities is growing, the market for Schuldschein loans issued by German states and by the sovereign is shrinking. The falling net issuance volumes of Schuldschein loans from Germany's public sector are in line with a decrease in total debt among German states and the sovereign. German states, the group that issues the most Schuldschein loans, have to comply with the zero-borrowing rule by 2020, meaning they cannot take on any new debt. At the same time, German states are cash rich and benefit from low interest expenses in the current market environment. Consequently, the volume of Schuldschein loans that German states have outstanding has dropped by one third over the past five years (from EUR 162.5bn in 2010 to EUR 102.6bn at the end of 2015), according data from the Bundesbank and Germany's Federal Statistical Office.

**Wave of new issuance: Hannover, Bielefeld, Lünen**

A number of municipalities have turned to the Schuldschein loan market this year, according to *Der Neue Kämmerer*. They include a recent EUR 100mn transaction from the **region of Hannover** in Lower Saxony. It issued multiple tranches of 20-30Y debt and was priced with an average coupon of 1.2%. It will use the proceeds for investments. Hannover had previously issued a EUR 93mn Schuldschein loan with a 24Y maturity and 0.9% coupon as a private placement. Before that, the North-Rhine Westphalian **city of Bielefeld** issued a EUR 106.5mn Schuldschein loan in July. The transaction comprised four tranches with maturities ranging from 5Y to 15Y. Bielefeld will use the proceeds for an entity related to the city, which will fund an acquisition. The **city of Lünen**, also located in North-Rhine Westphalia, raised EUR 45.5mn in June through a 10Y transaction. The **region of North Saxony** issued a 30Y Schuldschein loan in May. Apart from these publically reported transactions, new Schuldschein loan issuance remains difficult to track. The private nature of Schuldschein loan transactions means that they are not listed or traded publically nor are they tracked by data providers such as Bloomberg or dealogic.

## German municipalities in the bond market

**German municipalities in the bond market**

**In addition to Schuldschein loan issuance, German municipalities are also increasingly tapping public bond markets, which reached a size of EUR 2.44bn in 2016**. The largest issuers are communities from North-Rheine Westphalia (NRWGK), whose most recent transaction is the NRWGK 1.125% 2/2025.The average issue size of municipality bonds has increased from EUR 67mn in the 1990s to EUR 141mn in the 2000s and EUR 262mn since 2010. In 2013, the cities of Nuremberg and Würzburg for the first time issued a joint municipal bond – a model that was quickly adopted by a number of municipalities in NRW. There have already been two bonds by this group of issuers (NRW Städteanleihe) – issued in February 2014 and February 2015. In addition, the cities of Mainz and Ludwigshafen issued their inaugural bonds in November 2013 and November 2014, respectively. We expect the trend towards municipal bond issuance to continue in Germany. So far, there is no concrete model for a joint funding agency, like we have seen in France (Agence France Locale) or the Nordic countries (e.g. Municipality Finance). This would be, in our view, a very viable addition to the funding instruments of German municipalities, which would most likely be easier to realize on a state level, than on a national level.

**OUTSTANDING MUNICIPALITY BONDS**

| Issue | Municipality | Amount Issued (EUR mn) | Issue Date | Issue Spread (in bp) |
|---|---|---|---|---|
| NRWGK 1.125 2/2018 | NRW Städteanleihe 1 | 500 | 06 February 2014 | ms+35 |
| MAINZ FRN 11/2018 | City of Mainz Germany | 125 | 12 November 2013 | 3M EURIBOR +40 |
| HANNOV 3.645 12/2019 | City of Hanover Germany | 180 | 23 November 2009 | ms+25 |
| DRTMND FRN 3/2022 | City of Dortmund Germany | 120 | 09 March 2016 | 3M EURIBOR +39 |
| NRWGK 1.25 6/2022 | NRW Städteanleihe 2 | 250 | 10 June 2015 | ms+40 |
| MAINZ FRN 9/2022 | City of Mainz Germany | 150 | 30 September 2015 | 3M EURIBOR +35 |
| NRGWRG 1.875 5/2023 | Nürnberg Würzburg | 100 | 05 August 2013 | ms+38 |
| MAINZ FRN 9/2023 | City of Mainz Germany | 125 | 27 April 2016 | 3M EURIBOR +35 |
| LDGHFN 1.25 12/2024 | City of Ludwigshafen | 150 | 27 November 2014 | ms+41 |
| NRWGK 1.125 2/2025 | NRW Städteanleihe 3 | 500 | 19 February 2015 | ms+50 |
| BOCHUM 1 05/2026 | City of Bochum Germany | 115 | 11 May 2016 | ms + 50 |
| NRWGK 1 06/2026 | NRW Städteanleihe 4 | 125 | 31 May 2016 | ms + 49 |
| **TOTAL** | | **2,440** | | |

Source: Bloomberg, UniCredit Research

# Bund-Länder Bond

**Bund-Länder bond**

**In June 2013, a new type of bond emerged: the inaugural Bund-Länder Bond (Ticker: BULABO).** In a nutshell, the new Bund-Länder Bond is similar to the LANDER bonds, with the difference being that the Bund is also among the group of participants. As with LANDER bonds, each state, as well as the Bund, is liable for its own share of the bond only (i.e. several but not joint liability). Moreover, due to its larger issue size, the liquidity of the new bond is higher than that of the LANDER bonds.

**HIGHLIGHTS OF THE INAUGURAL BUND-LÄNDER BOND**

| | |
|---|---|
| **Issuers** | **10 German states plus Bund** |
| **Currency** | EUR |
| **Maturity** | 15 July 2020 |
| **Issue Date** | 26 June 2013 |
| **Issue Size** | EUR 3bn |
| **Liability** | Several but not joint liability, each participant is liable for its own share of the bond |
| **Rating** | AAA by Fitch |
| **Pricing** | ms+1bp |
| **Current trading*** | ms-18bp |

*As of 14 December 2016

Source: German Finanzagentur, Reuters, Bloomberg, UniCredit Research

**Background**

**In June 2012, as part of the agreement of the European fiscal pact, the German federal government and the German states agreed to start raising funds jointly in 2013**. According to a press release at the time, the aim of the initiative is to support the states in fulfilling their part of the fiscal compact and the constitutionalized zero-borrowing rules, which take effect in 2020. The idea was that the German states would be able to raise funds at more-favorable conditions if the Bund were to participate in the bond, thus enabling the German states to pay lower interest rates.

**Set-up**

**No single participant in the bond dominates the issue in terms of its individual share.** The share of the 10 German states participating in the bond (NRW, Berlin, Bremen, Schleswig-Holstein, Brandenburg, Rhineland-Palatinate, Saarland, Hamburg, Mecklenburg-Vorpommern, Saxony-Anhalt) is 86.5% of the total issue size (EUR 3bn). The Bund takes up the remaining 13.5% of the proceeds of the bond. Picking up the largest share, NRW is the state with the largest annual funding needs of the 16 German states. The six states not participating in the bond are Bavaria (which stated from the beginning that it would not participate), Baden-Württemberg, Hessen, Thuringia, Saxony and Lower Saxony.

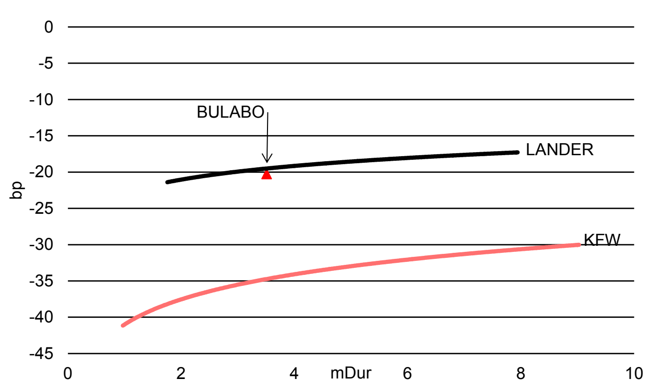
**PARTICIPANTS IN THE BUND-LÄNDER BOND**

| Issuer | Share in the new bond | Gross funding 2017 | Rating |
|---|---:|---:|---:|
| NRW | 20.00% | 20.2 | Aa1s/AA-s/AAAs |
| Berlin | 13.50% | 7.0 | Aa1s/--/AAAs |
| Bremen | 13.50% | 2.6 | --/--/-- |
| Schleswig-Holstein | 8.00% | 4.2 | --/--/AAAs |
| Brandenburg | 6.75% | 2.0 | Aa1s/--/-- |
| Rhineland-Palatinate | 6.75% | 8.2 | --/--/AAAs |
| Saarland | 6.75% | 1.5 | --/--/-- |
| Hamburg | 5.25% | 2.1 | --/--/AAAs |
| Mecklenburg-Vorpommern | 3.25% | 0.5 | --/--/-- |
| Saxony-Anhalt | 2.75% | 2.6 | Aa1s/AA+s/AAAs |
| **Bund** | **13.50%** | **185.2** | **Aaas/AAAs/AAAs** |

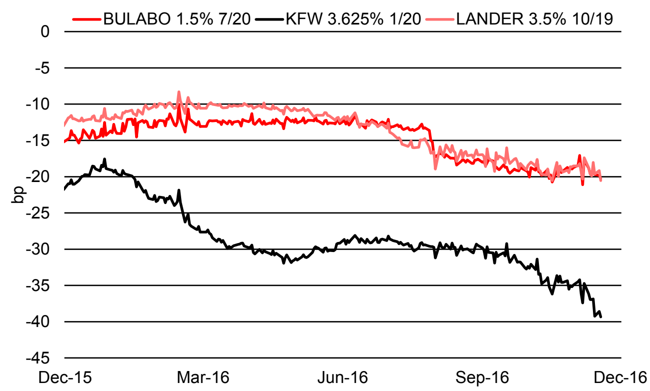
Source: German Finanzagentur, Bloomberg, UniCredit Research

### BUND-LANDER BOND VS PEERS

Current Credit Curves




Historic Development




Source: iBoxx, UniCredit Research

**Spread performance**

**Since issuance, BULABO has performed very well and has, of course, benefitted from the general spread tightening of German states bonds.** It was indicated at ms-18bp on 14 December 2016. BULABO 1/20 currently trades at around same level as the nearest LANDER bond (LANDER 6/20 indicated at ms-19bp) and the pick-up to KFW 1/20 has increased to 19bp, with KFW 1/20 indicated at ms-37bp.

**More to come?**

**At this point, there are no further BULABOs planned.** The Finanzagentur originally stated that its intention was to establish a new and liquid market segment with a benchmark curve across different maturities. However, none of the higher-rated German states have shown interest in participating in potential future issues. Nevertheless, further issues at a later stage cannot be ruled out. Should BULABOs ever become a regular funding instrument, we would expect them to replace LANDER issuance.

**Rating agencies**

**All three rating agencies (Moody's, Fitch and S&P) have published comments on the inaugural Bund-Länder Bond**. Fitch and S&P have very different approaches to assessing the creditworthiness of the joint Bund-Länder issue. Fitch emphasizes the strength of the support mechanism – and thereby equates the credit quality of the states with that of the Bund. S&P applies the weakest-link approach (i.e. would assign the lowest rating of all participating states to the bond).

**Our view**

**While we acknowledge that there are differences in fiscal indicators as well as debt levels among the states, we tend to assign more weight to the exceptional strength of the support mechanism in our assessment of the creditworthiness of the German states.** Moreover, we fully agree with Moody's that the new Bund-Länder Bond is credit positive for the German states. The fact that the Bund has participated in the bond – and furthermore clearly aims to establish a new and liquid market segment – underpins the deep entrenchment of the strong institutional framework in which the German states operate.

# Federal finance system ("Finanzausgleich")

**States are entrusted with a wide range of responsibilities**

**German states are entrusted with a wide range of responsibilities.** These responsibilities are assigned according to the subsidiarity principle, which stipulates that the Bund is only responsible for tasks that can be better performed by the sovereign rather than by the individual German states. The German states are generally responsible for education, police, infrastructure, transport, the local economy and the judiciary. As such, **there is considerable interdependence between the Bund and state governments**, i.e. bills regarding the states' finances and administrative tasks have to be approved by the Bundesrat (the Upper House of German Parliament).

As the states are responsible for a wide range of tasks, they also account for a relatively high share of government spending. **The states are supported by a finance system with a strong equalization mechanism called the "Länderfinanzausgleich", which ensures some smoothing of the revenue-generating capabilities of the states.**

**Financial equalization: new system from 2020**

**On 14 October 2016, representatives of the 16 German states and Germany's finance minister, Wolfgang Schäuble, agreed on a restructuring of the financial equalization mechanism of the 16 federal states, effective from 2020**. The new system effectively abolishes the financial equalization among German states, i.e. the equalization of living standards, in its current form. Instead, German states will receive total additional transfers of EUR 9.5bn from the sovereign. The VAT share distributed to each state will be an important factor in the equalization of financial strength, constituting EUR 4.02bn of the EUR 9.5bn of additional revenue for the states (see table overleaf). In exchange for the additional revenue, the sovereign will assume certain responsibilities from the states. Most importantly, it will claim responsibility for Germany's highway system, by establishing a federal Autobahn-agency at the sovereign level (Infrastrukturgesellschaft Verkehr).

**Background**

**Financial equalization, together with the state solidarity principle, is key to Germany's mechanism of federal support.** It ensures a high degree of cohesion among the states, such that all states can carry out their responsibilities and at the same time exercise their independence (as required by the constitution). This strong system is designed to prevent individual states from getting into financial difficulties. A change to the current system of financial equalization had become necessary as the system in its current form expires in 2019. In addition, the zero-borrowing rule takes effect for German states in 2019; this will prohibit states from incurring new debt.

**Financial equalization: key aspects of the reform**

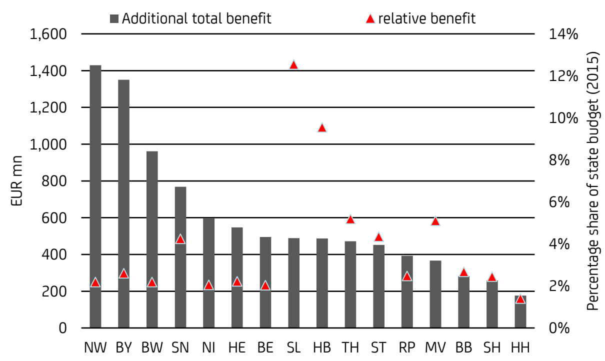
**The calculation of financial equalization has been changed from a progressive to a linear system.** The tariff is now constant at 63%, independent of a state's tax revenues. This means that for contributing states, increasing tax receipts do not lead, in relative terms, to increasing payments, making equalization of financial strength less pronounced. As compensation, the sovereign grants financially weaker states additional payments for political leadership, structural unemployment or the operation of ports. Importantly, the sovereign grants EUR 0.4bn per annum to each of the financially weak states of Bremen (BREMEN; unrated) and Saarland (SAARLD; unrated). This is clearly positive for Germany's federal system of support, because it shows that the sovereign pays special attention to weaker states.

**Rating agency view: equalization reform a key support argument**

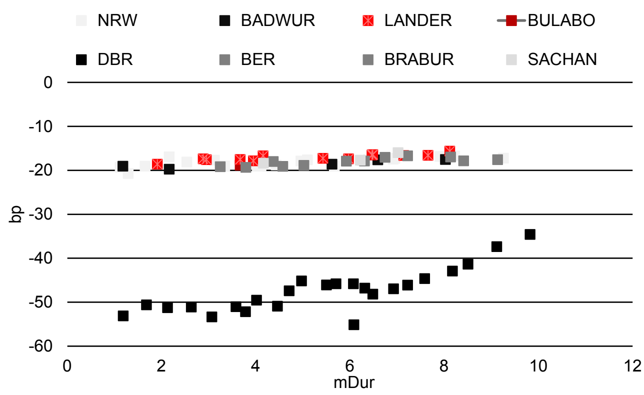
The reform agreement between the sovereign and German states is key support argument for the ratings of German states, according to Fitch. Additional financial support from the sovereign will compensate for reduced transfers between the states. Fitch further argues that the reform agreement is consistent with the aim of reducing disparities in financial performance among German states. Financial equalization, together with the state solidarity principle (see below) is key for Fitch's rating approach under which all states are rated triple-A with a stable outlook.

## FINANCIAL EQUALIZATION: EFFECTS FOR INDIVIDUAL STATES

ADDITIONAL TRANSFERS PER STATE (absolute and relative)




SPREAD LANDSCAPE OF GERMAN STATES VS. BUNDS




Source: iBoxx, German Federal Government, Ministry of Finance UniCredit Research

**Our view**

The new set-up of financial equalization is credit positive for the asset class of German states as a whole. The largest beneficiaries, in relative terms, are the financially relatively weaker states of Saarland, Bremen, Thuringia and Mecklenburg Western Pomerania (see table). The additional federal grants for Saarland and Bremen in particular show the strength of Germany's federal system. They underline that the sovereign grants support to the financially weakest states. This is one of the key strengths of Germany's federal system, underlining that German states benefit from strong implicit government support. Recent press comments suggests the finance minister wants to link the additional federal grants for Saarland and Bremen debt repayment. We recommend a switch into outstanding LANDER bonds, in which all of the above mentioned states have previously participated, with the exception of Thuringia.

**Trade recommendation: switch into LANDER bonds**

**The reform of Germany's financial equalization mechanism is positive for German states from a credit point of view.** The financial equalization reform highlights that Germany is willing to support the relatively weaker names. This is supportive in particular for SAARLD, BREMEN, THRGN and MECVOR. It therefore currently makes sense to switch out of the financially stronger German states into the weaker names. However, these states only have small amounts of bonds outstanding in secondary markets, the largest being BREMEN with EUR 10.8bn. One way to gain exposure to these names would be through LANDER issues, in which all of the aforementioned states participate, except for THRNGA. We thus recommend switching into outstanding LANDER bonds, which are relatively liquid with EUR 20bn in bonds outstanding. It has to be noted, however, that German states are already trading at tight levels, with virtually no differentiation among individual issuers.

**ADDITIONAL TRANSFERS UNDER FINANCIAL EQUALIZATION REFORM (2019 TAX ESTIMATES) – NUMBERS IN EUR MN**

| State | Additional VAT transfers | Additional vertical compensation | Additional federal support | Total additional benefit | State budget (2015)* | Relative benefit |
|---|---|---|---|---|---|---|
| Saarland | -33 | 117 | 400 | 489 | 3,900 | 12.5% |
| Bremen | -5 | 75 | 400 | 487 | 5,100 | 9.5% |
| Thuringia | -372 | 839 | 0 | 472 | 9,100 | 5.2% |
| Mecklenburg Western Pomerania | -255 | 619 | 0 | 367 | 7,200 | 5.1% |
| Saxony-Anhalt | -389 | 831 | 0 | 452 | 10,400 | 4.3% |
| Saxony | -637 | 1,385 | 0 | 768 | 18,100 | 4.2% |
| Brandenburg | -170 | 441 | 0 | 283 | 10,600 | 2.7% |
| Bavaria | 1,287 | 0 | 0 | 1,350 | 51,900 | 2.6% |
| Rhineland-Palatinate | 430 | -43 | 0 | 393 | 15,900 | 2.5% |
| Schleswig-Holstein | 213 | 33 | 0 | 259 | 10,600 | 2.4% |
| Hessen | 510 | 0 | 0 | 547 | 24,700 | 2.2% |
| Baden-Wuerttemberg | 880 | 0 | 0 | 961 | 44,000 | 2.2% |
| North Rhine-Westphalia | 2,048 | -668 | 0 | 1,429 | 65,500 | 2.2% |
| Lower Saxony | 222 | 367 | 0 | 596 | 29,100 | 2.0% |
| Berlin | 149 | 324 | 0 | 495 | 24,300 | 2.0% |
| Hamburg | 141 | 0 | 0 | 176 | 12,600 | 1.4% |
| **TOTAL** | **4,020** | **4,321** | **800** | **9,524** | **343,000** | **2.8%** |

*note that financial equalization calculations are based on 2019 tax estimates; the relative benefit uses 2015 budget numbers as a baseline

Source: German Federal Government, Federal Finance Ministry, UniCredit Research

## Liquidity management

**Safe and predictable cash management safeguards liquidity**

**German states benefit from a cash management system, which safeguards their liquidity.** Since the states are administrative entities, financial planning is mandatory due to legal requirements (i.e. the budget is the legal basis for all financial transactions). The cash management plan is set for one year and is based on predictable cash flows. In particular, inflows include mainly VAT and income tax, which may vary due to economic cycles, but are conservatively calculated. Outflows, which are not subject to large deviations, include payrolls, transfers to the finance system, and debt payments. Furthermore, the states have tax collection rights, which leaves room to recover revenues. **Given this one-year cash planning period, an unexpected liquidity crisis situation can be prevented.**

In addition to thorough cash planning, short-term arrangements are in place. Cash is transferred between the states and the Bund on a daily basis and states place their excess cash with each other independent of political contingencies. All financial transactions are made through an account with the Bundesbank with an intra-day credit line in place. At the end of the day, this account must be balanced. Furthermore, all states have negotiated credit and back-up lines with their Landesbanks as well as commercial banks, which, in turn, can be refinanced via the ECB.

**Strong and stable framework – positive for creditworthiness**

**Overall, the federal finance system and cash management provide a strong and stable framework, which is positive for the creditworthiness of the German states.**

### FINANCIAL EQUALIZATION OF GERMAN STATES – MOST IMPORTANT ASPECTS OF THE 2016 REFORM

| Item | Key aspect | Implication | Our view |
|---|---|---|---|
| **Value-added-tax distribution** | • The government and German states abolish financial equalization among individual states in its existing form, i.e. the equalization of living standards.<br>• They end the current system of value added tax (VAT) pre-distribution (Umsatzsteuervorausgleich).<br>• Under the new system, each state receives a share of VAT depending on the population, modified (addition or deduction) based on a state's financial strength. | • The VAT share of each state is now the most important factor in the equalization of financial strength. | • All German states benefit from the new system<br>• Under the new system of financial equalization, all states receive additional revenues.<br>• Weaker states benefit the most: Saarland receives 12.5% in additional revenues, Bremen receives 9.5% and Bavaria receives 2.5% of additional revenues, based on 2015 budget numbers. |
| **VAT contribution cap of 63%** | • The calculation of VAT distribution is changed to a linear system (was previously a progressive system).<br>• The rate for VAT receipts or deductions is capped at 63%. | • An increase in VAT receipts only translates into higher payouts on a linear scale.<br>• For relatively wealthier states, rising VAT receipts do not, progressively, translate into a higher equalization payouts. | • Key change in our view.<br>• The change clearly benefits wealthier states, which expect rising economic performance and rising value added tax receipts in the medium-to-long term.<br>• Under the reform, states that are closer to the average benefit more, according to research from the German think tank DIW.<br>• All in all, every German state benefits from the VAT reform, compared to the existing mechanism.<br>• This was done to ensure the viability, and acceptance of the new system. |
| **Additional cash transfer** | • Direct cash transfer from sovereign to German states. | • German states receive a fixed share of EUR 2.6bn as well as dynamic additional VAT benefits of EUR 1.42bn. | • Neutral. The government equalizes lower equalization payments of wealthier states to less wealthy states. |
| **Supplementary transfers** | • Some German states receive general supplementary federal grants.<br>• They are granted to states with a financial capacity per capita (after financial equalization) of less than 99.5% of the average.<br>• The degree of equalization and the rate of supplementary transfers is now increased to 99.75%.<br>• Supplementary grants for east German states will end in 2019. | • The supplementary grants that help equalize regional differences among German states are maintained (costs from structural unemployment, costs of political leadership, costs for the operation of ports).<br>• The former East German state of Brandenburg will receive EUR 11mn for "costs of political leadership". | • Total additional supplementary transfers amount to EUR 4.3bn; this is positive for relatively weaker states |
| **Special contributions** | • The state of Saarland and the state of Bremen receive a combined special contribution of EUR 800mn. | • This is a new aspect of financial equalization. | • This is a clear positive outcome of the reform in our view. It shows that the sovereign is supporting the weakest among the German states with special grants. |
| **Support for municipalities** | • The financial strength of communities has become more important for assessing the financial strength of a state; it accounts for 75% of the financial strength of a state (from 64% before) | • The sovereign grants transfers for differences in the financial strength of communities to the amount of EUR 1.5bn (estimate for May 2016 to May 2019)<br>• Former East German states plus Saarland are the beneficiaries of these transfers | • This aspect is to support those states with municipalities that face financial difficulties<br>• However, there are no direct transfers from the sovereign to communities under financial equalization; communities receive transfers through communal financial equalization |

Source: German Federal Government, UniCredit Research

## State Solidarity Principle ("Bundestreue")

**Joint responsibility to support a state facing financial difficulties**

According to the German Constitution, German states benefit from mutual support among the states, from the Bund to the states and vice versa. **All members of the federation have a joint responsibility to support a state facing financial difficulties.** They share common interests and hence must be in an equal financial position to fulfill their responsibilities while at the same time exercising their right of autonomy. This strong solidarity principle ("Bundestreue") means that if a state is in a situation of "extreme financial hardship" and the equalization mechanism (as described above) is not sufficient, the particular state is entitled to further financial assistance from all other members of the federation. In turn, the other members are required to support the state by constitutional means to bring it back to a position to be able to perform its functions and to resolve its budget emergency.

**1992 ruling of the Federal Constitutional Court**

**The principle was confirmed by the 1992 ruling (dated 27 May 1992) of the Federal Constitutional Court, which highlighted that if a state or the Bund experiences "extreme budgetary hardship", as defined by the two ratios of interest/tax revenue and net borrowing requirement/revenue or expenditure, it is entitled to receive financial assistance.** However, the court did not specify thresholds for either ratio nor did it specify a timeframe.

The ruling put the constitutional principle into practice, i.e. the Bund made additional transfers to Saarland and Bremen to improve their ability to repay debt. Both states had a net borrowing requirement/revenue ratio of two and three times the average, respectively.

Fitch emphasizes this principle in its AAA rating approach for the German states it rates. It states that the ruling and significant political faith has shown that if mutual support were not made available, a state could appeal to the Federal Constitutional Court on the basis of the solidarity principle. Furthermore, Fitch highlights that, although Saarland and Bremen experienced financial difficulties for a couple of years and the court took another two years to make its ruling, neither state came close to a default. Fitch takes this as further proof of the effectiveness of the system, i.e. the problem is tackled at an early stage, further deterioration is prevented, and long-term support is made available without short-term liquidity becoming an issue.

**Test case: Berlin**

Berlin appealed to the Federal Constitutional Court, claiming that it was in a situation of "extreme budgetary hardship". Unexpectedly, the claim was rejected in October 2006 with the reasoning that Berlin had not done everything it could have to improve its budgetary position. **The court emphasized that the solidarity principle remained in place and deeply entrenched. A state first has to ensure that it has done everything possible to improve its position before other states or the Bund step in to support the state in real financial difficulty.**

**Solidarity principle enhances states' creditworthiness**

**The solidarity principle implies that a German state cannot fail to fulfill its financial obligations unless the Bund and the other states are no longer able to provide financial assistance in support of a particular state.** This cross-support mechanism is a long-term structural framework while short-term difficulties are covered by the short-term arrangements as discussed above. **The solidarity principle is a very important strength of the German states and clearly enhances their creditworthiness.**

# Zero-Borrowing Rule ("Schuldenbremse")

**Constitutional change in June 2009**

In June 2009, the Bundesrat voted for a constitutional change – as part of the second stage of German federal reform – in favor of the introduction of debt limits for the Bund as well as zero-borrowing rules for the German states. The law focuses on limiting budget deficits rather than on debt levels themselves.

**Limits**

German states will have to run balanced structural budgets starting in 2020. By this time, the states will be allowed to report only cyclical deficits, or to run deficits only in emergency situations (broadly defined as caused by "natural catastrophes or exceptional emergency situations, which are not under the control of the government"). Debt accumulated during economic downturns has to be reduced in times of more favorable business cycles. This will, therefore, reduce the states' leeway for spending during economic upturns.

**Transfer payments to smooth transition**

In order to smooth the transition period and support financially weaker states in reaching balanced budgets by 2020, payments totaling EUR 800mn per year for the period 2011-19 will be transferred from the Bund to states with higher debt levels, adverse budgetary structures and/or that spend a somewhat higher share of their expenditure on interest payments. In detail, Bremen will receive EUR 300mn, Saarland EUR 260mn, and Berlin, Saxony-Anhalt and Schleswig-Holstein EUR 80mn each per year. Although these payments support financially weaker states and are generally positive, the amount of EUR 800mn annually seems relatively small.

## Four states under special supervision

**Warnings to four states**

**The stability board has placed four states under special supervision.** This step followed the conclusion of the evaluation committee in May 2011 that their respective debt levels were too high. The four states Berlin, Bremen, Saarland and Schleswig-Holstein had to present five-year consolidation plans. In these plans, the states committed to annual net new borrowing reduction targets as well as further measures to structurally improve their fiscal stance and reduce debt levels. The states report their progress in fulfilling the consolidation plans on a semiannual basis. If a state does not comply with its plan, the central government has the power to withhold certain transfer payments. Below we provide an overview of the stability board’s most recent consolidation outcome from December 2016.

**State of Berlin**

**Consolidation completed:** Berlin was able to implement a large part of its consolidation plans. Net borrowing was well below the agreed level. As a result, Berlin will complete its consolidation process as of 2016.

**State of Bremen**

**Consolidation not completed:** Bremen implemented additional consolidation measures in June 2016. However, these measures were not sufficient in keeping Bremen’s net new borrowing below the 2016 target, according to the December 2016 stability board results. Net borrowing per capita for 2016 is four times as high as agreed. The state argues that the reason for this is the increase in costs due to refugees. As a consequence Bremen’s consolidation efforts will not be completed at the end of 2016. Thus, the consolidation procedure will be extended.

**State of Saarland**

**Neutral outcome:** Saarland managed to stick to the bulk of the consolidation plans. The net borrowing remained under its allowed threshold. However, the state has to undertake significant consolidation efforts in the coming years because net borrowing is at a high level and very close to the allowed threshold. The consolidation process will not be completed within 2016, and therefore, the consolidation procedure will be extended.

**State of Schleswig-Holstein**

**Consolidation completed:** Schleswig-Holstein can complete the consolidation process in 2016. It progressed on the consolidation path and net borrowing in 2016 was significantly lower than allowed.

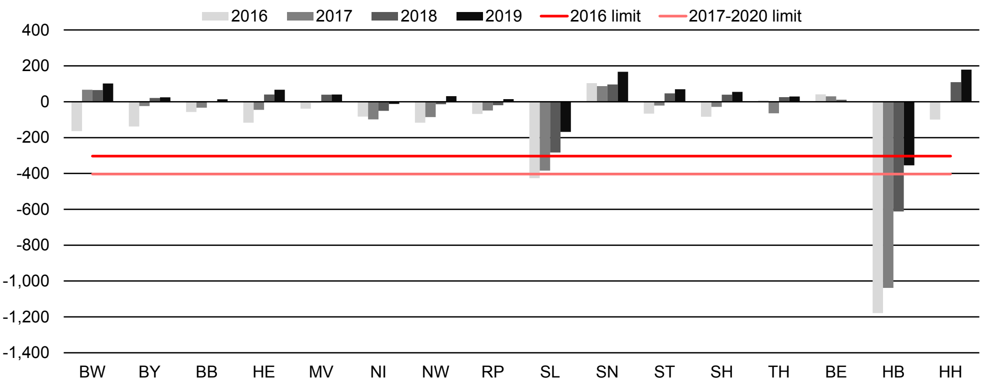
**Support is strong**

The German support system of financial equalization, coupled with the constitutional requirement of the central government and the states to support any state in financial trouble, make it virtually impossible for a state to default on an individual basis. States have asked for help in the past – and received it. The extremely strong support is reflected in the top ratings of the German states. Berlin, one of the states singled out by the evaluation committee, is rated Aa1s by Moody's, just one notch below the German sovereign. Moreover, before Fitch withdrew ratings for some German states, it rated all states at the level of the sovereign (i.e. AAA). The bond spreads of German states have not reacted to the news, highlighting the importance of the support system in investors' assessment of the credit fundamentals of the states.

**Increasing pressure to consolidate budgets**

**From a credit perspective, the placement of the four states under special supervision can be considered positive.** The fact that the four German states have very high debt levels was well known. The real piece of news was that this was put in the spotlight and that the states' efforts to step up fiscal consolidation are being closely monitored. We believe that the states' incentive to run austere fiscal policy has, thus, increased.

**STRUCTURAL NET BALANCE (EUR PER CAPITA)**



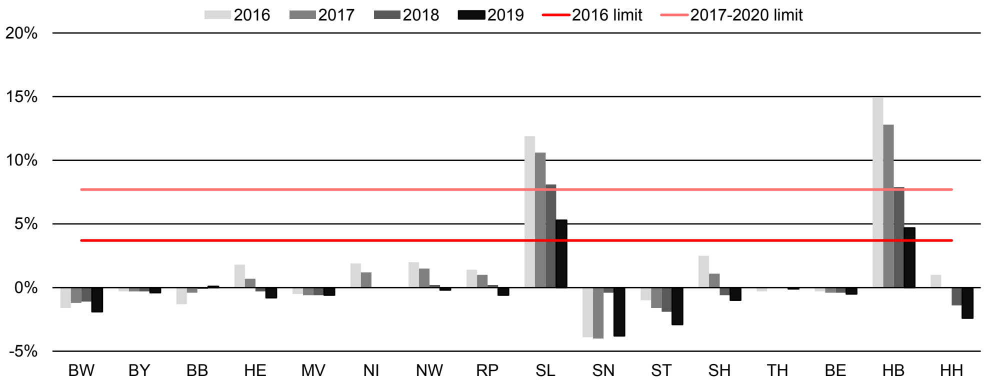

Source: stability board (12 December 2016), UniCredit Research

**STRUCTURAL NET BORROWING (EUR PER CAPITA)**

| | BW | BY | BB | HE | MV | NI | NW | RP | SL | SN | ST | SH | TH | BE | HB | HH | Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2016 | -164 | -138 | -57 | -117 | -39 | -83 | -117 | -68 | -426 | 104 | -66 | -84 | 7 | 41 | -1,179 | -99 | -303 |
| 2017 | 67 | -24 | -33 | -45 | -4 | -98 | -86 | -49 | -384 | 87 | -21 | -29 | -64 | 30 | -1,038 | 1 | -403 |
| 2018 | 65 | 21 | 2 | 40 | 39 | -51 | -14 | -19 | -283 | 96 | 47 | 39 | 26 | 11 | -612 | 109 | -403 |
| 2019 | 102 | 25 | 14 | 67 | 40 | -12 | 31 | 15 | -168 | 167 | 70 | 55 | 29 | -2 | -355 | 179 | -403 |

Source: stability board ( 12 December 2016), UniCredit Research

### NET BORROWING/EXPENDITURE (%)



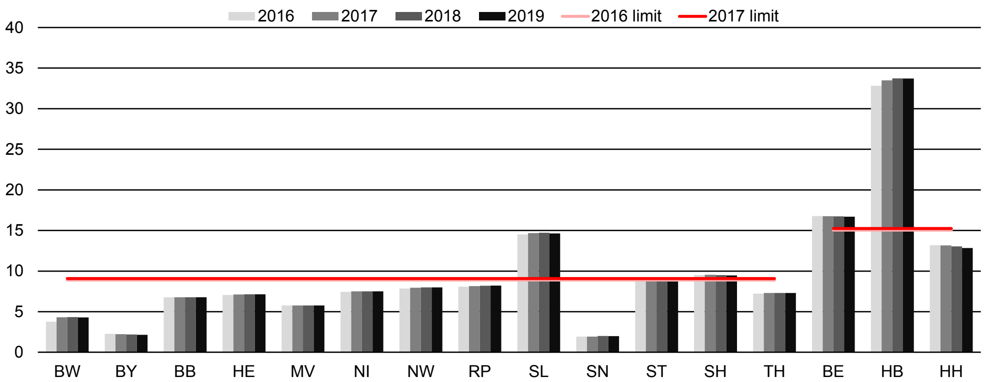

Source: stability board (12 December 2016), UniCredit Research

### NET BORROWING/EXPENDITURE (%)

| | BW | BY | BB | HE | MV | NI | NW | RP | SL | SN | ST | SH | TH | BE | HB | HH | Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2016 | -1.6 | -0.3 | -1.3 | 1.8 | -0.5 | 1.9 | 2.0 | 1.4 | 11.9 | -3.9 | -1.0 | 2.5 | -0.3 | -0.3 | 14.9 | 1.0 | 3.7 |
| 2017 | -1.2 | -0.3 | -0.4 | 0.7 | -0.6 | 1.2 | 1.5 | 1.0 | 10.6 | -4.0 | -1.6 | 1.1 | 0.0 | -0.4 | 12.8 | 0.0 | 7.7 |
| 2018 | -1.1 | -0.3 | -0.1 | -0.3 | -0.6 | 0.0 | 0.2 | 0.2 | 8.1 | -0.4 | -1.9 | -0.6 | 0.0 | -0.4 | 7.9 | -1.4 | 7.7 |
| 2019 | -1.9 | -0.4 | 0.1 | -0.8 | -0.6 | 0.0 | -0.2 | -0.6 | 5.3 | -3.8 | -2.9 | -1.0 | -0.1 | -0.5 | 4.7 | -2.4 | 7.7 |

Source: stability board (12 December 2016), UniCredit Research

### DEBT LEVEL (EUR THD. PER CAPITA)



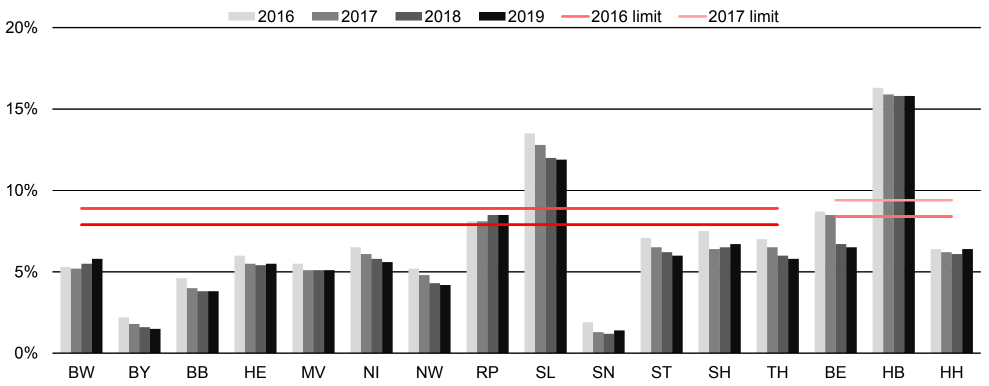

Source: stability board ( 12 December 2016), UniCredit Research

### DEBT LEVEL PER CAPITA (EUR THD)

| | BW | BY | BB | HE | MV | NI | NW | RP | SL | SN | ST | SH | TH | BE | HB | HH | Limit non-city | Limit city |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2016 | 3.8 | 2.3 | 6.8 | 7.1 | 5.8 | 7.5 | 7.9 | 8.1 | 14.5 | 1.9 | 8.9 | 9.5 | 7.2 | 16.8 | 32.8 | 13.2 | 8.9 | 15.0 |
| 2017 | 4.3 | 2.2 | 6.8 | 7.1 | 5.8 | 7.5 | 8.0 | 8.2 | 14.7 | 1.9 | 8.9 | 9.5 | 7.3 | 16.8 | 33.5 | 13.2 | 9.1 | 15.2 |
| 2018 | 4.3 | 2.2 | 6.8 | 7.1 | 5.8 | 7.5 | 8.0 | 8.2 | 14.7 | 2.0 | 8.8 | 9.5 | 7.3 | 16.7 | 33.7 | 13.0 | 9.3 | 15.4 |
| 2019 | 4.3 | 2.2 | 6.8 | 7.1 | 5.8 | 7.5 | 8.0 | 8.2 | 14.6 | 2.0 | 8.7 | 9.5 | 7.3 | 16.7 | 33.7 | 12.8 | 9.5 | 15.6 |

Source: stability board( 12 December 2016), UniCredit Research

**INTEREST/TAX REVENUE (%)**




Source: stability board ( 12 December 2016), UniCredit Research

**INTEREST/TAX REVENUE (%)**

| | BW | BY | BB | HE | MV | NI | NW | RP | SL | SN | ST | SH | TH | BE | HB | HH | Limit non-city | Limit city |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2016 | 5.3 | 2.2 | 4.6 | 6.0 | 5.5 | 6.5 | 5.2 | 8.1 | 13.5 | 1.9 | 7.1 | 7.5 | 7.0 | 8.7 | 16.3 | 6.4 | 7.9 | 8.4 |
| 2017 | 5.2 | 1.8 | 4.0 | 5.5 | 5.1 | 6.1 | 4.8 | 8.1 | 12.8 | 1.3 | 6.5 | 6.4 | 6.5 | 8.5 | 15.9 | 6.2 | 8.9 | 9.4 |
| 2018 | 5.5 | 1.6 | 3.8 | 5.4 | 5.1 | 5.8 | 4.3 | 8.5 | 12.0 | 1.2 | 6.2 | 6.5 | 6.0 | 6.7 | 15.8 | 6.1 | 8.9 | 9.4 |
| 2019 | 5.8 | 1.5 | 3.8 | 5.5 | 5.1 | 5.6 | 4.2 | 8.5 | 11.9 | 1.4 | 6.0 | 6.7 | 5.8 | 6.5 | 15.8 | 6.4 | 8.9 | 9.4 |

Source: stability board ( 12 December 2016), UniCredit Research

## Stability board

**Stability board monitors consolidation efforts**

A stability board ("Stabilitätsrat") was created with the aim of monitoring the public finances of the German states as well as those of the Bund. In addition it will also be monitoring the debt break of states and bund. The stability board is a joint body of the federal government and the states. An early warning system has been set up to detect potential public finance deterioration and implement counteractive measures. In order to even out cyclical effects, an account is created where excess deficits but also surpluses will be recorded to ensure that the account balances over time. The stability board held its inaugural meeting in April 2010.

**Set-up of the stability board**

The stability board is comprised of the federal minister of finance, the federal minister of economics and technology, as well as the respective ministers of finance of each German state. The chair is held (alternating yearly) by the federal minister of finance and the chairman of the Conference of the Ministers of Finance of the German states ("Finanzministerkonferenz"), through which the German states coordinate their work. The stability board meets at least twice a year, usually in May and mid-December. Additional meetings are held if at least five members wish to do so. With regard to decision-making, two-thirds of the German states plus the vote of the Bund (represented by the federal minister of finance) is necessary. Decisions regarding a particular German state exclude this state from the voting process. For decisions regarding the sovereign, a two-thirds majority of all members of the stability board  eligible to vote (including the Bund) is necessary.

**Yearly report**

The basis for the monitoring process are annual reports presented by all German states as well as the Bund. These reports have to be presented by mid-October of each year. The period under review always includes actual figures of the past two years and the budgeted numbers for the current year and the subsequent year, meaning that four years are being assessed; these years are divided into two time frames: the current public finance situation (based on the two past years plus the current year) and the "financial planning" period (the subsequent year).

**Key indicators used**

The following indicators are used in the monitoring process to evaluate the state of public finances:

1. structural net borrowing,
2. net borrowing as a percentage of expenditure,
3. total debt level,
4. interest as a percentage of tax revenue.

The stability board has defined thresholds for each indicator. An indicator is "suspicious" in a defined time frame if at least two figures exceed the threshold. A time frame is generally considered "suspicious" if at least three out of four indicators are "suspicious". The stability board starts a detailed evaluation process (by setting up an evaluation committee) if at least one of the two time frames are "suspicious".

**INDICATORS TO EVALUATE PUBLIC FINANCES**

| Indicator | Threshold |
|---|---|
| **1.** Structural net borrowing | **German states**: Net borrowing exceeding the average of German states by EUR 200 per capita. For the financial planning period, the threshold is the current year's value plus EUR 100 per capita.<br>**Bund**: Net borrowing exceeding EUR 50 per capita above the previously defined reduction path. |
| **2.** Net borrowing/ expenditure | **German states**: Ratio 3% higher than the average of German states. For the financial planning period, the threshold is the current year's value plus 4%.<br>**Bund**: Average of the past five years plus 8%. For the fiscal planning period, the current year's threshold is taken. |
| **3.** Debt level | **German states**: Debt level per capita exceeding 130% for non-city-states and 220% for city-states of the average of German states. For the financial planning period, the threshold is the current year's value plus EUR 200 per capita per year.<br>**Bund**: Average of the past five years in relation to GDP plus 8%. For the fiscal planning period, the current year's threshold is taken. |
| **4.** Interest/tax revenue | **German states**: Ratio exceeding 140% for non-city-states and 150% for city-states of the average of German states. For the financial planning period, the threshold is the current year's value plus 1%.<br>**Bund**: Average of the past five years plus 8%. For the fiscal planning period, the current year's threshold is taken. |

Source: German Ministry of Finance, UniCredit Research

**Evaluation committee**

In the case of a potential budgetary distress situation ("Haushaltsnotlage") of a state or the Bund, as defined by the indicators for evaluation of public finances, and following a decision by the stability board, an evaluation committee ("Evaluationsausschuss") is established. Its members are comprised of a state secretary of the federal ministry of finance, and four state secretaries of ministries of finance of the German states. The entity in question also participates in the committee meetings and will be given the opportunity to comment on the issue. The evaluation committee will present a report to the stability board as well as a proposal for resolution. If a restructuring plan is called for by the stability board, the evaluation committee is responsible for reviewing the proposal by the respective entity, coordinating details, and presenting a proposal for resolution to the stability board.

**Performance indicators**

On the following two pages, we provide an overview of the four indicators and the performance of the sixteen German states relative to the indicators. The stability board monitors the indicators on an annual basis and publishes the data on its website.

# Credit Ratings

| State | Moody's | S&P | Fitch |
|---|---|---|---|
| Baden-Württemberg | Aaa s | AAA s | -- |
| Bavaria | Aaa s | AAA s | -- |
| Berlin | Aa1 s | -- | AAA s |
| Brandenburg | Aa1 s | -- | -- |
| Bremen | -- | -- | -- |
| Hamburg | -- | -- | AAA s |
| Hessen | -- | AA s | -- |
| Lower Saxony | -- | -- | AAA s |
| Mecklenburg-W. Pomerania | -- | -- | -- |
| North Rhine-Westphalia | Aa1 s | AA- s | AAA s |
| Rhineland-Palatinate | -- | -- | AAA s |
| Saarland | -- | -- | -- |
| Saxony | -- | AAA s | -- |
| Saxony-Anhalt | Aa1 s | AA+ s | AAA s |
| Schleswig-Holstein | -- | -- | AAA s |
| Thuringia | -- | -- | -- |
| German Federal Republic | Aaa s | AAA s | AAA s |

s = Stable; p = Positive; n = Negative

Source: Rating agencies, UniCredit Research

**Top ratings**

**All rated German states enjoy credit ratings in the highest rating category.** The individual rating agencies have slightly different approaches to assigning ratings. While Moody's and Standard & Poor's ratings differentiate between the states, Fitch has assigned a AAA rating to all states it rates.

**Fitch's rating approach**

**Fitch** considers that the system under which the German states operate carries a AAA risk. Risk is equalized throughout the country and is similar to the sovereign rating. Fitch justifies its reasoning on the basis of the historical structure of German federalism; provisions in the Constitution, including the federal solidarity principle; and the tax-sharing and transfer system. Thus, any German state rated by Fitch is automatically assigned a AAA rating.

**S&P's rating approach**

**Standard & Poor's** ratings differentiate between states. S&P arrived at the conclusion that, with sufficient predictability, there would be timely and sufficient credit support from another government (in this case from the Bund or other states) in the event of financial distress. Thus, the ratings benefit from a one-notch uplift. S&P then differentiates among credit profiles, given that there are differences with regard to budgetary performance, debt burden, contingent liabilities, economic profiles and management.

**Moody's rating approach**

**Moody's** applies its joint default analysis to rating local and regional governments (LRGs). The rating agency disaggregates the rating into two major components:

1. an assessment of the **baseline credit risk** (BCA) of the states (on a scale from aaa to c), which incorporates the standalone intrinsic credit strength of a German state (in the absence of any extraordinary support from the central government) but takes into account the ongoing annual subsidies from the government rather than extraordinary support.
2. an estimate of the likelihood of **extraordinary support** from the supporting government (as a percentage), which, among other factors, also takes into account the default dependence – given by the estimated correlation between a default of the states and the supporting government.

3. **The BCA of the German states ranges from aa1 for Bavaria to a1 for Berlin and North-Rhine Westphalia.** Nevertheless, Moody's does not rate any German state below Aa1 due to the very high likelihood that the Federal Republic of Germany would act to prevent a default of the states (91-100% probability of support). This reflects **1.** Moody's opinion of the elevated reputational risk for Germany as a whole in the case of a default by an individual state and **2.** the federal solidarity principle, according to which all German states must express mutual solidarity in the event that one of them (or the Federal Republic) faces a severe budgetary crisis.

**RATINGS OF GERMAN STATES BY MOODY'S**

| Issuer | Rating | Baseline Credit Assessment* | Probability of Support |
|---|---|---|---|
| Baden-Württemberg | Aaa | aa2 | 91-100 % (very high) |
| Bavaria | Aaa | aa1 | 91-100 % (very high) |
| Berlin | Aa1 | a1 | 91-100 % (very high) |
| Brandenburg | Aa1 | aa3 | 91-100 % (very high) |
| North-Rhine Westphalia | Aa1 | a1 | 91-100 % (very high) |
| Saxony-Anhalt | Aa1 | aa3 | 91-100 % (very high) |

*The Base Credit Assessment reflects the standalone intrinsic credit strength. Source: Moody's, UniCredit Research

# Regulatory treatment of German states

**Favorable regulatory treatment**

**German states enjoy favorable treatment from a regulatory perspective.** This includes a 0% risk weight and Level 1 treatment under the LCR, as well as the possibility to apply a 0% stress and concentration factor under Solvency II.

**German states have a 0% risk weight under the CRR**

**German states are 0% risk-weighted under the European Capital Requirement Directive (CRR)** that became effective on 1 January 2014. Article 115 of the CRR states that exposure to regional governments is risk-weighted like exposures to banks unless they can be treated as exposure to the central government.

Exposure to regional governments qualify for the same treatment as exposure to the central government provided the regional government has specific revenue-raising powers and institutional arrangements, the effect of which reduces its risk of default. Thus, regional governments that fulfill these criteria receive a 0% risk weight if their central government is 0% risk weighted. As all EU central governments have a 0% risk weight, regional governments based in the EU and fulfilling the above-mentioned criteria receive a 0% risk weight. The European Banking Authority (EBA) published a list of all EU regional governments and local authorities that are treated as exposures to central governments (click here). In Germany, all regional governments, local governments and local government associations are treated as exposure to the central government and , therefore, receive a 0% risk weight.

**Treatment in other countries**

**The debt issued by German states is 0% risk-weighted in all other European Union member states** because the CRR applies in all these countries. However, the treatment in other countries can differ dependent on the national law. For exposure to regional governments that are risk-weighted like exposure to banks, Basel II provides two possible options: under the first option, all banks incorporated in a country receive a risk weight one category less favorable than that assigned to claims on the central government of that country. Under the second option the risk-weighting is based on the bank's individual rating.

**RISK WEIGHTS ACCORDING TO BASEL II**

| Rating | AAA to AA- | A+ to A- | BBB+ to BBB- | BB+ to B- | Below B- | Unrated |
|---|---|---|---|---|---|---|
| Option 1 | 20% | 50% | 100% | 100% | 150% | 100% |
| Option 2 | 20% | 50% | 50% | 100% | 150% | 100% |

Source: Basel Committee on Banking Supervision, UniCredit Research

**Treatment in the liquidity coverage ratio (LCR)**

According to the CRR, exposure to EU regional governments **can be treated as Level 1** provided these exposures are treated as exposure to central government. The prerequisites are the same as for the CRR risk weighting (see above). Exposure to EU regional governments that are risk weighted with 20% under the CRR (this corresponds to a rating of at least AA-) can be treated as a Level 2A asset (i.e. a haircut 15% and diversification required). Exposure to other regional governments cannot count as liquid assets under the LCR.

**Solvency II**

Under Solvency II, exposure to EU regional governments that are treated as exposure to central government (same prerequisites as for the CRR) receive a **stress factor of 0% for the spread and concentration risk**. The stress factors for all other regional governments and local authorities are dependent on the rating of the issuer and the duration of the bond.

**Further reading**

**For further details on the regulatory treatment of European sub-sovereigns, supranationals and agencies, please refer to our comprehensive publication on this topic: Sector Flash RAS – Sub-sovereigns, supras and agencies: A regulatory guide.**

# Profiles

# State of Baden-Württemberg

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding |
|---|---|---|---|---|
| Aaas/AAAs/-- | 0% | Yes | BADWUR | EUR 17.6bn |

Source: Bloomberg, UniCredit Research

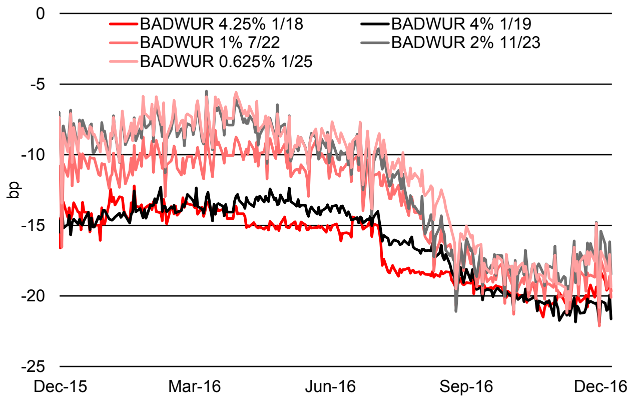
**Profile:** The State of Baden-Württemberg is among the top German states in terms of credit fundamentals. It has a strong and diversified regional economy, a far-sighted debt strategy, and it is extremely prudent in its budget preparation. It is one of only three German states to have a triple-A rating from S&P, and one of two states with a triple-A rating from Moody's.

**Economy:** Baden-Württemberg is located in southwest Germany and is the third-largest state in terms of nominal GDP, population and area. Its economy consists of a mix of several medium-sized as well as large companies (such as Daimler, Porsche, SAP and IBM), making it one of the wealthiest regions in Europe. Per capita GDP amounted to EUR 42,745 in 2015, which is the third- largest among the German non-city-states. Due to its strong industrial base and export orientation, the state benefits more than most from global economic growth. GDP has grown, on average, by 1.7% in real terms between 2013 and 2015, compared to 1.2% in Germany as a whole. This has made the State of Baden-Württemberg the fourth-fastest-growing economy in Germany in recent years.

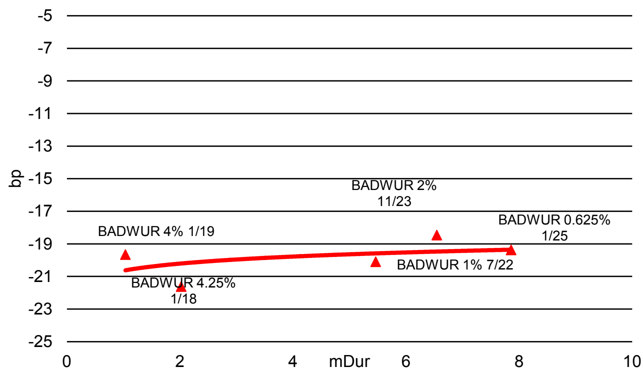
**Budget & debt:** Baden-Württemberg's fiscal indicators are some of the best among the German states. Relative debt levels (tax-supported debt as a percentage of consolidated operating revenues) have decreased six times in a row from 165.8% in 2009 to 127.5% in 2015. Nominal debt recorded by far the largest decrease among the German states in 2015 vs. 2014 (EUR -4.9bn). The state is committed to continuing **1.** its consolidation-oriented fiscal policy, and **2.** its reduction of debt levels. The credit risks related to contingent liabilities (including obligations towards Landesbank Baden-Württemberg) are very unlikely to materialize.

**Funding strategy:** Baden-Württemberg has a conservative funding strategy. The state raises funding through bonds as well as private placements and Schuldschein loans. It prefers long tenors. The bonds are entirely EUR-denominated. Coupons are fixed-rate as well as floating. Baden-Württemberg has issued one syndicated floating-rate bond and one fixed-coupon bond in 2016. For 2017, Baden-Württemberg has a gross funding target of EUR 8.8bn.

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iBoxx, UniCredit Research

**Strengths/Opportunities**

- Exceptionally strong and diversified regional economy
- Sound financial performance; good budgetary management
- Strong institutional framework; strong support from the German revenue equalization and solidarity system
- Low debt level compared to the German average
- Strong access to external funding via access to national and international capital markets

**Weaknesses/Threats**

- High debt burden and contingent liabilities relative to international peers
- Very low credit risk due to exposure to contingent liabilities linked to support measures taken for Landesbank Baden-Württemberg (LBBW)
- Export-sensitive industry
- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE0001040509 | BADWUR 4.25 1/18 | --/AAA/-- | 1,500mn |
| DE0001040624 | BADWUR 4 1/19 | --/AAA/-- | 1,250mn |
| DE0001040970 | BADWUR 1 7/22 | Aaa/AAA/-- | 1,550mn |
| DE0001040947 | BADWUR 2 11/23 | Aaa/AAA/-- | 1,750mn |
| DE000A14JYT7 | BADWUR 0.625 1/25 | --/AAA/-- | 1,000mn |

Source: Bloomberg, UniCredit Research

**Next elections:** Spring 2021

**Current governing parties:** Greens, CDU

**Rating:** Baden-Württemberg is rated by Moody's and S&P. **Moody's** assigned a AAA rating due to the strong regulatory framework, sound budgetary management, and the state's exceptionally strong and diversified economy. **S&P** raised the rating to AAA in March 2012, due to: **1.** debt being on a declining trend and **2.** the commitment of the state to fiscal consolidation. Other factors cited by S&P include the very stable fiscal institutional system and excellent capital-market access. Baden-Württemberg has a stable outlook at S&P and a stable outlook at Moody's (in line with the sovereign rating).

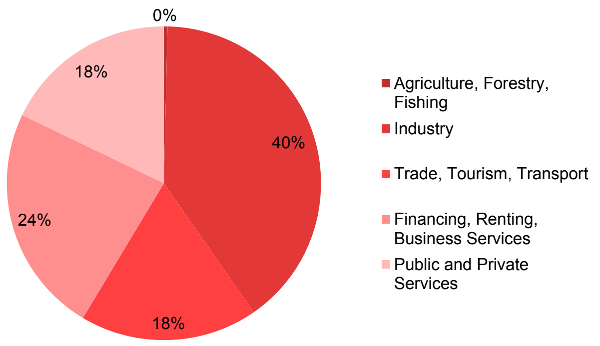
### ECONOMIC INDICATORS – BADEN-WÜRTTEMBERG

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 357.0 | 377.1 | 381.5 | 355.5 | 384.9 | 406.0 | 413.7 | 423.4 | 437.3 | 460.7 |
| GDP (per capita in EUR '000) | 33.2 | 35.0 | 35.4 | 33.0 | 35.7 | 38.7 | 39.24 | 39.9 | 41.0 | 42.7 |
| Real GDP growth | 6.2% | 3.9% | 0.4% | -9.1% | 7.7% | 4.7% | 0.3% | 0.4% | 1.5% | 3.1% |
| Share of national GDP | 14.9% | 15.0% | 14.9% | 14.4% | 14.9% | 15.0% | 15.0% | 15.0% | 15.0% | 15.2% |
| Unemployment rate (average) | 6.3% | 4.9% | 4.1% | 5.1% | 4.9% | 4.1% | 3.9% | 4.1% | 4.0% | 3.8% |
| Total debt (EUR bn) | 42.5 | 41.7 | 41.7 | 41.7 | 43.3 | 42.2 | 42.2 | 44.2 | 45.6 | 40.7 |
| Total debt as a % of GDP | 11.9% | 11.1% | 10.9% | 11.7% | 11.2% | 10.4% | 10.2% | 10.4% | 10.4% | 8.8% |
| Total revenues (EUR bn) | 31.9 | 34.4 | 35.8 | 33.2 | 38.8 | 37.4 | 39.0 | 40.5 | 43.0 | 44.1 |
| Total expenditures (EUR bn) | 32.9 | 32.9 | 34.5 | 34.6 | 35.7 | 37.7 | 38.9 | 40.7 | 42.3 | 44.0 |
| Financial balance (EUR bn) | -0.9 | 1.5 | 1.4 | -1.4 | 3.2 | -0.3 | 0.1 | -0.2 | 0.7 | 0.0 |
| Net borrowings (EUR bn) | 1.5 | 1.0 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 | 1.8 | 1.2 | 0.0 |

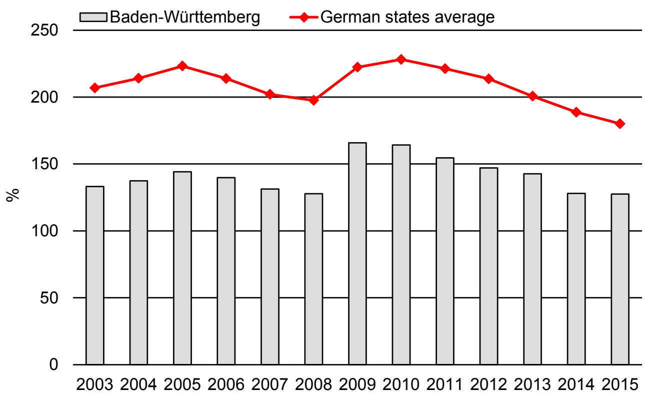
*Based on 2014 population data

Source: FSO, MoF, Statistical Office Baden-Württemberg, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

### STRUCTURE OF GDP (2015)



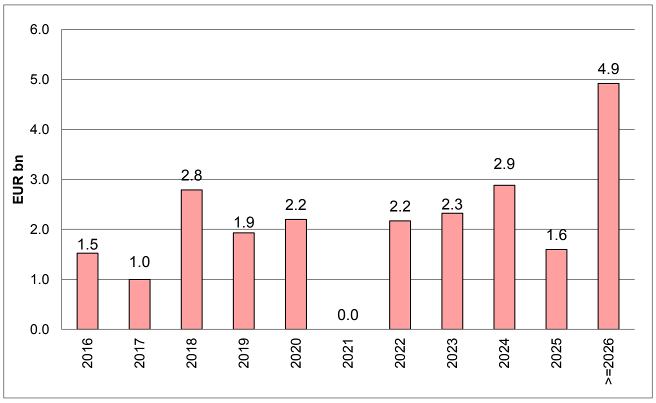

### DEBT DEVELOPMENT*



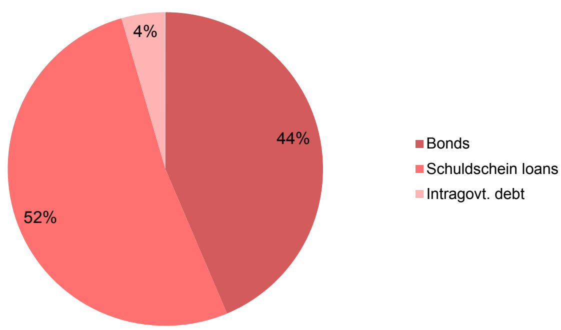

*tax-supported debt as a % of consolidated operating revenues

Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

### OUTSTANDING BOND MATURITY PROFILE




### DEBT STRUCTURE OF BADEN WÜRTTEMBERG (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

### CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | - | - | - | - | 32.1 | 33.3 | 35.8 | 37.9 | 39.3 | 41.5 | 42.9 |
| Operating expenditures | - | - | - | - | 31.2 | 31.8 | 33.7 | 35.6 | 37.3 | 38.2 | 39.7 |
| Operating balance | - | - | - | - | 0.9 | 1.5 | 2.1 | 2.3 | 2.0 | 3.4 | 3.2 |
| Operating balance as a % of operating revenues | -1.3 | 1.9 | 10.1 | 9.6 | 2.8 | 4.6 | 6.1 | 6.3 | 5.7 | 8.6 | 7.2 |
| Tax-supported debt as a % of consolidated operating revenues | 144.2 | 139.8 | 131.2 | 127.8 | 165.8 | 164.2 | 154.6 | 147.1 | 142.6 | 128.0 | 127.5 |
| Balance after debt repayment and on lending as a % of total revenues | -22.8 | -18.6 | -11.5 | -21.0 | -23.2 | -18.6 | -20.2 | -14.1 | -13.2 | -8.1 | -16.5 |

Source: S&P, UniCredit Research

# State of Bavaria

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding |
|---|---|---|---|---|
| Aaas/AAAs/-- | 0% | Yes | BAYERN | EUR 5.0 |

Source: Bloomberg, UniCredit Research

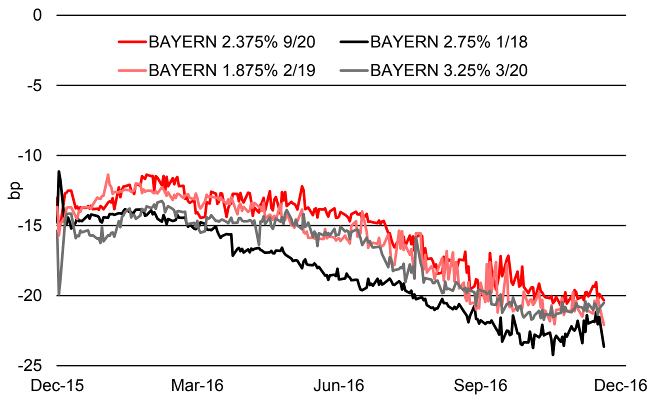
**Profile:** The State of Bavaria is the No. 1 state in terms of economic and financial indicators and one of the wealthiest regions in Europe. It is one of only three German states with a triple-A rating from S&P, and one of two states with a triple-A rating from Moody's. It has solid standalone creditworthiness and enjoys sound financial management by the state's administration.

**Economy:** Bavaria has a highly competitive economic structure. Its GDP is the second-largest among all states, contributing around 18% of Germany's GDP. The state also has the lowest unemployment rate in Germany and the largest GDP per capita among the German non-city states. Bavaria has a strong and diversified regional economy, based on a mix of medium-sized as well as large companies (such as BMW, Siemens, MAN and Linde). Its economy is strongly focused on high-tech/service industries with a large export orientation. Thus, the state benefits more than most from global economic growth. GDP has grown by an average of 1.6% in real terms between 2013 and 2015, compared to 1.2% in Germany as a whole. In terms of economic growth, in recent years Bavaria has ranked fifth among all German states.

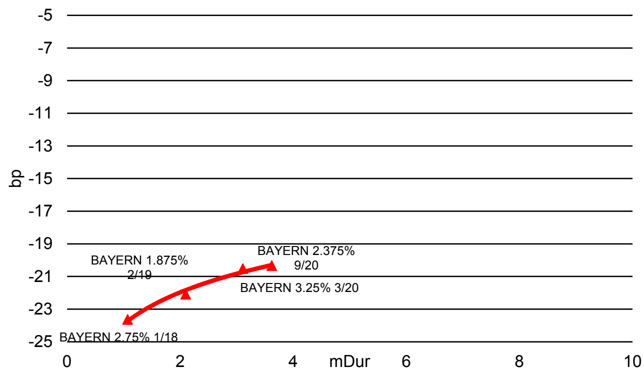
**Budget & debt:** Bavaria has sound and prudent budgetary management with a proven track record in reducing debt levels. The budget has been in surplus since 2011 and net new borrowing has since been negative. Bavaria's performance (together with that of Saxony) by far exceeds that of the other states in terms of relative debt levels, as measured by tax-supported debt as a percentage of consolidated operating revenues. Moderate financial risk stems from the state's exposure to BayernLB. In 2008, Bavaria injected EUR 10bn of capital into the bank, and it issued a guarantee of EUR 4.8bn for BayernLB's structured finance portfolio. In the meantime, BayernLB repaid EUR 4bn of the injected capital to the state of Bavaria.

**Funding strategy:** The State of Bavaria has a conservative funding strategy. It issues bonds and Schuldschein loans, which nearly all have fixed rate coupons. The state raises funding exclusively in euro and it does not use derivatives. Due to low funding requirements, benchmark-sized bonds have become rare – only one bond, the BAVARIA 1/2017, is over EUR 1bn. Although Bavaria has a 2017 gross funding target of EUR 3.4bn (2016: EUR 2.4bn), the probability that the bank will issue a bond in 2017 is low.

### ASW DEVELOPMENT OF MAJOR BOND ISSUES




### CREDIT CURVE




Source: iBoxx, UniCredit Research

**Strengths/Opportunities**

- Strong diversified and competitive economy with low unemployment
- History of sound and prudent budgetary management
- Lower debt to GDP than almost all other German states

**Weaknesses/Threats**

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Exposure to contingent liabilities stemming mainly from its 75% ownership of BayernLB

### MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE0001053221 | BAYERN 4.125 01/17 | --/AAA/-- | 1,250mn |
| DE0001053387 | BAYERN 2.375 09/20 | --/AAA/-- | 750mn |
| DE0001053395 | BAYERN 2.75 01/18 | --/AAA/-- | 725mn |
| DE0001053445 | BAYERN 1.875 02/19 | --/AAA/-- | 500mn |

Source: Bloomberg, UniCredit Research

**Next elections:** Autumn 2018

**Current governing parties:** CSU

**Rating: Moody's** rates Bavaria Aaa, due to its sound financial management, lower debt than its peers, and its strong economy. **S&P's** AAA rating takes into account Bavaria's strong conservative management, which is committed to limiting net new borrowing, its excellent access to liquidity, the well-above-average tax revenues, and the wealthy and diversified regional economy. Bavaria has a stable outlook at S&P and a stable outlook at Moody's (in line with the outlook on the sovereign rating).

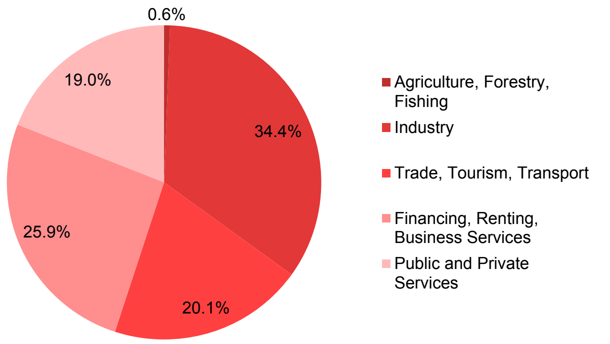
## ECONOMIC INDICATORS – BAVARIA

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 412.9 | 433.6 | 436.9 | 426.7 | 450.2 | 480.5 | 493.4 | 508.1 | 526.7 | 549.2 |
| GDP (per capita in EUR '000) | 33.0 | 34.6 | 34.8 | 34.0 | 35.9 | 38.7 | 39.5 | 40.4 | 41.6 | 43.1 |
| Real GDP growth | 3.8% | 3.3% | 0.2% | -4.5% | 4.9% | 5.9% | 1.0% | 0.9% | 1.9% | 2.1% |
| Share of national GDP | 17.3% | 17.3% | 17.1% | 17.3% | 17.4% | 17.8% | 17.9% | 18.0% | 18.1% | 18.1% |
| Unemployment rate (average) | 6.8% | 5.3% | 4.2% | 4.8% | 4.5% | 3.8% | 3.7% | 3.8% | 3.8% | 3.6% |
| Total debt (EUR bn) | 24.8 | 22.8 | 22.1 | 27.6 | 29.3 | 29.1 | 28.1 | 26.4 | 25.1 | 22.6 |
| Total debt as a % of GDP | 6.0% | 5.3% | 5.1% | 6.5% | 6.5% | 6.1% | 5.7% | 5.2% | 4.8% | 4.1% |
| Total revenues (EUR bn) | 35.5 | 38.5 | 41.1 | 39.4 | 40.6 | 43.8 | 45.2 | 48.9 | 51.8 | 54.0 |
| Total expenditures (EUR bn) | 35.0 | 35.9 | 41.2 | 47.3 | 41.9 | 42.9 | 43.8 | 46.8 | 50.2 | 51.9 |
| Financial balance (EUR bn) | 0.5 | 2.6 | -0.1 | -8.0 | -1.3 | 1.0 | 1.4 | 2.1 | 1.6 | 2.1 |
| Net borrowings (EUR bn) | 0.0 | -0.3 | -0.6 | 5.5 | 1.7 | -0.2 | -1.0 | -1.7 | -1.3 | -2.5 |

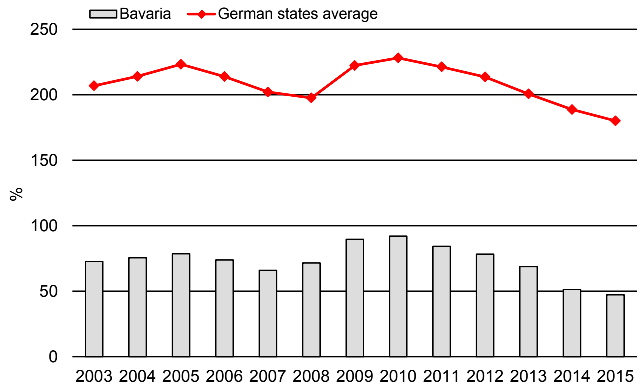
*Based on 2014 population data

Source: FSO, MoF, Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)



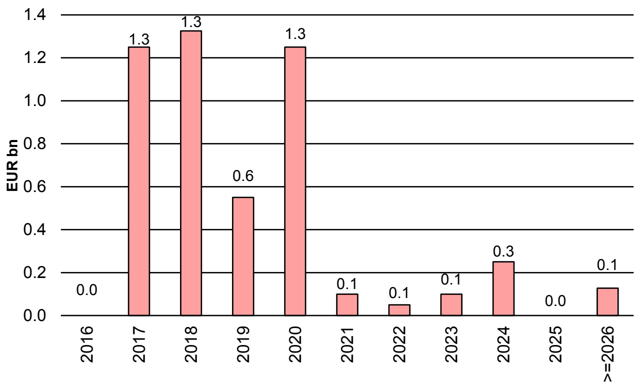

## DEBT DEVELOPMENT*



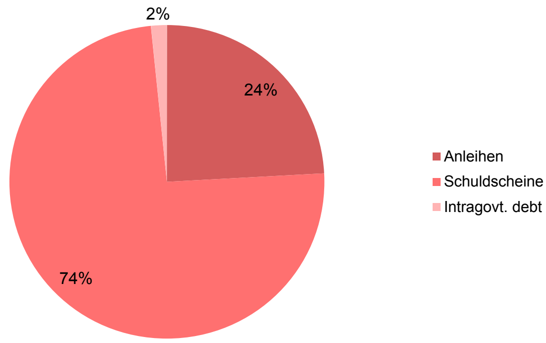

*Tax supported debt as a % of consolidated operating revenues

Source: Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF BAVARIA (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | - | - | - | - | 37.7 | 38.4 | 42.4 | 43.4 | 47.0 | 49.3 | 52.5 |
| Operating expenditures | - | - | - | - | 35.6 | 36.6 | 38.9 | 38.9 | 41.4 | 43.6 | 46.3 |
| Operating balance | - | - | - | - | 2.1 | 1.9 | 3.6 | 4.5 | 5.6 | 5.7 | 6.2 |
| Operating balance as a % of operating revenues | 4.2 | 8.4 | 14.2 | 15.3 | 5.6 | 4.9 | 10.2 | 10.5 | 12.0 | 11.6 | 12.0 |
| Tax-supported debt as a % of consolidated operating revenues | 78.6 | 73.8 | 65.9 | 71.6 | 89.6 | 92.1 | 84.3 | 78.3 | 68.7 | 51.3 | 47.2 |
| Balance after debt repayment and on lending as a % of total revenues | -10.4 | -6.6 | -0.4 | -7.9 | -27.4 | -11.7 | -4.3 | -5.3 | -2.2 | -0.5 | 1.8 |

Source: S&P, UniCredit Research

# State of Berlin

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding |
|---|---|---|---|---|
| Aa1s/--/AAAs | 0% | Yes | BERGER | EUR 38.3bn |

Source: Bloomberg, UniCredit Research

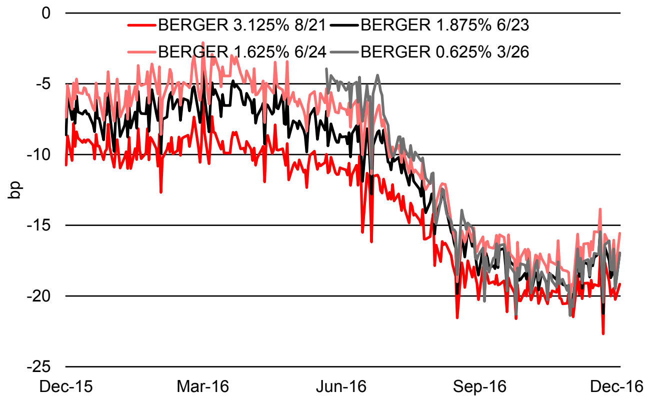
**Profile:** The city-state of Berlin is home to the capital of Germany and is the country's largest city with 3.5mn inhabitants. Besides being an important location for politics, culture, business and tourism, Berlin has been implementing resolute reforms to cope with its economic and financial challenges.

**Economy:** Berlin's economy has undergone fundamental structural changes as a result of successful economic policy. While traditionally industrial, the service sector has been gaining in importance (84% of GDP in 2015 vs. 69% in Germany as a whole). Progress is reflected in an improved economic performance: Berlin's real GDP growth over the past three years has been high compared to that of other German states. The city-state's economy is less vulnerable to economic cycles as a high share of its population works in public administration. Berlin's economic performance has been above that of Germany, on average, over the last three years: real GDP has grown by 1.8% in Berlin, while the growth rate for Germany as a whole has also been 1.2% in the period of 2013 and 2015.

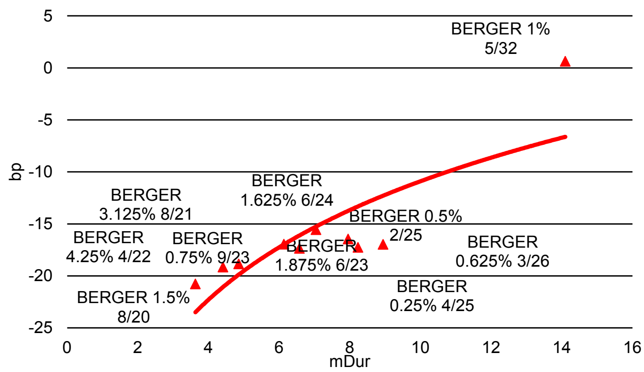
**Budget & debt:** Berlin's budget is characterized by strict fiscal discipline. After an increase in budgetary pressure during the recession in 2009, Berlin's budget has been in surplus every year since 2012. As a consequence, the city-state has been able to continuously reduce its nominal debt levels since 2011. The state balanced its budget four years ahead of targeted government policy. Still, Berlin is one of the four states currently supervised by the stability board (Stabilitätsrat), which monitors progress made towards achieving the zero budget balance rules by 2020. In its latest evaluation report from December 2016, the Stability Board said that Berlin completed its consolidation efforts in 2016.

**Funding strategy:** Berlin has a highly professional funding strategy. The state issues bonds and Schuldschein loans. Bonds are large and liquid and the state has a well-established benchmark curve. Berlin manages its portfolio actively, also using derivatives for hedging purposes. In 2016, the state extended its benchmark curve from 10Y towards 20Y maturities. For 2017, Berlin has a gross funding target of EUR 7bn (2016: EUR 7.2bn).

**ASW DEVELOPMENT OF MAJOR BOND ISSUES**




**CREDIT CURVE**




Source: iBoxx, UniCredit Research

**Strengths/Opportunities**

- Solid financial performance; financial surpluses since 2012 that are projected to continue
- Strong support from the German revenue equalization and solidarity system
- Good access to capital markets; low funding costs
- Continuous efforts towards financial consolidation
- Decent economic development; favorable demographics

**Weaknesses/Threats**

- High debt level compared to the other states
- Moderate fiscal flexibility; limited revenue-raising powers, like all other German states
- Contingent liabilities in the form of indirect financial debt (ownership in housing companies and water, utility, and public transport companies) and guarantees, although they have already declined

**MAJOR BOND ISSUES (IN EUR)**

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1R06T9 | BERGER 1.875% 6/23 | Aa1/--/AAA | 1,500mn |
| DE000A11QEJ1 | BERGER 1.625% 6/24 | Aa1/--/AAA | 1,500mn |
| DE000A168023 | BERGER 1% 5/32 | Aa1/--/AAA | 1,350mn |
| DE000A1K0FR4 | BERGER 3.125% 8/21 | Aa1/--/AAA | 1,250mn |
| DE000A168015 | BERGER 0.625% 3/26 | Aa1/--/AAA | 1,100mn |

Source: Bloomberg, iboxx, UniCredit Research

**Next elections:** September 2021

**Current governing parties:** SPD, Green Party, Left Party

**Rating:** Berlin is rated by Fitch and Moody's. Berlin was assigned a AAA rating by **Fitch**, which considers that the system under which the states operate carries a AAA risk. **Moody's** rates Berlin Aa1. Despite high debt levels and debt service, the state benefits from very good access to liquidity and from the very high likelihood of support from the German government. Berlin has a stable outlook from Fitch and a stable outlook from Moody's.

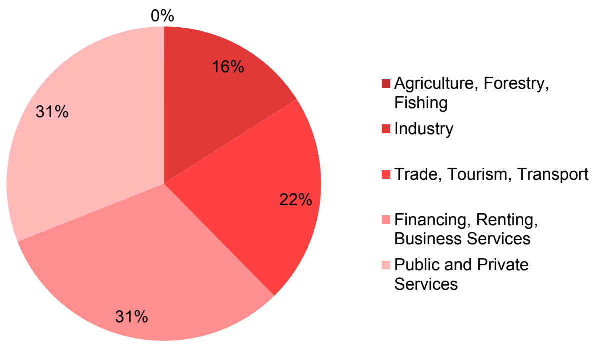
## ECONOMIC INDICATORS – BERLIN

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 90.4 | 94.7 | 99.3 | 99.3 | 103.3 | 108.1 | 109.8 | 112.8 | 117.7 | 124.2 |
| GDP (per capita in EUR '000) | 26.5 | 27.7 | 28.9 | 28.8 | 29.9 | 32.7 | 32.8 | 33.2 | 34.2 | 35.6 |
| Real GDP growth | 3.2% | 3.3% | 4.0% | -1.4% | 3.0% | 3.6% | -0.2% | 0.2% | 2.1% | 3.0% |
| Share of national GDP | 3.8% | 3.8% | 3.9% | 4.0% | 4.0% | 4.0% | 4.0% | 4.0% | 4.0% | 4.1% |
| Unemployment rate (average) | 17.5% | 15.5% | 13.9% | 14.1% | 13.5% | 13.3% | 12.3% | 11.7% | 11.1% | 10.7% |
| Total debt (EUR bn) | 60.1 | 56.6 | 56.0 | 58.8 | 60.4 | 61.5 | 61.0 | 60.4 | 59.8 | 58.6 |
| Total debt as a % of GDP | 66.5% | 59.8% | 56.4% | 59.2% | 58.5% | 56.9% | 55.5% | 53.6% | 50.8% | 47.2% |
| Total revenues (EUR bn) | 18.7 | 20.8 | 21.7 | 19.6 | 20.3 | 20.8 | 22.6 | 22.7 | 23.8 | 24.7 |
| Total expenditures (EUR bn) | 20.4 | 20.7 | 20.9 | 21.0 | 21.7 | 21.9 | 21.9 | 22.3 | 23.0 | 24.3 |
| Financial balance (EUR bn) | -1.8 | 0.0 | 0.8 | -1.5 | -1.4 | -1.1 | 0.6 | 0.5 | 0.8 | 0.4 |
| Net borrowings (EUR bn) | 1.8 | -2.5 | -0.7 | 2.8 | 1.6 | 1.2 | -0.6 | -1.0 | -1.2 | -2.0 |

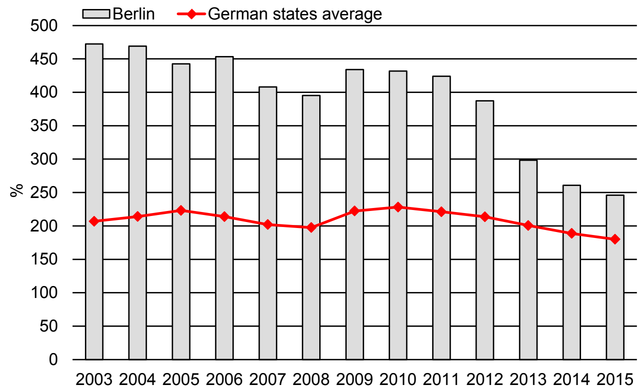
*Based on 2014 population data

Source: FSO, MoF, Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)



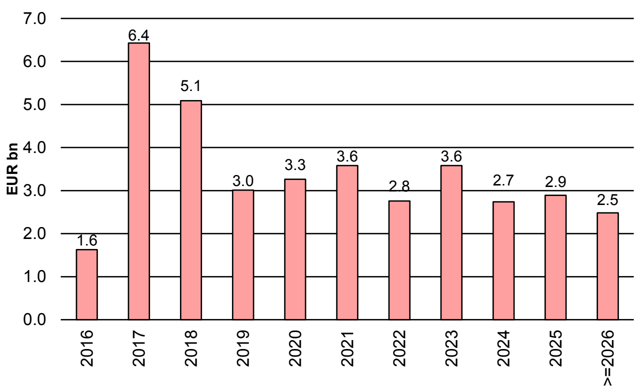

## DEBT DEVELOPMENT*



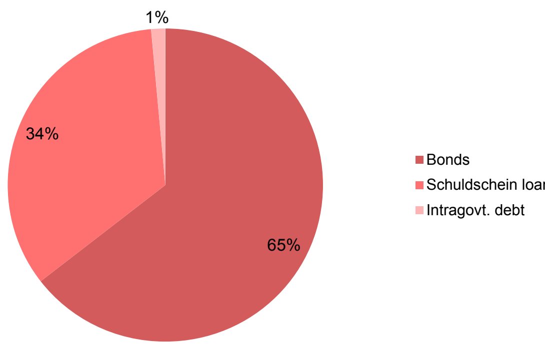

*Tax supported debt as a % of consolidated operating revenues

Source: Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF BERLIN (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 18.8 | 19.2 | 19.8 | 21.6 | 21.8 | 22.9 | 23.8 |
| Operating expenditures | -- | -- | -- | -- | 19.4 | 19.8 | 20.3 | 20.5 | 20.9 | 21.5 | 22.1 |
| Operating balance | -- | -- | -- | -- | -0.6 | -0.6 | -0.5 | 1.1 | 0.9 | 1.4 | 1.7 |
| Operating balance as a % of operating revenues* | -6.3 | -5.3 | 1.1 | 3.7 | -3.5 | -3.1 | -2.6 | 5.1 | 4.4 | 6.2 | 7.34 |
| Tax-supported debt as a % of consolidated operating revenues* | 442.6 | 453.3 | 408.1 | 395.2 | 434.1 | 431.7 | 423.9 | 387.3 | 298.2 | 260.7 | 246.1 |
| Balance after debt repayment & on-lending as a % of total revenues* | -59.2 | -48.9 | -10.1 | -31.6 | -50.7 | -51.3 | -44.0 | -32.7 | -32.9 | -- | -- |

*numbers provided by S&P until 2013

Source: S&P, UniCredit Research

# State of Brandenburg

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding |
|---|---|---|---|---|
| Aa1s/--/--- | 0% | Yes | BRABUR | EUR 11bn |

Source: Bloomberg, UniCredit Research

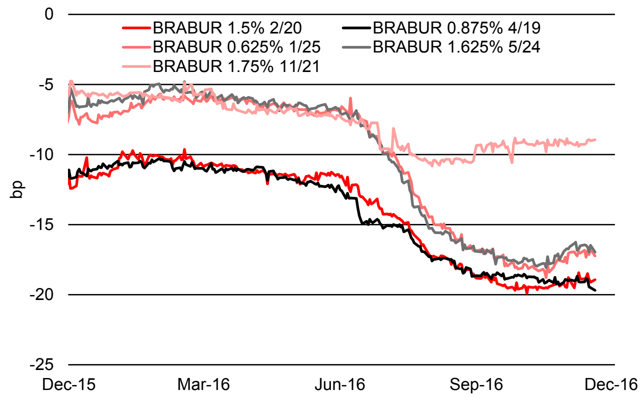
**Profile:** Brandenburg is the fifth-largest German state by geographic size. It is located in northeast Germany and surrounds the city-state of Berlin. Following German reunification, Brandenburg – one of the five former East German states – underwent comprehensive structural changes, creating a sound financial and economic base.

**Economy:** Brandenburg's economic profile has improved markedly since German reunification. The improvements in key economic indicators show that the restructuring efforts are bearing fruit. The economic profile of the region is characterized by small and medium-sized enterprises (SME) in the services sector. Moreover, sizeable direct investment has taken place in recent years and a number of important international companies have either set up or taken over production sites in Brandenburg. On average, between 2013 and 2015, Brandenburg's real GDP has expanded by 1.7% compared to 1.2% for Germany as a whole.

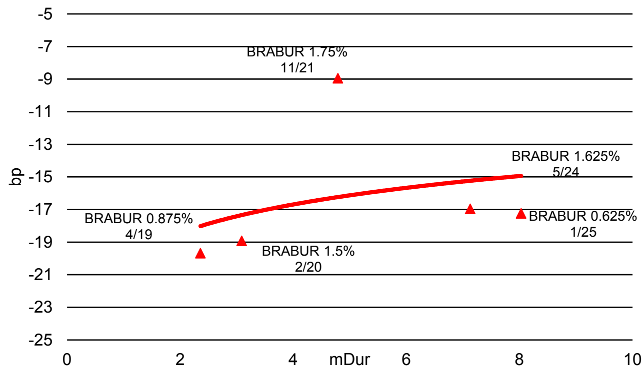
**Budget & debt:** Brandenburg is strongly committed to financial discipline and budgetary consolidation. It was one of nine states that achieved a balanced budget or a budget surplus at the end of 2015. Nominal and relative debt levels have decreased. They are below the German average, and slightly improved in 3Q16.

**Funding strategy:** Brandenburg has a conservative funding strategy. The instruments used include bond issues (benchmarks and private placements) and German domestic Schuldschein loans (plain vanilla). The bonds are usually EUR-denominated. Brandenburg has issued one bond >EUR 500mn per year since 2011. For 2017, Brandenburg has a gross funding target of EUR 2bn (2016: EUR 2.4bn).

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iBoxx, Bloomberg, UniCredit Research

**Strengths/Opportunities**

- Strong support from the German revenue equalization and solidarity system
- Strong fiscal discipline, decreasing debt levels
- Solid financial performance; controlled expenditure growth in recent years
- Well-positioned in the vicinity of the German capital
- Well-diversified industrial base with skilled labor force

**Weaknesses/Threats**

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Weak economic prospects with higher-than-average unemployment

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1PGSJ4 | BRABUR 1.5% 2/20 | Aa1/--/-- | 1,000mn |
| DE000A1PGS08 | BRABUR 0.875% 4/19 | Aa1/--/-- | 600mn |
| DE000A11QEW4 | BRABUR 0.625% 1/25 | Aa1/--/-- | 500mn |
| DE000A11QER4 | BRABUR 1.625% 5/24 | Aa1/--/-- | 500mn |
| DE000A1PGSR7 | BRABUR 1.75% 11/21 | Aa1/--/-- | 300mn |

Source: Bloomberg, UniCredit Research

**Next elections:** Autumn 2019

**Current governing parties:** SPD, Left Party ("Die Linke")

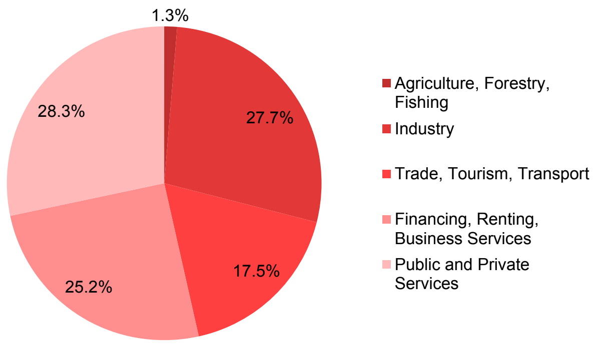
**Rating:** Brandenburg is rated Aa1 by **Moody's.** The agency takes the state's generally prudent budget management, limited off-balance-sheet liabilities, the challenging economic prospects, its declining budget size, and its minimal revenue flexibility into account. The outlook is stable, in line with the outlook on the sovereign rating.

### ECONOMIC INDICATORS – BRANDENBURG

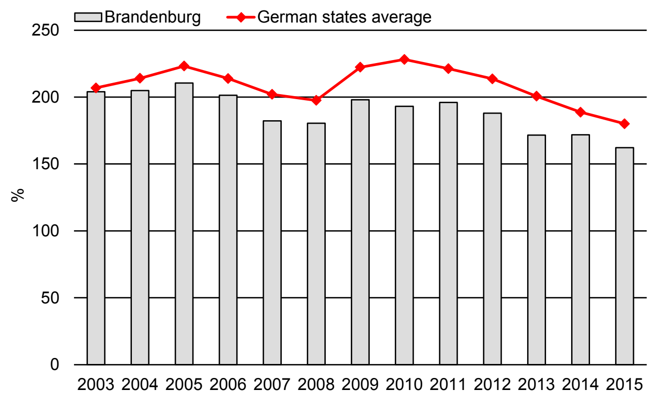
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 50.8 | 53.0 | 54.9 | 53.6 | 56.0 | 57.7 | 58.8 | 60.4 | 62.4 | 65.3 |
| GDP (per capita in EUR '000) | 19.9 | 20.9 | 21.7 | 21.3 | 22.4 | 23.5 | 23.9 | 24.7 | 25.4 | 26.5 |
| Real GDP growth | 3.1% | 1.8% | 2.1% | -2.8% | 2.8% | 0.8% | 0.5% | 0.9% | 1.6% | 2.7% |
| Share of national GDP | 2.1% | 2.1% | 2.1% | 2.2% | 2.2% | 2.1% | 2.1% | 2.1% | 2.1% | 2.2% |
| Unemployment rate (average) | 17.5% | 15.5% | 13.9% | 12.3% | 11.2% | 10.7% | 10.2% | 10.0% | 9.3% | 8.7% |
| Total debt (EUR bn) | 17.2 | 17.4 | 17.2 | 17.4 | 17.8 | 17.9 | 18.0 | 17.2 | 16.7 | 16.7 |
| Total debt as a % of GDP | 33.8% | 32.8% | 31.3% | 32.4% | 31.8% | 31.0% | 30.5% | 28.5% | 26.8% | 25.6% |
| Total revenues (EUR bn) | 9.7 | 10.3 | 10.2 | 9.5 | 9.4 | 10.1 | 9.8 | 10.8 | 10.5 | 10.9 |
| Total expenditures (EUR bn) | 10.0 | 9.8 | 10.1 | 10.0 | 9.9 | 10.0 | 10.1 | 10.1 | 10.2 | 10.6 |
| Financial balance (EUR bn) | -0.3 | 0.5 | 0.1 | -0.5 | -0.5 | 0.1 | -0.3 | 0.7 | 0.3 | 0.3 |
| Net borrowings (EUR bn) | -0.4 | 0.0 | 0.0 | 0.3 | 0.3 | -0.7 | -0.7 | -1.4 | -1.7 | -1.7 |

*Based on 2014 population data
Source: FSO, MoF, Statistical Office, VGR der Länder, Bundesagentur für Arbeit UniCredit Research

### STRUCTURE OF GDP (2015)

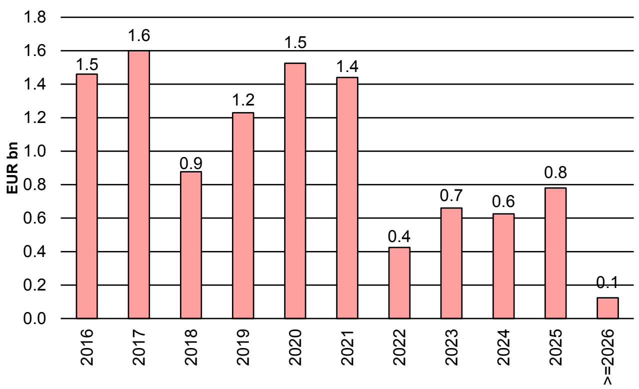



### DEBT DEVELOPMENT*

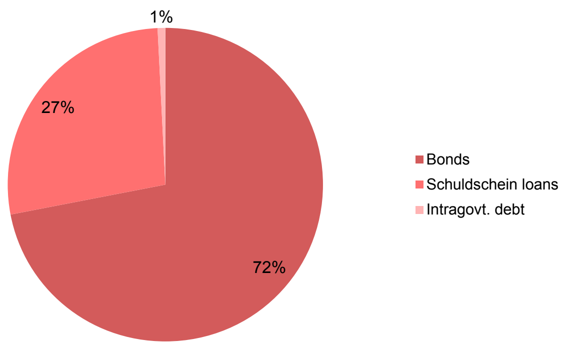



*Tax supported debt as a % of consolidated operating revenues
Source: Statistical Office, VGR der Länder, S&P, UniCredit Research

### OUTSTANDING BOND MATURITY PROFILE




### DEBT STRUCTURE OF BRANDENBURG (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

### CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 8.7 | 8.7 | 9.1 | 9.5 | 9.9 | 9.7 | 10.3 |
| Operating expenditures | -- | -- | -- | -- | 8.2 | 8.3 | 8.4 | 8.7 | 8.7 | 8.8 | 9.3 |
| Operating balance | -- | -- | -- | -- | 0.5 | 0.4 | 0.8 | 0.8 | 1.2 | 0.9 | 1.0 |
| Operating balance as a % of operating revenues* | 4.3 | 7.2 | 14.7 | 11.7 | 5.9 | 4.9 | 8.7 | 8.6 | 12.6 | 9.2 | 9.8 |
| Tax-supported debt as a % of consolidated operating revenues* | 210.6 | 201.4 | 182.2 | 180.5 | 198.0 | 193.1 | 196.0 | 188.0 | 171.6 | 171.9 | 162.2 |
| Balance after debt repayment & on-lending as a % of total revenues* | -25.2 | -32.7 | -23.7 | -43.7 | -47.2 | -45.6 | -27.5 | -47.1 | -31.4 | -- | -- |

*numbers provided by S&P until 2013
Source: S&P, UniCredit Research

# State of Bremen

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding* |
|---|---|---|---|---|
| --/--/-- | 0% | No | BREMEN | EUR 9.8bn |

*Without LANDER issues

Source: Bloomberg, UniCredit Research

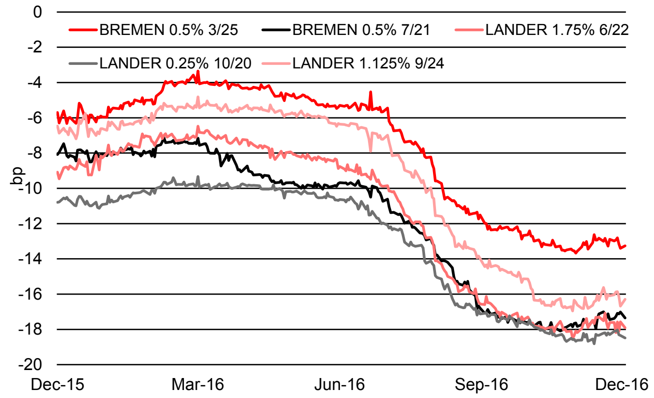
**Profile**: The city-state of Bremen is located in northwest Germany. It comprises the cities of Bremen and Bremerhaven and is the smallest state in terms of economic size, population (0.66mn) and area (404km$^2$). As a city-state, Bremen has a high GDP per capita of EUR 47,603 (2015) and therefore ranks second among the German states.

**Economy:** Bremen's main economic bases are the two harbors, which provide jobs in shipping, harbor maintenance, transportation and logistics. Every fourth job in Bremen is related to the shipping industry. Further important sectors are the aerospace, automotive and the consumer industries. Bremen ranks high in terms of providing a favorable environment for innovation. Bremen has a high export share, which implies that its economic performance is more sensitive to economic swings. On average, during between 2013 and 2015, Bremen’s real GDP expanded by 0.9% compared to 1.2% for that of Germany.

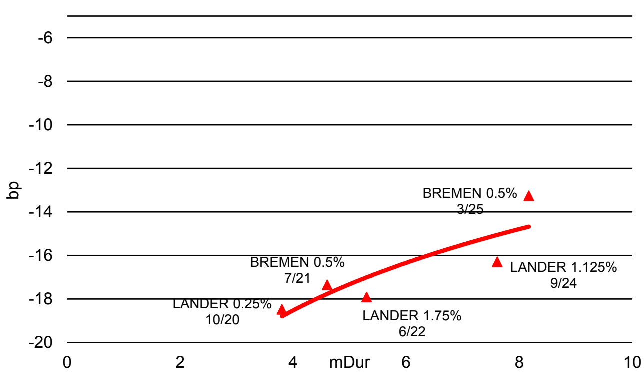
**Budget & debt:** Bremen is the state with the highest debt ratios and the weakest fiscal indicators. However, Bremen is narrowing its budget gap. At the end of 2015, the state recorded a budget deficit of EUR 0.3bn, a constant improvement from the EUR 1.3bn recorded in 2010. Tax-supported debt is historically by far the highest among German states (S&P data). Bremen is one of the four states under supervision by the stability board, which monitors the progress made towards achieving the zero budget balance rules by 2020. Landesbank BremenLB, 41%-owned by the city-state originally, encountered difficulties in 2016. It was fully taken over by NordLB and operates as a 100% subsidiary. In its latest evaluation report from December 2016, the Stability Board said that Bremen did not complete its consolidation efforts in 2016.

**Funding strategy:** Bremen has traditionally fulfilled its funding needs by participating in the joint jumbo issues of the German states (LANDER) and by issuing Schuldschein loans. LANDER bonds are issued by several German states and have a size of more than EUR 1bn. Bremen has issued its own bonds since 2009; since end-2015, it has issued only fixed-rate bonds denominated in EUR. It uses derivatives to actively manage its portfolio. For 2017, Bremen has a gross funding volume of EUR 2.6bn, below previous years (3Y average: EUR 6.5bn), according to its June budget plan.

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iBoxx, Bloomberg, UniCredit Research

**Strengths/Opportunities**

- Strong support from the German revenue equalization and solidarity system
- Second-largest harbor in Germany with high export quota
- High GDP per capita of EUR 47,603 (128% of German average)

**Weaknesses/Threats**

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Challenging fiscal situation, relatively high debt levels (67% debt/GDP ratio)

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1680L2 | BREMEN 0.375% 2/24 | --/--/AAA | 750mn |
| DE000A1680J6 | BREMEN 0.5% 10/22 | --/--/AAA | 750mn |
| DE000A1680M0 | BREMEN 0.125% 5/23 | --/--/AAA | 500mn |
| DE000A11QJ16 | BREMEN 0.5% 3/25 | --/--/AAA | 500mn |
| DE000A11QJ32 | BREMEN 0.5% 7/21 | --/--/AAA | 500mn |

*Bremen also participates in the "Ländergemeinschaftsbond" issues

Source: Bloomberg, UniCredit Research

**Next elections:** Spring 2019
**Current governing parties:** SPD, Green Party

**Rating: Fitch** states that the AAA bond reflects the strong mutual support mechanisms that apply to all members of the German Federation, including the State of Bremen, and the extensive liquidity facilities they benefit from, which ensure timely debt and debt service payment. **Recent developments:** Since March 2014, bonds issued by Bremen carry a AAA rating by Fitch.

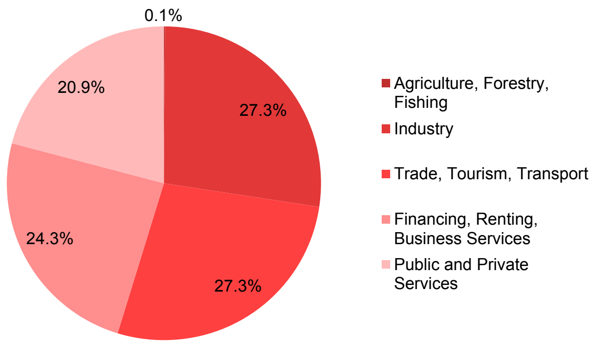
### ECONOMIC INDICATORS – BREMEN

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 26.3 | 27.3 | 27.7 | 25.2 | 26.7 | 27.7 | 28.9 | 29.3 | 30.1 | 31.6 |
| GDP (per capita in EUR '000) | 39.5 | 41.0 | 41.7 | 38.2 | 40.6 | 42.4 | 44.1 | 44.6 | 45.6 | 47.6 |
| Real GDP growth | 4.3% | 1.8% | 0.3% | -9.3% | 4.6% | 2.4% | 2.7% | -0.7% | 0.8% | 2.7% |
| Share of national GDP | 1.1% | 1.1% | 1.1% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% |
| Unemployment rate (average) | 14.9% | 12.7% | 11.4% | 11.8% | 12.0% | 11.6% | 11.2% | 11.1% | 10.9% | 10.9% |
| Total debt (EUR bn) | 13.5 | 14.3 | 15.3 | 16.0 | 17.6 | 18.2 | 19.0 | 19.6 | 19.5 | 21.2 |
| Total debt as a % of GDP | 51.4% | 52.4% | 55.3% | 63.6% | 65.9% | 65.9% | 65.9% | 67.1% | 64.9% | 67.1% |
| Total revenues (EUR bn) | 3.2 | 3.3 | 3.7 | 3.4 | 3.3 | 3.9 | 4.1 | 4.4 | 4.7 | 4.8 |
| Total expenditures (EUR bn) | 4.0 | 4.0 | 4.1 | 4.2 | 4.6 | 4.6 | 4.7 | 4.9 | 5.1 | 5.1 |
| Financial balance (EUR bn) | -0.8 | -0.7 | -0.4 | -0.9 | -1.3 | -0.6 | -0.6 | -0.5 | -0.4 | -0.3 |
| Net borrowings (EUR bn) | 0.8 | 0.8 | 0.5 | 1.0 | 1.2 | 0.9 | 0.3 | 0.4 | 0.3 | 0.2 |

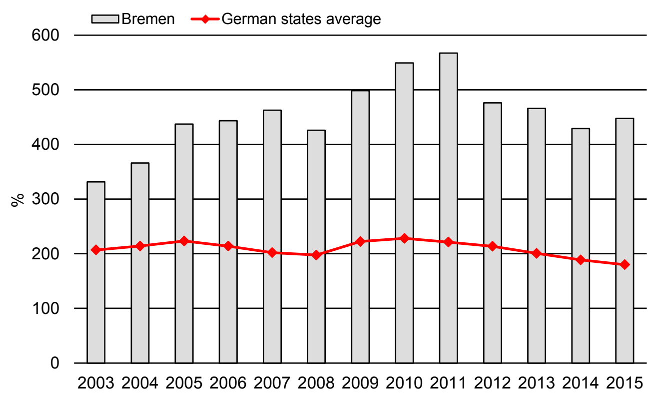
*Based on 2014 population data

Source: FSO, MoF, Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

### STRUCTURE OF GDP (2015)



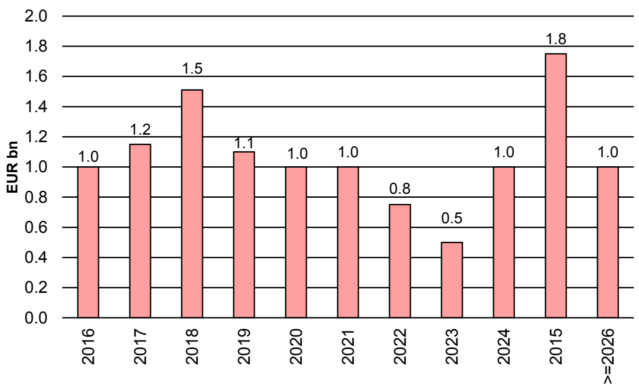

### DEBT DEVELOPMENT*



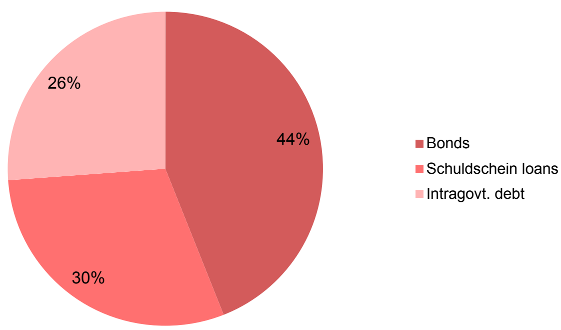

*Tax supported debt as a % of consolidated operating revenues

Source: Statistical Office, VGR der Länder, S&P, UniCredit Research

### OUTSTANDING BOND MATURITY PROFILE




### DEBT STRUCTURE OF BREMEN (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

### CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 3.2 | 3.1 | 3.8 | 4.0 | 4.3 | 4.6 | 4.7 |
| Operating expenditures | -- | -- | -- | -- | 3.8 | 4.0 | 4.0 | 4.2 | 4.3 | 4.4 | 4.6 |
| Operating balance | -- | -- | -- | -- | -0.5 | -0.9 | -0.2 | -0.1 | 0.0 | 0.2 | 0.2 |
| Operating balance as a % of operating revenues* | -16.7 | -11.7 | -9.8 | -0.4 | -16.0 | -28.7 | -10.9 | -3.8 | -0.3 | 4.1 | 3.5 |
| Tax-supported debt as a % of consolidated operating revenues* | 437.4 | 443.3 | 462.8 | 426.1 | 498.6 | 549.2 | 567.3 | 476.2 | 466.0 | 429.2 | 447.7 |
| Balance after debt repayment & on-lending as a % of total revenues* | -84.7 | -70.2 | -57.2 | -79.4 | -173.8 | -190.9 | -278.8 | -238.5 | -217.0 | -- | -- |

*numbers provided by S&P until 2013

Source: S&P, UniCredit Research

# State of Hamburg

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding* |
|---|---|---|---|---|
| --/--/AAAs | 0% | No | HAMBRG | EUR 10.6bn |

*Without LANDER issues

Source: Bloomberg, UniCredit Research

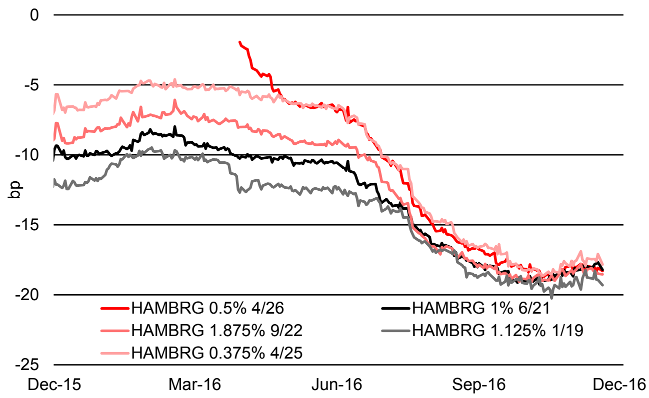
**Profile:** The State of Hamburg (city-state) is located in northern Germany between Lower Saxony and Schleswig Holstein. It is the second-largest city in Germany and the seventh-largest in the EU with a population of 1.8mn. Hamburg and its economy benefit from its harbor, which is among the largest in the world in terms of container-handling volume.

**Economy:** Hamburg's economy is strong in the trade and service sectors and in manufacturing. It has a good infrastructure thanks to its international airport, its harbor and its function as the largest railway hub in northern Europe. Hamburg has the highest GDP per capita among the German states (2015: EUR 61,729), representing 166% of the German average. Important industrial sectors include aerospace (third-largest worldwide), consumer and chemical products, machinery and shipbuilding and the petroleum industry. Between 2013 and 2015, Hamburg's real GDP has recorded an average growth rate of 1.7%, above the 1.2% growth rate recorded for Germany as a whole.

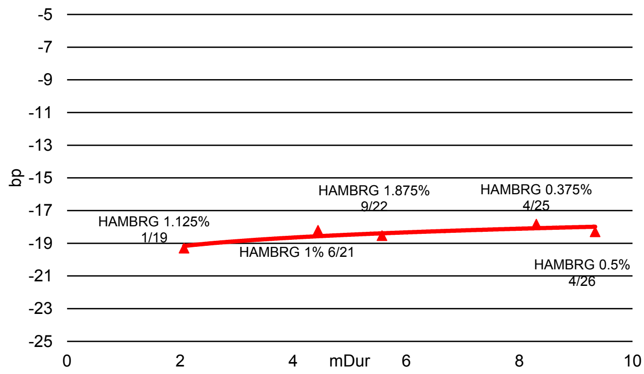
**Budget & debt:** Hamburg's budgetary performance has improved continuously since 2012. The city posted a EUR 200mn budget surplus in 2015 after years of consecutive budget deficits until 2013. This improvement is in line with the overall performance of German states, which posted a combined EUR 2.8bn budget surplus in 2015. Hamburg owns HSH Nordbank (jointly with the state of Schleswig-Holstein); the two states together issued a EUR 10bn guarantee for HSH Nordbank, which will likely be fully drawn in the coming years; the guarantee will likely lead to EUR 5bn of additional liabilities for each of the two states; EUR 1.3bn of that guarantee have already been drawn. Hamburg's nominal debt is unchanged since 2013. Total debt to GDP for 2015 is 22.5% (2013: 23.2%), which is higher than the average of German states of 26.1%.

**Funding strategy:** Hamburg has both a broad and conservative funding strategy. It issues bonds and Schuldschein loans (EUR focus). Traditionally, Hamburg has issued small-sized bonds (EUR 50-100mn) with shorter maturities; however, since 2010, it has increased issue sizes to up to EUR 500-750mn. It participates in the joint jumbo issues of the German states (Ländergemeinschaftsbonds). The LANDER bonds are issued jointly by several German states and are benchmark size. In 2017, its gross funding volume will be EUR 2.1bn (2016: EUR 2.2bn).

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iboxx, Bloomberg, UniCredit Research

### Strengths/Opportunities

- Strong support from the German revenue equalization and solidarity system
- Strong and wealthy economy; GDP per capita at 166% of German average
- Good track record in job creation

### Weaknesses/Threats

- Export-sensitive economy, especially the shipping industry
- Hamburg owns HSH Nordbank (jointly with the state of Schleswig-Holstein); the two states together issued a EUR 10bn guarantee for HSH
- Further pressure could emerge from **1.** the privatization of HSH and **2.** possible further deterioration of acquired HSH assets (shipping loans)
- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states

## MAJOR BOND ISSUES (IN EUR)*

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1YCQK7 | HAMBRG 0.5% 4/26 | --/--/AAA | 800mn |
| DE000A1YCQA8 | HAMBRG 1% 6/21 | --/--/AAA | 800mn |
| DE000A1H3EM7 | HAMBRG 1.875% 9/22 | --/--/AAA | 750mn |
| DE000A1H3ER6 | HAMBRG 1.125% 1/19 | --/--/AAA | 750mn |
| DE000A1YCQD2 | HAMBRG 0.375% 4/25 | --/--/AAA | 700mn |

*Hamburg also participates in the "Ländergemeinschaftsbond" issues

Source: Bloomberg, UniCredit Research

**Next elections:** Spring 2019
**Current governing parties:** SPD, Greens

**Rating:** Hamburg has been assigned a AAA rating by **Fitch**. The rating agency bases its rating on the stability and sustainability of the solidarity system for the German states. Thus, Fitch considers the system under which the states operate to carry a AAA risk. **S&P** withdrew its rating in 2010.

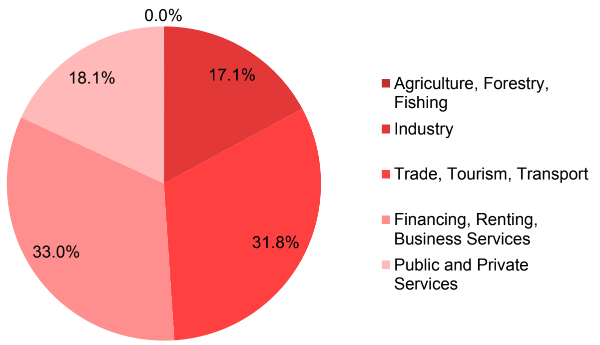
## ECONOMIC INDICATORS – HAMBURG

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 89.2 | 92.4 | 95.1 | 91.7 | 94.6 | 95.9 | 97.8 | 102.3 | 105.2 | 109.3 |
| GDP (per capita in EUR '000) | 50.9 | 52.3 | 53.7 | 51.3 | 53.1 | 56.0 | 56.6 | 58.8 | 60.0 | 61.7 |
| Real GDP growth | 1.8% | 2.1% | 3.3% | -4.7% | 1.3% | 0.7% | 0.1% | 2.4% | 0.8% | 1.9% |
| Share of national GDP | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% | 3.5% | 3.6% | 3.6% | 3.6% | 3.6% |
| Unemployment rate (average) | 11.0% | 9.2% | 8.1% | 8.6% | 8.2% | 7.8% | 7.5% | 7.4% | 7.6% | 7.4% |
| Total debt (EUR bn) | 21.9 | 21.6 | 21.6 | 22.6 | 23.6 | 21.2 | 20.9 | 23.2 | 23.2 | 23.2 |
| Total debt as a % of GDP | 24.6% | 23.4% | 22.7% | 24.6% | 25.0% | 22.2% | 21.3% | 22.7% | 22.1% | 21.2% |
| Total revenues (EUR bn) | 10.2 | 10.2 | 11.0 | 9.6 | 10.2 | 11.0 | 11.1 | 11.2 | 12.3 | 12.8 |
| Total expenditures (EUR bn) | 10.1 | 10.4 | 11.1 | 10.5 | 11.1 | 11.5 | 11.8 | 11.8 | 11.9 | 12.6 |
| Financial balance (EUR bn) | 0.1 | -0.3 | -0.1 | -1.0 | -0.9 | -0.5 | -0.7 | -0.6 | 0.4 | 0.2 |
| Net borrowings (EUR bn) | 0.6 | 0.0 | -0.7 | 0.0 | 0.0 | -1.2 | 0.0 | 0.3 | 0.2 | 0.0 |

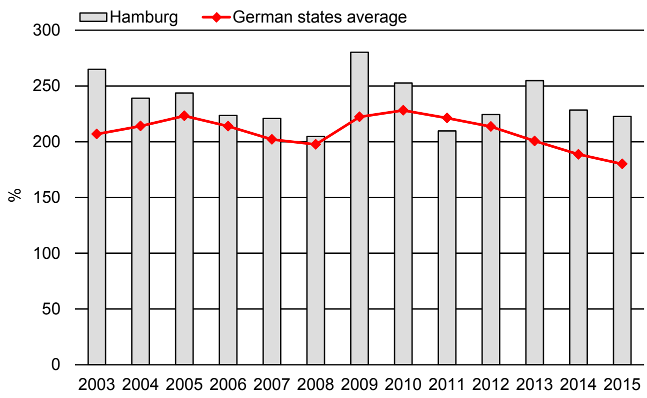
*Based on 2014 population data

Source: FSO, MoF, Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)



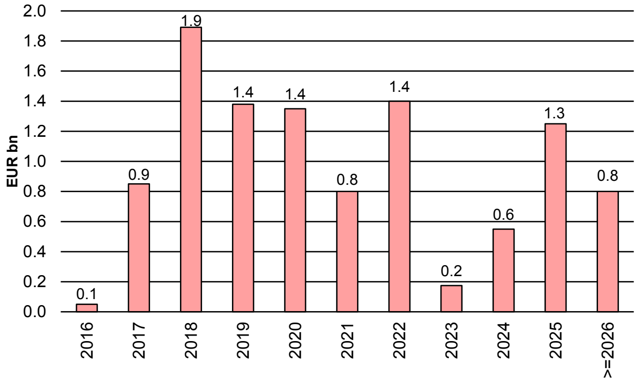

## DEBT DEVELOPMENT*



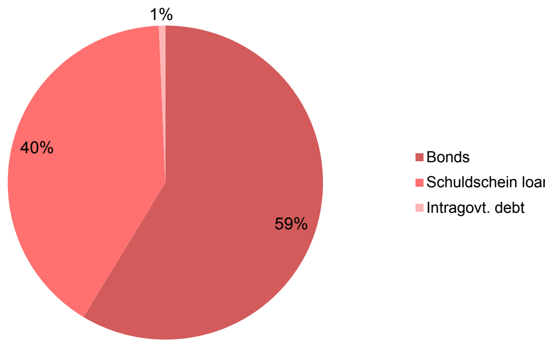

*Tax supported debt as a % of consolidated operating revenues

Source: Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF HAMBURG (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 9.3 | 9.8 | 10.7 | 10.9 | 11.4 | 12.2 | 12.5 |
| Operating expenditures | -- | -- | -- | -- | 9.3 | 9.9 | 10.3 | 10.8 | 11.1 | 11.0 | 11.7 |
| Operating balance | -- | -- | -- | -- | 0.0 | -0.1 | 0.4 | 0.1 | 0.2 | 1.1 | 0.8 |
| Operating balance as a % of operating revenues* | -1.3 | 7.3 | 7.1 | 11.2 | -0.7 | -1.1 | 2.5 | -0.2 | 0.8 | 9.2 | 6.2 |
| Tax-supported debt as a % of consolidated operating revenues* | 243.6 | 223.6 | 221.0 | 204.7 | 280.3 | 252.7 | 209.7 | 224.3 | 254.7 | 228.4 | 222.7 |
| Balance after debt repayment & on-lending as a % of total revenues* | -25.2 | -20.9 | -21.9 | -23.3 | -34.6 | -42.1 | -42.8 | -35.4 | -39.4 | -- | -- |

*numbers provided by S&P until 2013

Source: S&P, UniCredit Research

# State of Hessen

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding |
|---|---|---|---|---|
| --/AAs/-- | 0% | Yes | HESSEN | EUR 32.2bn |

Source: Bloomberg, UniCredit Research

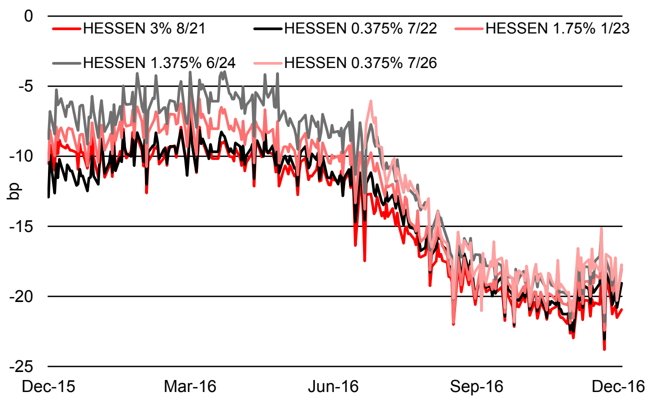
**Profile:** The State of Hessen is located in the center of Germany and includes one of Europe's most important financial centers, Frankfurt am Main. It is home to the headquarters of the European Central Bank, the Frankfurt Stock Exchange and the derivatives exchange Eurex. Hessen has the second-largest GDP per capita among the German non-city-states (2015: EUR 43,073), 16% above the German average.

**Economy**: Hessen's economic structure is well-diversified. The economy benefits from an excellent infrastructure and its airport hub, Frankfurt, the third-largest in Europe. The financial services industry plays an important role. More than 325 banks are located in Frankfurt, 50% of which are foreign. The city is set to gain further importance after the UK's Brexit vote. The insurance industry is clustered in Wiesbaden, Hessen's capital. Other important sectors include logistics and transport. Hessen has the second-highest concentration of industry in Germany, after the Ruhrgebiet (Ruhr region) in North Rhine-Westphalia. The most important of these are the pharmaceutical, chemical, optical engineering, fine mechanics and the automotive industries. Real GDP growth has been above the German average between 2013 and 2015 (1.5% real GDP growth of Hessen vs. 1.3% for Germany as a whole between 2013 and 2015).

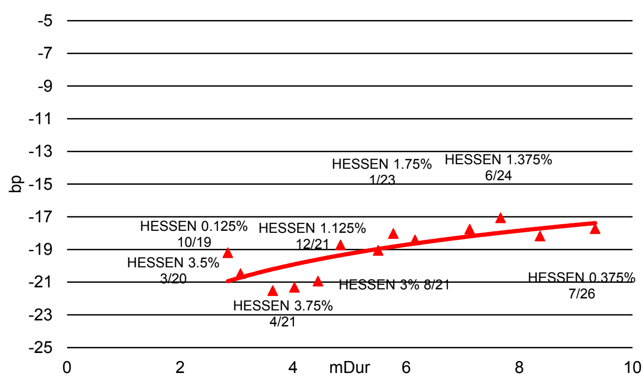
**Budget & debt:** Hessen has reduced its fiscal deficit since 2012 from EUR 1.6bn to EUR 0.3bn in 2015. The state's nominal debt increased slightly in 2015 to EUR 42.6bn. For 2015, tax-supported debt was 210% of consolidated operating revenues, above the German average of 180% (S&P data). Hessen is committed to reaching the constitutional zero-borrowing rules by 2020.

**Funding Strategy:** Hessen has an innovative and professional funding strategy. It raises funds through Schuldschein loans (mainly plain vanilla), private placements, and benchmark bonds. Bonds are large and relatively liquid, as the state runs a sophisticated benchmark program. In 2016, Hessen's maximum allowed funding volume ("Kreditermächtigung") was EUR 6.2bn in gross terms, slightly above the figure for 2015 (EUR 5.8bn). The state had not announced a 2017 funding plan at the time of writing.

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: UniCredit Research

**Strengths/Opportunities**

– Strong and wealthy economy with relatively high GDP per capita
– Among Europe's most important financial centers, home to the ECB and Eurex
– Commitment to fiscal consolidation and an improving fiscal situation

**Weaknesses/Threats**

– Moderate fiscal flexibility with limited revenue-raising powers, like all other German states

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1RQCY2 | HESSEN 0.375% 7/26 | -/AA/-- | 2,000mn |
| DE000A1RQB11 | HESSEN 1.375% 6/24 | --/AA/-- | 1,500mn |
| DE000A1RQBC0 | HESSEN 1.75% 1/23 | --/AA/-- | 1,500mn |
| DE000A1KRA18 | HESSEN 3% 8/21 | --/AA/-- | 1,250mn, |
| DE000A1RQCT2 | HESSEN 0.375% 7/22 | --/AA/-- | 1,250mn |

Source: iboxx,Bloomberg, UniCredit Research

**Next elections:** Autumn 2018
**Current governing parties:** CDU, Greens

**Rating: S&P** assigns a AA rating to Hessen. The rationale for the rating is that Hessen has a wealthy and diversified economy and a stable system of inter-governmental relations. S&P highlights weak budgetary performance, although it expects a gradual improvement in the coming years. The outlook is stable.

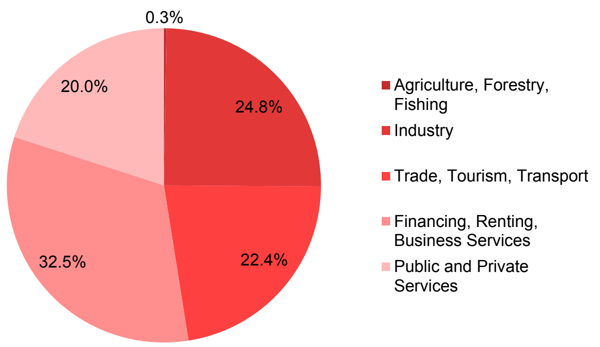
### ECONOMIC INDICATORS – HESSEN

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 218.9 | 227.5 | 230.6 | 219.5 | 227.2 | 235.6 | 237.6 | 243.4 | 253.9 | 263.4 |
| GDP (per capita in EUR ‘000) | 36.0 | 37.4 | 37.9 | 36.1 | 37.4 | 39.4 | 39.6 | 40.4 | 41.8 | 43.1 |
| Real GDP growth | 3.2% | 2.8% | 0.8% | -7.6% | 3.1% | 2.9% | -0.6% | 0.3% | 2.4% | 1.7% |
| Share of national GDP | 9.1% | 9.1% | 9.0% | 8.9% | 8.8% | 8.7% | 8.6% | 8.6% | 8.7% | 8.7% |
| Unemployment rate (average) | 9.2% | 7.6% | 6.6% | 6.8% | 6.4% | 5.9% | 5.7% | 5.8% | 5.7% | 5.5% |
| Total debt (EUR bn) | 30.1 | 30.0 | 30.6 | 33.4 | 37.1 | 39.0 | 40.4 | 39.9 | 41.0 | 42.6 |
| Total debt as a % of GDP | 13.7% | 13.2% | 13.3% | 15.2% | 16.3% | 16.5% | 17.0% | 16.4% | 16.2% | 16.2% |
| Total revenues (EUR bn) | 18.9 | 20.5 | 20.0 | 18.2 | 18.8 | 20.3 | 20.4 | 22.0 | 23.0 | 24.5 |
| Total expenditures (EUR bn) | 19.1 | 21.1 | 21.0 | 20.7 | 20.7 | 21.6 | 22.1 | 22.5 | 23.7 | 24.7 |
| Financial balance (EUR bn) | -0.3 | -0.6 | -1.1 | -2.6 | -1.9 | -1.2 | -1.6 | -0.5 | -0.7 | -0.3 |
| Net borrowings (EUR bn) | -0.6 | 7.0 | -0.9 | 2.7 | 2.5 | 1.0 | 1.0 | -1.1 | -0.9 | -0.3 |

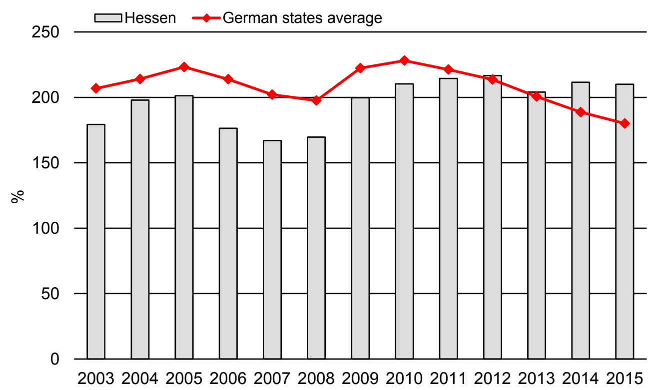
*Based on 2014 population data

Source: FSO, MoF, Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

### STRUCTURE OF GDP (2015)



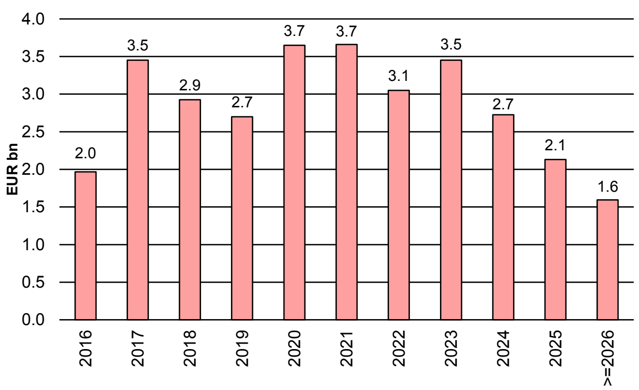

### DEBT DEVELOPMENT*



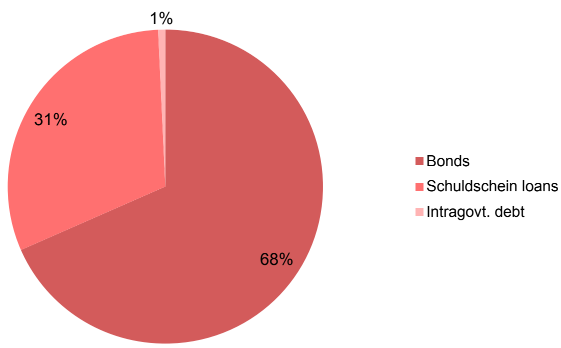

*Tax supported debt as a % of consolidated operating revenues

Source: Statistical Office, VGR der Länder, S&P, UniCredit Research

### OUTSTANDING BOND MATURITY PROFILE




### DEBT STRUCTURE OF HESSEN (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

| Credit Metrics | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 17.5 | 18.0 | 19.3 | 19.9 | 21.4 | 22.5 | 23.9 |
| Operating expenditures | -- | -- | -- | -- | 18.9 | 18.6 | 19.2 | 20.2 | 20.7 | 22.0 | 23.0 |
| Operating balance | -- | -- | -- | -- | -1.4 | -0.6 | 0.1 | -0.3 | 0.7 | 0.5 | 0.9 |
| Operating balance as a % of operating revenues | -4.0 | 0.2 | 0.8 | 1.3 | -7.8 | -3.4 | 1.6 | -0.7 | 4.2 | 3.2 | 2.4 |
| Tax-supported debt as a % of consolidated operating revenues | 201.2 | 176.4 | 166.9 | 169.6 | 199.7 | 210.3 | 214.5 | 216.6 | 204.0 | 211.5 | 210.0 |
| Balance after debt repayment and on-lending as a % of total revenues | -19.2 | -23.7 | -23.8 | -20.0 | -36.1 | -28.5 | -29.3 | -32.6 | -28.6 | -25.4 | -24.8 |

Source: S&P, UniCredit Research

## State of Lower Saxony

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding |
|---|---|---|---|---|
| --/--/AAAs | 0% | Yes | NIESA | EUR 37.5bn |

Source: Bloomberg, UniCredit Research

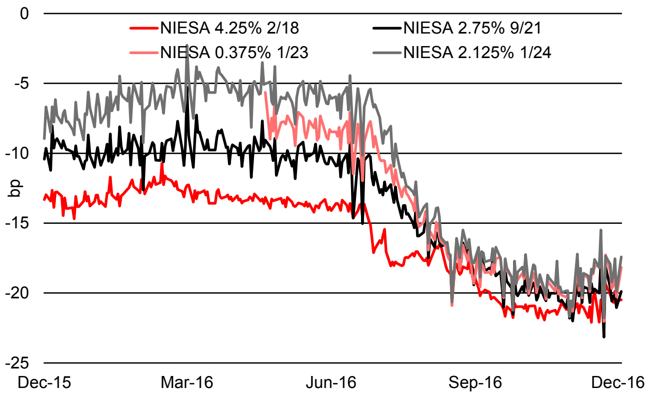
**Profile:** The State of Lower Saxony is located in northwest Germany. It is the second-largest of the German states by geographical area (47,613km$^2$) and the fourth largest by population (7.8mn). It contributes 8.5% to Germany's total GDP. Its GDP per capita amounted to EUR 32,890 in 2015, which is 11% below the German average.

**Economy:** Lower Saxony has a well-diversified economy. In particular, its strong manufacturing-orientation stands out due to its world-class automotive industry, as well as its strong export base. The economic region of Wolfsburg-Hannover-Braunschweig is home to Europe's biggest car-builder, Volkswagen, and is one of the largest centers for the automotive sector in Europe. The state owns 20% of Volkswagen's ordinary shares (voting shares) through Hannoversche Beteiligungsgesellschaft. The automotive sector employs 30% of all employees in Lower Saxony. Moreover, Lower Saxony is home to the third-largest seaport in Germany, which handles more than 46 million tons of goods annually. Real GDP growth of 0.7% between 2013 and 2015 has been below the German average (1.2%).

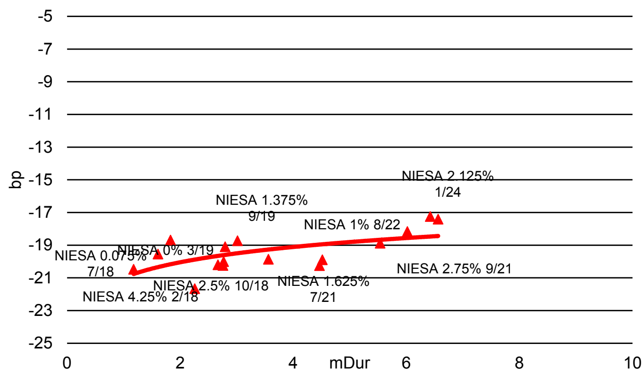
**Budget & debt:** Lower Saxony's fiscal indicators changed slightly in 2015. The state recorded a small increase in its budget deficit to EUR 0.3bn in 2015 after three consecutive reductions in the years before. The nominal debt level rose to EUR 58.1bn at the end of 2015 from EUR 57.2bn the year before. However, Lower Saxony slightly decreased its debt-to-GDP ratio to 22.5% in 2015 from 23% in 2014. Still, the total debt-to-GDP ratio remained above the average German of the 16 German states (26.1% in 2015). Like all other German states, Lower Saxony will need to fulfill the constitutional zero-borrowing rules by 2020, which will incentivize the state to intensify its fiscal consolidation path.

**Funding strategy:** Lower Saxony has an innovative funding strategy with a benchmark program. The state raises funds through Schuldschein loans (plain vanilla), private placements and approximately four benchmark bonds a year that are gradually increased from EUR 500mn to over EUR 1bn. Since 2015, the state has mainly focused on fixed-coupon bonds. Lower Saxony issues bonds in EUR and actively manages its portfolio. For 2017, Lower Saxony has a gross funding volume of EUR 8.2bn (2016: EUR 8bn).

### ASW DEVELOPMENT OF MAJOR BOND ISSUES




### CREDIT CURVE




Source: UniCredit Research

**Strengths/Opportunities**

– Strong support from the German revenue equalization and solidarity system
– Strong export base
– Successful fiscal consolidation since 2011

**Weaknesses/Threats**

– Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
– Exposure to Volkswagen can have negative effects on Lower Saxony, risks for the state that VW gets hit with fines or legal penalties with knock-on effects on the region's economy (see, for example, fines related to the US Clean Air Act in 2015 and 2016)

### MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1YC244 | NIESA 2 ⅛ 01/16/24 | --/AAA/-- | 1,500mn |
| DE0001590651 | NIESA 4 ¼ 02/22/17 | --/AAA/-- | 1,250mn |
| DE0001590677 | NIESA 4 ¼ 02/27/18 | --/AAA/-- | 1,250mn |
| DE0001590545 | NIESA 2 ¾ 09/13/21 | --/AAA/-- | 1,200mn |
| DE000A2AAKB1 | NIESA 0 ⅜ 01/19/23 | --/AAA/-- | 1,125mn |

Source: Bloomberg, UniCredit Research

**Next elections:** Winter 2018
**Current governing parties:** SPD, Greens

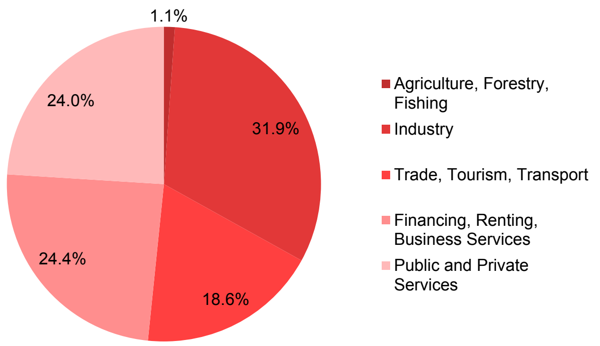
**Rating:** Lower Saxony has been assigned a AAA rating by **Fitch**. The rating agency bases its rating on the stability and sustainablity of the solidarity system for the German states. Thus, Fitch considers the system under which the states operate to carry a AAA risk.

## ECONOMIC INDICATORS – LOWER SAXONY

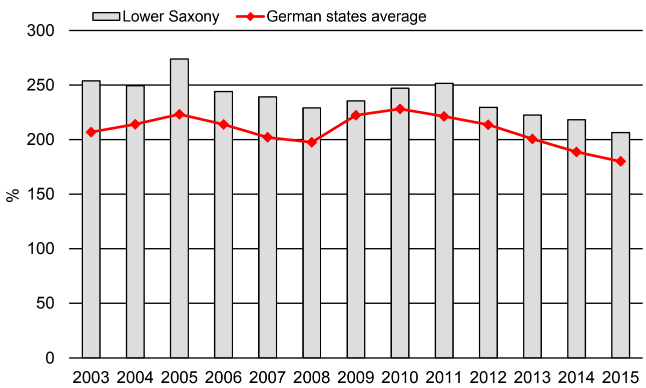
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 204.5 | 213.4 | 219.2 | 209.8 | 222.9 | 235.9 | 240.1 | 242.3 | 248.5 | 258.5 |
| GDP (per capita in EUR '000) | 25.6 | 26.8 | 27.6 | 26.4 | 28.1 | 30.3 | 30.9 | 31.1 | 31.8 | 32.9 |
| Real GDP growth | 3.7% | 3.0% | 1.8% | -5.1% | 5.0% | 4.4% | 0.2% | -1.1% | 1.0% | 2.1% |
| Share of national GDP | 8.5% | 8.5% | 8.6% | 8.5% | 8.6% | 8.7% | 8.7% | 8.6% | 8.5% | 8.5% |
| Unemployment rate (average) | 10.5% | 8.8% | 7.7% | 7.8% | 7.5% | 6.9% | 6.6% | 6.6% | 6.5% | 6.1% |
| Total debt (EUR bn) | 49.7 | 49.4 | 50.2 | 51.5 | 54.0 | 56.1 | 55.3 | 56.5 | 57.2 | 58.1 |
| Total debt as a % of GDP | 24.3% | 23.1% | 22.9% | 24.5% | 24.2% | 23.8% | 23.0% | 23.3% | 23.0% | 22.5% |
| Total revenues (EUR bn) | 21.5 | 22.8 | 23.0 | 22.6 | 22.7 | 23.6 | 25.8 | 26.4 | 27.1 | 28.8 |
| Total expenditures (EUR bn) | 21.8 | 23.4 | 23.5 | 24.6 | 24.3 | 26.1 | 26.6 | 26.7 | 27.3 | 29.1 |
| Financial balance (EUR bn) | -0.3 | -0.7 | -0.4 | -1.5 | -1.6 | -2.5 | -0.8 | -0.4 | -0.2 | -0.3 |
| Net borrowings (EUR bn) | 1.1 | 0.7 | 0.0 | 2.2 | 2.1 | 0.9 | -1.9 | -1.1 | -0.9 | -1.0 |

*Based on 2014 population data
Source: FSO, MoF, Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)

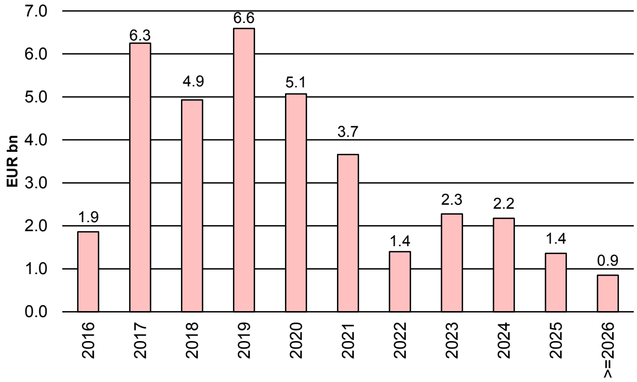



## DEBT DEVELOPMENT*

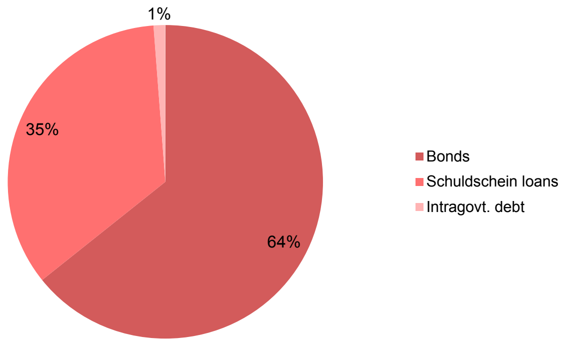



*Tax supported debt as a % of consolidated operating revenues
Source: Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF LOWER SAXONY (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 21.5 | 21.6 | 22.6 | 24.4 | 25.5 | 26.2 | 28.1 |
| Operating expenditure | -- | -- | -- | -- | 22.6 | 22.4 | 23.6 | 24.3 | 25.0 | 25.7 | 27.3 |
| Operating balance | -- | -- | -- | --- | -1.1 | -0.8 | -1.0 | 0.0 | 0.5 | 0.5 | 0.8 |
| Operating balance as a % of operating revenues* | -8.6 | 0.6 | -0.2 | 3.2 | -1.8 | -3.6 | -4.4 | 0.2 | 2.4 | 2.0 | 2.9 |
| Tax-supported debt as a % of consolidated operating revenues* | 273.8 | 244.1 | 239.2 | 229.1 | 235.5 | 247.1 | 251.5 | 229.5 | 222.5 | 218.1 | 206.5 |
| Balance after debt repayment & on-lending as a % of total revenues* | -46.4 | -29.1 | -29.5 | -28.6 | -33.2 | -37.8 | -35.7 | -26.3 | -26.1 | -- | -- |

*numbers provided by S&P until 2013
Source: S&P, UniCredit Research

# State of Mecklenburg-Western Pomerania

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding* |
|---|---|---|---|---|
| --/--/-- | 0% | No | MECVOR | EUR 1.7bn |

*Without LANDER issues Source: Bloomberg, UniCredit Research

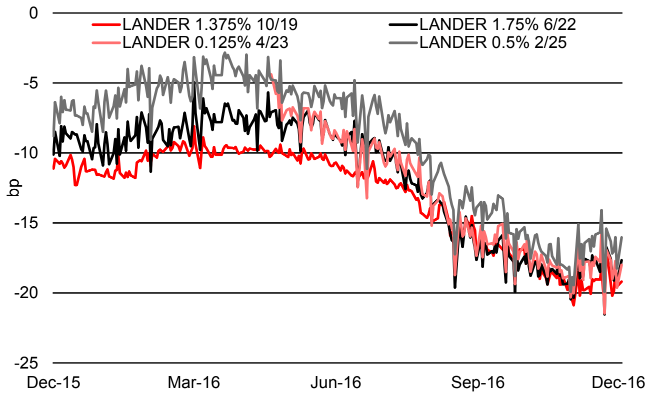
**Profile:** The State of Mecklenburg-Western Pomerania is located in northern Germany on the Baltic Sea. By area (23,171km$^2$), it is the sixth-largest and in terms of population (1.6mn) the third-smallest state.

**Economy:** Mecklenburg-Western Pomerania's economy is traditionally strong in the dockyard industry, in tourism and in agriculture. Mecklenburg contributes 1.3% to national GDP. New industries include biotechnology and telecommunication, which are thriving due to their close links to the two universities of Rostock and Greifswald. However, its unemployment rate is among the highest at 10.4% in 2015 (vs. 6.4% for Germany in 2015). GDP per capita of EUR 24,909 is the lowest in Germany (67% of the German average). Real GDP growth between 2013 and 2015 (1.1%) has been in line with the German average, at 1.2%.

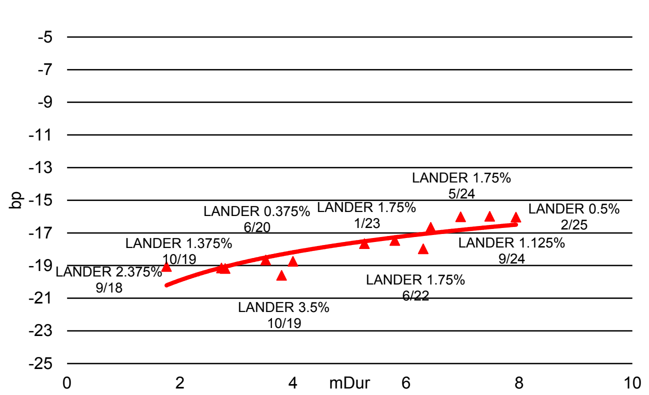
**Budget & debt:** Mecklenburg-Western Pomerania is committed to strict fiscal discipline. In 2015, the state recorded a budget surplus of EUR 500mn. The state has gradually reduced its nominal debt over the last years to EUR 9.2bn in 2015. In relative terms, its debt level is below the German average. Mecklenburg-Western Pomerania decreased its total-debt-to-GDP ratio for the sixth time in a row, to 23.1% in 2015 (2014: 24.4%). The total-debt-to-GDP ratio is now below the average of all German states of 26.1% in 2015. Since 2006, the state has had zero or even negative net new borrowing, thereby meeting the zero-borrowing rule well ahead of the 2020 target date.

**Funding strategy:** Mecklenburg-Western Pomerania has a very conservative funding strategy. The state raises funds through bonds and Schuldschein loans. Issuance is EUR-denominated and all coupons are fixed. The state has no benchmark program due to its low funding needs. It frequently participates in the joint jumbo issues of the German states ("Ländergemeinschaftsbonds"). In 2014, it issued its second, larger-sized bond (after the first in 2013), with an issue size of EUR 500mn. For 2017, the state announced a gross funding volume of EUR 0.5bn (2016: EUR 1.2bn).

### ASW DEVELOPMENT OF MAJOR BOND ISSUES




### CREDIT CURVE




Source: iboxx, Bloomberg, UniCredit Research

**Strengths/Opportunities**

- Strict fiscal discipline, which has resulted in zero or negative net new borrowing since 2006
- Strong support from the German revenue equalization and solidarity system
- Favorable geographic location in Germany, close to Scandinavia and Eastern Europe

**Weaknesses/Threats**

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- High unemployment

### MAJOR BOND ISSUES (IN EUR)*

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1PGZ58 | LANDER 1.75% 6/22 | --/--/AAA | 1,725mn |
| DE000A14J421 | LANDER 0.5% 2/25 | --/--/AAA | 1,500mn |
| DE000A2AASV2 | LANDER 0.125% 4/23 | --/--/AAA | 1,500mn |
| DE000A1RE1H2 | LANDER 1.375% 10/19 | --/--/AAA | 1,500mn |
| DE000A1A6K25 | LANDER 3.5% 10/19 | --/--/AAA | 1,350mn |

*Mecklenburg-Western Pomerania does not issue large-size bonds itself, but participates in "Ländergemeinschaftsbond" issues

Source: Bloomberg, UniCredit Research

**Next elections:** 2021

**Current governing parties:** SPD, CDU

**Rating:** Mecklenburg-Western Pomerania is not rated, but Fitch has assigned a AAA rating to individual bonds. Fitch bases its assessment on the stability and sustainability of the solidarity system for the German states. Thus, Fitch considers the system under which the states operate as bearing AAA risk.

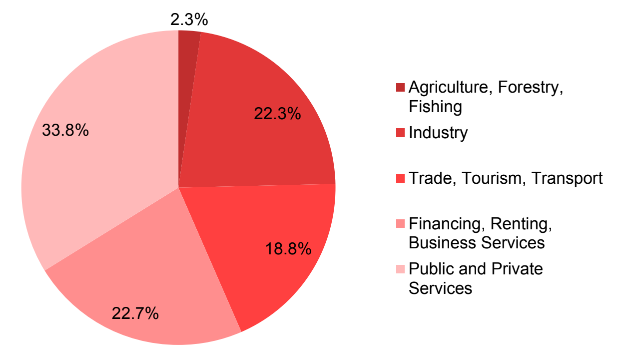
### ECONOMIC INDICATORS – MECKLENBURG-WESTERN POMERANIA

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 31.7 | 33.5 | 34.5 | 34.1 | 35.0 | 36.3 | 36.4 | 37.5 | 38.4 | 39.9 |
| GDP (per capita in EUR '000) | 18.8 | 20.0 | 20.7 | 20.7 | 21.4 | 22.5 | 22.7 | 23.4 | 24.0 | 24.9 |
| Real GDP growth | 1.7% | 4.4% | 1.6% | -0.7% | -0.2% | 1.9% | -0.8% | 0.5% | 1.0% | 1.9% |
| Share of national GDP | 1.3% | 1.3% | 1.3% | 1.4% | 1.4% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% |
| Unemployment rate (average) | 19.0% | 16.5% | 14.1% | 13.6% | 12.7% | 12.5% | 12.0% | 11.7% | 11.1% | 10.4% |
| Total debt (EUR bn) | 10.7 | 10.1 | 9.9 | 9.9 | 9.8 | 9.7 | 9.6 | 9.5 | 9.4 | 9.2 |
| Total debt as a % of GDP | 33.8% | 30.2% | 28.7% | 29.0% | 28.0% | 26.7% | 26.3% | 25.3% | 24.4% | 23.1% |
| Total revenues (EUR bn) | 6.9 | 7.1 | 7.2 | 7.2 | 6.7 | 7.3 | 7.3 | 7.3 | 7.4 | 7.7 |
| Total expenditure (EUR bn) | 6.8 | 6.7 | 6.9 | 6.8 | 6.8 | 7.0 | 7.1 | 7.0 | 7.1 | 7.2 |
| Financial balance (EUR bn) | 0.1 | 0.4 | 0.3 | 0.4 | -0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.5 |
| Net borrowings (EUR bn) | 0.0 | -0.2 | -0.7 | 0.0 | 0.0 | 0.0 | -0.1 | -0.1 | -0.2 | -0.1 |

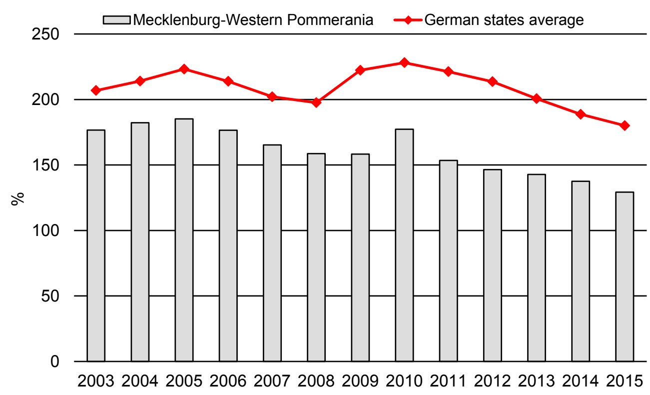
*Based on 2014 population data

Source: MoF, Federal Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

### STRUCTURE OF GDP (2015)



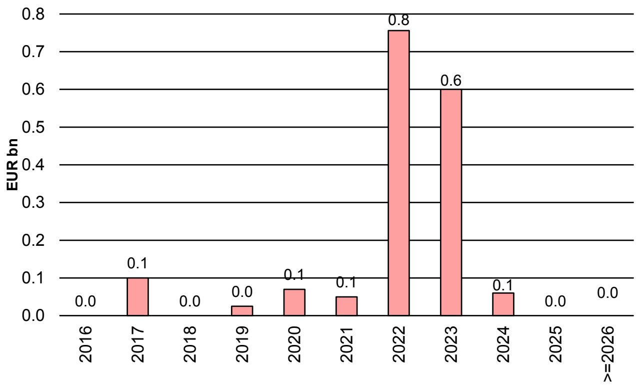

### DEBT DEVELOPMENT*



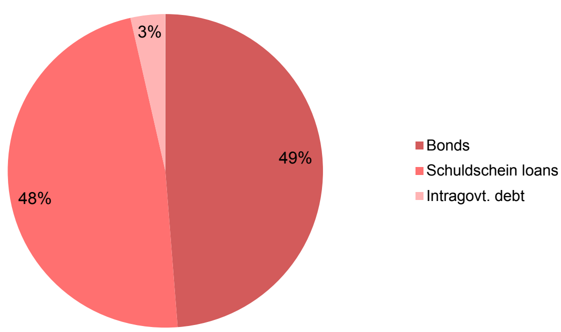

*Tax supported debt as a % of consolidated operating revenues

Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

### OUTSTANDING BOND MATURITY PROFILE




### DEBT STRUCTURE OF MECKLENBURG-WESTERN POMERANIA (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

### CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | - | - | - | - | 6.2 | 6.1 | 6.4 | 6.6 | 6.7 | 6.8 | 7.1 |
| Operating expenditure | - | - | - | - | 5.6 | 5.6 | 5.7 | 5.8 | 5.9 | 6.1 | 6.2 |
| Operating balance | - | - | - | - | 0.6 | 0.5 | 0.7 | 0.8 | 0.7 | 0.8 | 0.9 |
| Operating balance as a % of operating revenues* | 2.8 | 8.9 | 13.7 | 14.9 | 10.3 | 7.1 | 9.2 | 11.0 | 10.7 | 11.2 | 12.6 |
| Tax-supported debt as a % of consolidated operating revenues* | 185.2 | 176.5 | 165.3 | 158.6 | 158.3 | 177.2 | 153.4 | 146.4 | 142.8 | 137.5 | 129.3 |
| Balance after debt repayment & on lending as a % of total revenues* | -26.2 | -15.7 | -16.7 | -17.6 | -15.6 | -22.4 | -10.8 | -11.9 | -12.8 | -- | -- |

*numbers provided by S&P until 2013

Source: S&P, UniCredit Research

# State of North Rhine-Westphalia

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding |
|---|---|---|---|---|
| Aa1s/AA-s/AAAs | 0% | Yes | NRW | EUR 99.1bn |

Source: Bloomberg, UniCredit Research

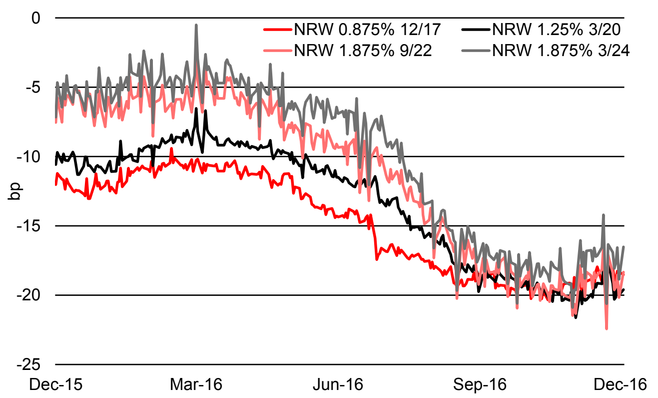
**Profile:** The State of North Rhine-Westphalia (NRW) is the largest by economic size (GDP 2015: EUR 645.6bn) and population (18mn). Its GDP is greater than that of some sovereign states (e.g. Belgium GDP 2014: EUR 401bn; Austria: EUR 329bn) and accounts for 21.3% of Germany's GDP.

**Economy:** NRW has the most diversified economy in Germany. Like most developed regional economies, NRW is service-oriented. Trade is the dominant segment in terms of employees and turnover, followed by telecommunications and business-related services. Although NRW is known for its industrial base – particularly in the Ruhr region, the center of heavy industry in Germany – the services sector has developed steadily since the decline of the coal and steel industry. In several segments of the manufacturing sector, NRW holds dominant positions in Germany in terms of employment and turnover. The manufacturing sector is also a key player in Germany's export business, accounting for about 17% of the country's total export revenues. NRW's performance has been below the German average in terms of real GDP growth (0.7% on average between 2013 and 2015 in NRW compared to 1.3% for Germany as a whole).

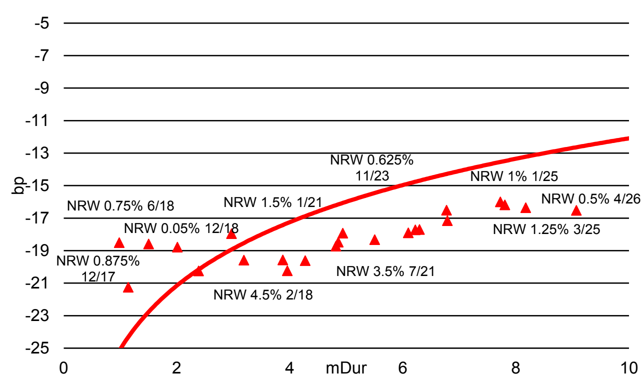
**Budget & debt:** NRW's budgetary performance has been stable, while nominal debt levels remain high. The full-year budget deficit stood at EUR 1.9bn in 2015. At the same time, tax-supported debt decreased slightly to 246.7% as a percentage of operating revenues (2014: 266.2%), which is the fifth decline in a row (S&P data). S&P has included EUR 10bn in guarantees for the workout unit of EAA in this figure, as the rating agency believes that the state will likely honor the guarantee in full over the next few years. Like all other German states, NRW will have to meet the zero-borrowing target by 2020. S&P thinks that NRW will be able to achieve this target due to the state's commitment to consistently applying cost-cutting measures.

**Funding strategy:** NRW has an innovative and sophisticated funding strategy with an international investor base. It issues bonds and Schuldschein loans. NRW has a benchmark program with the most liquid bonds among German states and has extended its benchmark curve towards 30Y in 2016. NRW is flexible in terms of structured funding. In terms of currencies, NRW is the most diversified issuer in the sector. In 2016, it has had bonds outstanding in 9 different currencies: EUR, USD, CHF, JPY, BRL, AUD, NOK, GBP and MXP. In 1Q16, NRW issued its second sustainability bond and it is the only state active in this segment to date. NRW has by far the highest funding allowance of all German states (2017: EUR 20.2bn; 2016: EUR 20bn; 2015: EUR 20.9bn).

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iBoxx, Bloomberg, UniCredit Research

**Strengths/Opportunities**

- Strong support from German revenue equalization and solidarity system
- Large and diversified economy
- Highest nominal GDP of all German states
- Commitment to fiscal consolidation

**Weaknesses/Threats**

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Relatively high debt levels
- Risks arising from contingent liabilities from financial institutions as well as EAA

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000NRW0E68 | NRW 1 ⅞ 09/15/22 | Aa1/AA-/AAA | 3,175mn |
| DE000NRW21X4 | NRW 1 ¼ 03/13/20 | Aa1/AA-/AAA | 2,050mn |
| DE000NRW23J9 | NRW 1 ⅞ 03/15/24 | Aa1/AA-/AAA | 2,000mn |
| DE000NRW0GS5 | NRW 0.2 04/17/23 | Aa1/AA-/AAA | 1,700mn |
| DE000NRW1006 | NRW 4 ⅜ 04/29/22 | Aa1/AA-/AAA | 1,700mn |

Source: Bloomberg, UniCredit Research

**Next elections:** 14 May 2017
**Current governing parties:** SPD, Greens

**Rating: Moody's** has assigned a Aa1 rating, due to the federal support mechanisms, the relative strength of NRW's tax base and its large diversified economy. NRW is rated by all three rating agencies. NRW has been assigned a AAA rating by **Fitch**, which considers the system under which the states operate to bear AAA risk. **S&P** rates NRW AA-. NRW has a stable outlook from S&P, Fitch and Moody's (in line with the outlook on the sovereign rating).

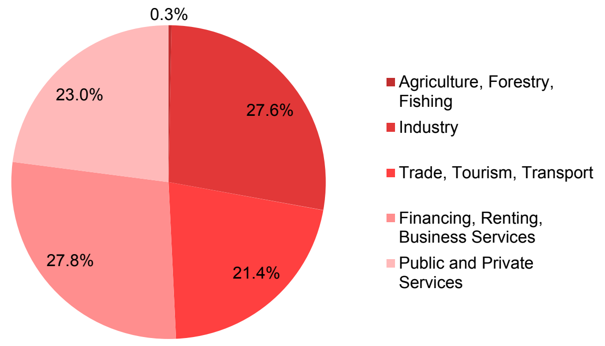
## ECONOMIC INDICATORS – NORTH RHINE-WESTPHALIA

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 525.4 | 558.0 | 572.4 | 550.4 | 566.2 | 588.8 | 597.4 | 611.1 | 632.8 | 645.6 |
| GDP (per capita in EUR '000) | 29.1 | 30.9 | 31.8 | 30.7 | 31.6 | 33.6 | 34.0 | 34.8 | 35.9 | 36.5 |
| Real GDP Growth | 2.9% | 4.0% | 1.4% | -5.3% | 2.5% | 2.7% | 0.2% | 0.2% | 1.8% | 0.0% |
| Share of national GDP | 22.0% | 22.2% | 22.3% | 22.4% | 21.9% | 21.8% | 21.7% | 21.7% | 21.7% | 21.3% |
| Unemployment rate (average) | 11.4% | 9.5% | 8.5% | 8.9% | 8.7% | 8.1% | 8.1% | 8.3% | 8.2% | 8.0% |
| Total debt (EUR bn) | 116.0 | 114.1 | 113.6 | 120.5 | 123.2 | 125.8 | 129.9 | 133.9 | 136.8 | 136.9 |
| Total debt as a % of GDP | 22.1% | 20.4% | 19.8% | 21.9% | 21.8% | 21.4% | 21.8% | 21.9% | 21.6% | 21.2% |
| Total revenues (EUR bn) | 44.4 | 48.0 | 50.0 | 47.2 | 48.9 | 52.8 | 54.6 | 56.8 | 59.9 | 63.6 |
| Total expenditure (EUR bn) | 47.8 | 49.0 | 50.0 | 52.0 | 53.9 | 55.8 | 58.1 | 59.2 | 61.8 | 65.5 |
| Financial balance (EUR bn) | -3.4 | -1.0 | 0.1 | -4.7 | -5.0 | -2.9 | -3.6 | -2.5 | -1.9 | -1.9 |
| Net borrowings (EUR bn) | 3.1 | 2.0 | 1.2 | 5.7 | 5.0 | 0.2 | 1.0 | 1.0 | 0.4 | -2.3 |

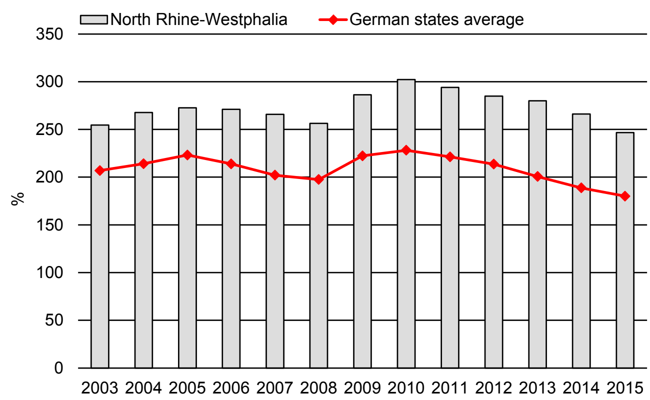
*Based on 2014 population data

Source: MoF, Federal Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)



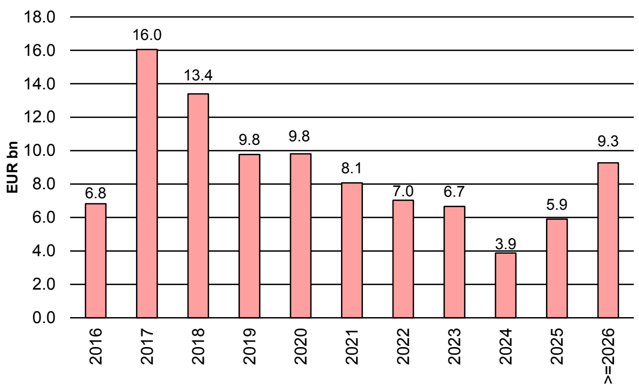

## DEBT DEVELOPMENT*



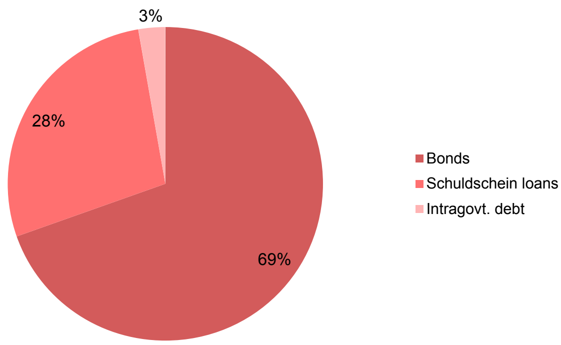

*Tax supported debt as a % of consolidated operating revenues

Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF NORTH RHINE-WESTPHALIA (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 45.2 | 46.1 | 49.8 | 52.6 | 54.8 | 57.9 | 61.6 |
| Operating expenditure | -- | -- | -- | -- | 47.7 | 48.0 | 49.6 | 53.3 | 54.7 | 57.0 | 60.0 |
| Operating balance | -- | -- | -- | -- | -2.5 | -1.9 | 0.2 | -0.7 | 0.1 | 1.0 | 1.6 |
| Operating balance as a % of operating revenues | -6.1 | -0.3 | 3.7 | 3.8 | -5.2 | -3.6 | 0.8 | 1.0 | 1.7 | 2.6 | 4.7 |
| Tax-supported debt as a % of consolidated operating revenues | 272.7 | 271.0 | 265.8 | 256.3 | 286.3 | 302.3 | 294.1 | 284.9 | 280.0 | 266.2 | 246.7 |
| Balance after debt repayment and on lending as a % of total revenues | -51.3 | -41.8 | -38.4 | -36.4 | -47.6 | -52.8 | -46.8 | -42.1 | -49.9 | -35.0 | -34.2 |

*numbers provided by S&P until 2013

Source: S&P, UniCredit Research

# State of Rhineland-Palatinate

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding* |
|---|---|---|---|---|
| --/--/AAAs | 0% | Yes | RHIPAL | EUR 25bn |

*Without LANDER issues

Source: Bloomberg, UniCredit Research

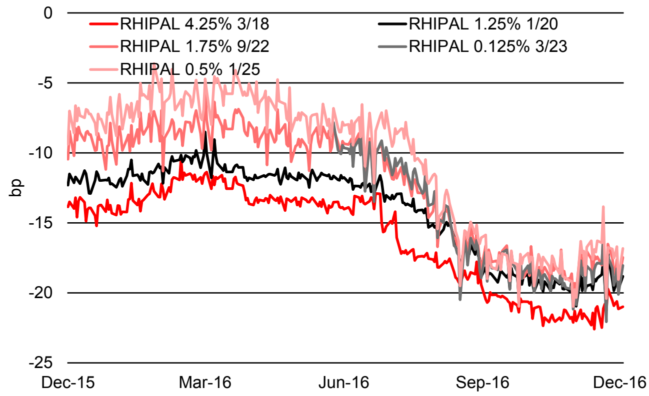
**Profile:** The State of Rhineland-Palatinate is located in southwest Germany. It is the ninth-largest state by area (19,847km$^2$) and the seventh-largest by population (4mn). In 2015, Rhineland-Palatinate contributed 4.4% to Germany's GDP. GDP per capita is 11% below the German average at EUR 32,814 (vs. EUR 37,100 for Germany).

**Economy:** Rhineland-Palatinate has a high export quota thanks to its strong manufacturing base. In addition to tourism, its main sectors are chemicals, pharmaceuticals, automotive and machine tool industries. Rhineland-Palatinate has a highly educated workforce and a very low unemployment rate (5.2% on average in 2015 compared to 6.7% on average for Germany). Real GDP growth has slightly below the German average between 2013 and 2015 (0.8% vs. 1.3% for all of Germany).

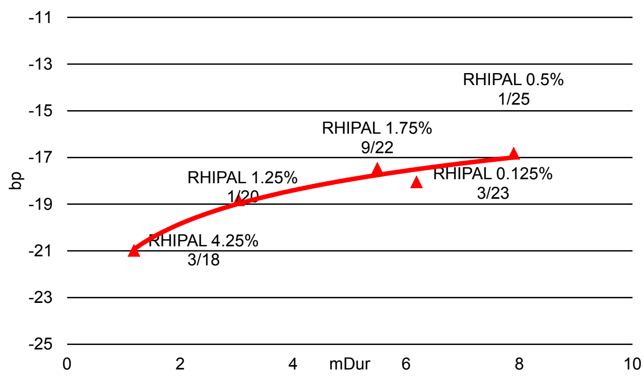
**Budget & debt:** In 2015, the budgetary performance of Rhineland-Palatinate was similar to that of the previous year. The state's deficit remained at EUR 0.6bn. Nominal debt, however, decreased slightly to EUR 32.1bn from EUR 32.6bn the year before. In 2015, total debt to GDP decreased to 24.3% (2014: 25.6%), which is still 1.8 percentage points below the average of German states (26.1%). Like all German states, Rhineland-Palatinate will have to meet the constitutional zero-borrowing rules by 2020.

**Funding strategy:** Rhineland-Palatinate has an innovative funding strategy. The state raises funds through private placements and benchmark bonds. It also participates in the joint jumbo issues of the German states ("Ländergemeinschaftsbonds"), most recently in October 2016. Rhineland-Palatinate issues mostly fixed-rate and EUR-denominated bonds and prefers short maturities. It also uses derivatives to actively manage its portfolio. Moreover, Rhineland-Palatinate also obtains funding through the repo market. The 2017 gross funding allowance is EUR 8.2bn (2016: EUR 7bn).

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iboxx,UniCredit Research

### Strengths/Opportunities

- Strong support from the German revenue equalization and solidarity system
- Strong and diversified economy
- Very low unemployment

### Weaknesses/Threats

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Relatively high debt levels, but budgetary performance expected to improve

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE0001731990 | RHIPAL 4 ¼ 03/02/18 | --/--/AAA | 1,375mn |
| DE000RLP0413 | RHIPAL 1 ¼ 01/16/20 | --/--/AAA | 1,375mn |
| DE000RLP0736 | RHIPAL 0 ⅛ 03/01/23 | --/--/AAA | 1,150mn |
| DE000RLP0645 | RHIPAL 0 ½ 01/21/25 | --/--/AAA | 1,125mn |
| DE000A0SLFQ2 | RHIPAL 2 ⅞ 03/03/17 | --/--/AAA | 1,125mn |

Source: Bloomberg, UniCredit Research

**Next elections:** Spring 2021
**Current governing parties:** SPD, FDP, Greens

**Rating:** Rhineland-Palatinate was assigned a AAA rating by **Fitch**. The rating agency bases its rating on the stability and sustainablity of the solidarity system for the German states. Thus, Fitch considers the system under which the states operate to carry a AAA risk. Fitch has a stable outlook on the rating of Rhineland-Palatinate.

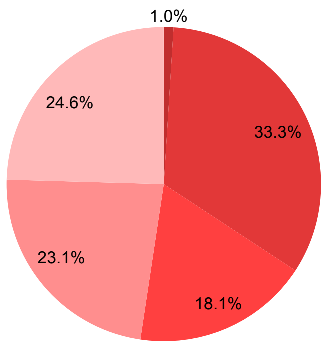
## ECONOMIC INDICATORS – RHINELAND-PALATINATE

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 104.6 | 109.4 | 111.3 | 108.4 | 114.3 | 119.6 | 122.0 | 124.7 | 127.7 | 132.0 |
| GDP (per capita in EUR '000) | 25.8 | 27.0 | 27.6 | 27.0 | 28.5 | 30.0 | 30.6 | 31.2 | 31.9 | 32.8 |
| Real GDP growth | 3.5% | 2.7% | 0.6% | -4.7% | 4.9% | 3.3% | 0.6% | 0.1% | 0.8% | 1.4% |
| Share of national GDP | 4.4% | 4.4% | 4.3% | 4.4% | 4.4% | 4.4% | 4.4% | 4.4% | 4.4% | 4.4% |
| Unemployment rate (average) | 8.0% | 6.5% | 5.6% | 6.1% | 5.7% | 5.4% | 5.3% | 5.5% | 5.4% | 5.2% |
| Total debt (EUR bn) | 25.7 | 25.7 | 25.7 | 27.0 | 28.1 | 29.1 | 32.2 | 32.8 | 32.6 | 32.1 |
| Total debt as a % of GDP | 24.6% | 23.5% | 23.1% | 24.9% | 24.6% | 24.3% | 26.4% | 26.3% | 25.6% | 24.3% |
| Total revenues (EUR bn) | 11.0 | 11.8 | 12.2 | 11.6 | 11.9 | 12.0 | 13.1 | 13.8 | 14.6 | 15.3 |
| Total expenditure (EUR bn) | 11.9 | 12.2 | 13.0 | 13.1 | 13.8 | 14.0 | 14.2 | 14.4 | 15.2 | 15.9 |
| Financial balance (EUR bn) | -0.9 | -0.4 | -0.8 | -1.6 | -1.9 | -2.0 | -1.1 | -0.5 | -0.6 | -0.6 |
| Net borrowings (EUR bn) | 0.8 | 0.6 | 1.0 | 1.6 | 1.8 | 2.0 | 0.9 | 0.5 | 0.6 | 0.6 |

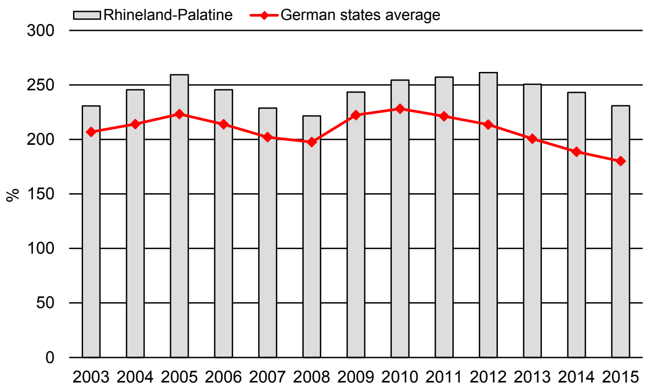
*Based on 2014 population data

Source: FSO, MoF, Federal Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)



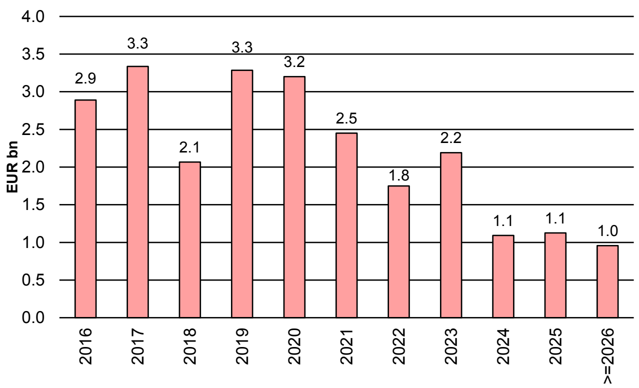

## DEBT DEVELOPMENT*



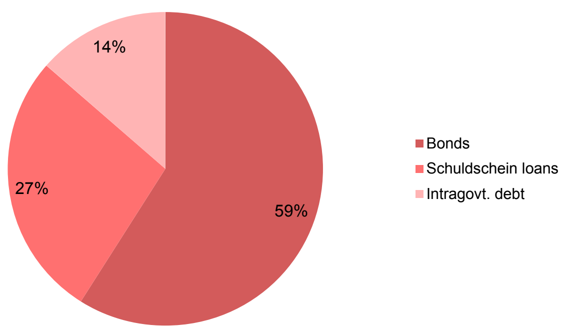

*Tax supported debt as a % of consolidated operating revenues

Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF RHINELAND-PALATINATE (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 11.1 | 11.3 | 11.8 | 12.9 | 13.6 | 14.2 | 14.8 |
| Operating expenditure | -- | -- | -- | -- | 12.1 | 12.5 | 13.1 | 13.2 | 13.6 | 14.3 | 14.9 |
| Operating balance | -- | -- | -- | -- | -1.0 | -1.2 | -1.3 | -0.3 | 0.0 | -0.1 | -0.1 |
| Operating Balance as a % of operating revenues* | -5.3 | -0.4 | 5.1 | 1.7 | -8.9 | -10.6 | -7.4 | 1.4 | 3.4 | -0.8 | -0.8 |
| Tax-supported debt as a % of consolidated operating revenues* | 259.3 | 245.6 | 228.7 | 221.6 | 243.5 | 254.5 | 257.2 | 261.3 | 250.7 | 243.1 | 230.8 |
| Balance after debt repayment & on lending as a % of total revenues* | -51.8 | -51.1 | -51.5 | -55.8 | -63.5 | -69.3 | -79.1 | -66.7 | -50.2 | -- | -- |

*numbers provided by S&P until 2013

Source: S&P, UniCredit Research

# State of Saarland

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding* |
|---|---|---|---|---|
| --/--/-- | 0% | No | SAARLD | EUR 3.6bn |

*Without LANDER issues

Source: Bloomberg, UniCredit Research

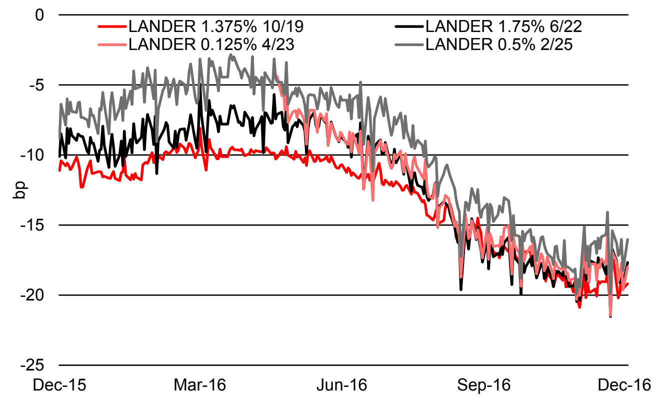
**Profile:** The State of Saarland is the smallest German state by area, with the exception of the three city-states. It is the second-smallest in terms of population (1mn) and accounts for 1.2% of the German population and GDP. The state's GDP per capita is close to the German average (EUR 35,409 vs. EUR 37,099 in 2015).

**Economy:** Saarland has a strong industrial base. The main sectors are the automotive and metal industries, in addition to medical, information and communication technology and tourism. Saarland has a high share of exports in its GDP. Thus, real GDP growth is much more volatile than that of other German states. Between 2013 and 2015, Saarland's real GDP growth has been lower than the German average (0.7% vs. 1.3%).

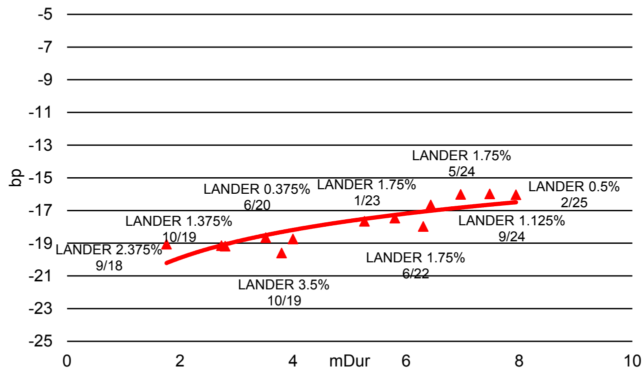
**Budget & debt:** In 2015, Saarland recorded the third consecutive decrease in its budget deficit, to EUR 0.1bn (2014: EUR 0.3bn). The state has very high debt ratios, and at 40.3% it recorded the highest debt/GDP ratio of a German non-city-state in 2015. Saarland is one of the four states currently under supervision by the stability board, which monitors progress made towards achieving the zero-budget-balance rules by 2020. In its latest evaluation report from December 2016, the Stability Board said that Saarland has to undertake further consolidation efforts and the procedure will be extended.

**Funding strategy:** Saarland's funding strategy can be described as conservative. The state raises funds through Schuldschein loans and small-sized bonds. Saarland tends to focus on euro-denominated instruments and German investors. It has no own benchmark program but participates in the joint jumbo issues of the German states ("Ländergemeinschaftsbonds"), most recently in October 2016. For 2017, Saarland has a gross funding allowance of EUR 1.5bn (2016: EUR 1.8bn).

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iBoxx, UniCredit Research

**Strengths/Opportunities**

- Strong support from the German revenue equalization and solidarity system
- Strong industrial base with solid export orientation

**Weaknesses/Threats**

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Challenging fiscal situation
- No credit rating

## MAJOR BOND ISSUES (IN EUR)*

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1PGZ58 | LANDER 1.75% 6/22 | --/--/AAA | 1,725mn |
| DE000A14J421 | LANDER 0.5% 2/25 | --/--/AAA | 1,500mn |
| DE000A2AASV2 | LANDER 0.125% 4/23 | --/--/AAA | 1,500mn |
| DE000A1RE1H2 | LANDER 1.375% 10/19 | --/--/AAA | 1,500mn |
| DE000A1A6K25 | LANDER 3.5% 10/19 | --/--/AAA | 1,350mn |

*Saarland does not issue large-size bonds itself, but participates in the "Ländergemeinschaftsbond" issues

Source: Bloomberg, UniCredit Research

**Next elections:** 26 March 2017
**Current governing party:** CDU, SPD

**Rating:** Saarland is not rated, but Fitch has assigned a AAA rating to individual bonds. Fitch bases its assessment on the stability and sustainability of the solidarity system for the German states. Thus, Fitch considers the system under which the states operate as bearing AAA risk.

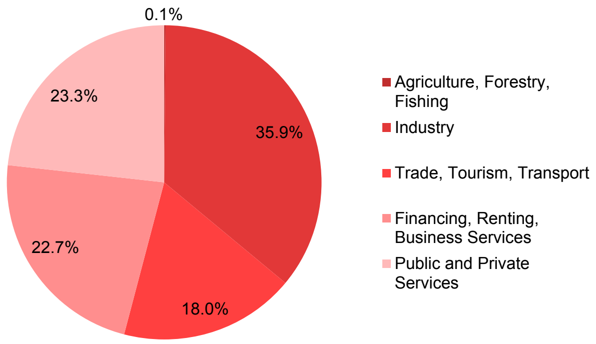
## ECONOMIC INDICATORS – SAARLAND

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 29.9 | 31.4 | 31.7 | 28.7 | 30.3 | 32.0 | 32.5 | 32.5 | 33.5 | 35.0 |
| GDP (per capita in EUR '000) | 28.5 | 30.1 | 30.6 | 27.9 | 29.7 | 32.0 | 32.6 | 32.7 | 33.8 | 35.4 |
| Real GDP growth | 3.0% | 2.3% | 0.3% | -10.6% | 5.2% | 4.6% | -0.8% | -1.7% | 1.3% | 2.4% |
| Share of national GDP | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.1% | 1.2% |
| Unemployment rate (average) | 9.9% | 8.4% | 7.3% | 7.7% | 7.5% | 6.8% | 6.7% | 7.3% | 7.2% | 7.2% |
| Total debt (EUR bn) | 8.7 | 9.1 | 9.5 | 10.6 | 11.3 | 11.5 | 13.0 | 13.7 | 14.0 | 14.1 |
| Total debt as a % of GDP | 29.1% | 29.0% | 29.9% | 36.9% | 37.3% | 36.0% | 40.1% | 42.3% | 41.7% | 40.3% |
| Total revenues (EUR bn) | 2.6 | 2.9 | 2.8 | 2.6 | 2.9 | 3.3 | 3.3 | 3.4 | 3.6 | 3.8 |
| Total expenditure (EUR bn) | 3.3 | 3.6 | 3.3 | 3.5 | 3.9 | 3.7 | 3.9 | 3.9 | 3.9 | 3.9 |
| Financial balance (EUR bn) | -0.7 | -0.7 | -0.5 | -1.0 | -1.0 | -0.4 | -0.7 | -0.5 | -0.3 | -0.1 |
| Net borrowings (EUR bn) | 0.5 | 0.4 | 0.5 | 0.9 | 1.0 | 0.2 | 0.4 | 0.2 | 0.2 | 0.1 |

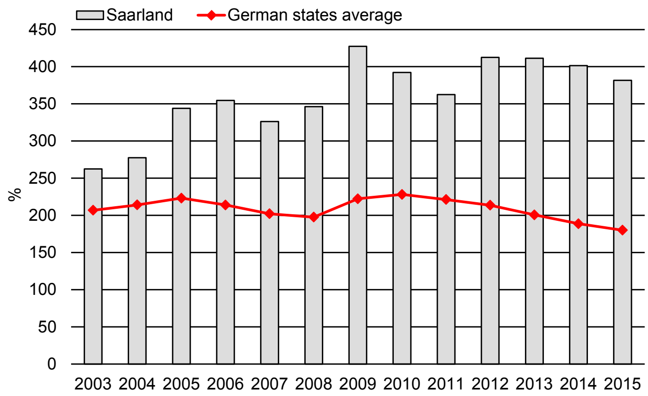
*Based on 2014 population data

Source: FSO, MoF, Federal Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)



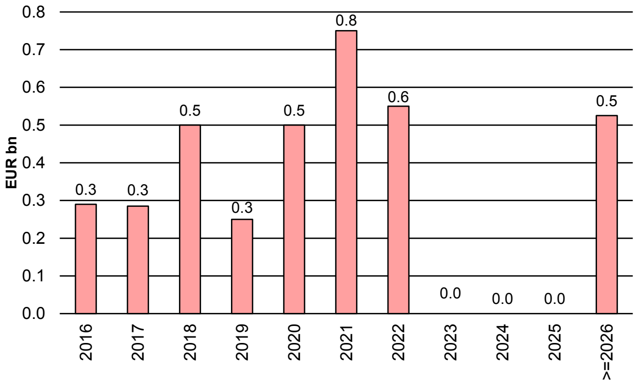

## DEBT DEVELOPMENT*



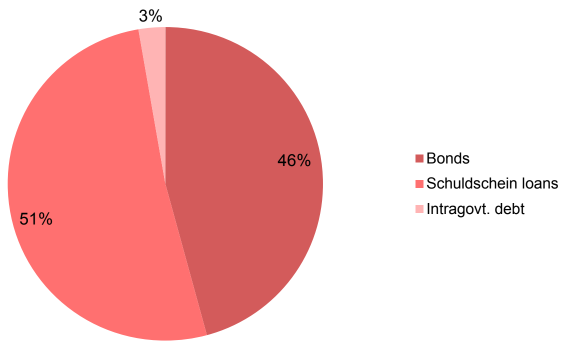

*Tax supported debt as a % of consolidated operating revenues

Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF SAARLAND (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | - | - | - | - | 2.5 | 2.9 | 3.2 | 3.2 | 3.3 | 3.5 | 3.7 |
| Operating expenditure | - | - | - | - | 3.2 | 3.4 | 3.4 | 3.6 | 3.5 | 3.5 | 3.6 |
| Operating balance | - | - | - | - | -0.6 | -0.5 | -0.1 | -0.4 | -0.1 | -0.1 | 0.1 |
| Operating balance as a % of operating revenues* | -21.3 | -17.4 | -4.7 | -9.1 | -27.1 | -16.7 | -3.6 | -12.0 | -4.4 | -1.6 | 2.6 |
| Tax-supported debt as a % of consolidated operating revenues* | 344.0 | 354.5 | 326.2 | 346.3 | 427.4 | 392.1 | 362.5 | 412.4 | 411.3 | 401.4 | 381.7 |
| Balance after debt repayment & on lending as a % of total revenues* | -56.8 | -54.6 | -45.3 | -48.9 | -70.5 | -60.3 | -37.5 | -56.8 | -48.2 | -- | -- |

*numbers provided by S&P until 2013

Source: S&P, UniCredit Research

# State of Saxony

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding* |
|---|---|---|---|---|
| --/AAAs/-- | 0% | No | SAXONY | EUR 0.3bn |

*Without LANDER issues

Source: Bloomberg, UniCredit Research

**Profile:** The State of Saxony is among the strongest states in terms of economic fundamentals. It is the sixth-largest by population (4.1mn) and tenth by area (18,413km$^2$). Saxony is a model state that has successfully mastered the challenges it has faced. While Saxony's GDP per capita of EUR 27,776 remains well below the German average of EUR 37,099, it ranks highest among the former East German states. Saxony is one of three states rated AAA by S&P.

**Economy:** Saxony's economy has undergone fundamental structural changes. Lignite mining has been scaled back and antiquated industry production has been closed down, while manufacturing and microelectronics have been promoted. Economic development is mainly driven by the automotive, electronics and logistics sectors, with a focus on the production of cars, machinery and electronic chips. Saxony's economy is less exposed to economic swings due to its low export orientation. Between 2013 and 2015, the average real GDP growth rate was 1.3%, in line with the German average of 1.3%. A major challenge, which the government is already addressing, is a declining population.

**Budget & debt:** Saxony has recorded excellent budgetary performance and has consistently outperformed its budgets over recent years. The state has even managed to fund reserves for future variations in tax revenues. Saxony has a prudent and credible financial policy that aims at further reducing direct debt. Tax-supported debt as a percentage of consolidated operating revenues is historically by far the lowest among the 16 German states. It decreased for the fifth time in a row to 44.2% in 2015 (from 45.9% in 2014).Saxony has moderate contingent liabilities.

**Funding strategy:** Saxony follows a highly conservative funding strategy with only EUR 325mn of bonds outstanding. Its funding strategy focuses on EUR-denominated bonds (mainly fixed) and plain-vanilla Schuldschein loans. Since 2011, Saxony has hardly raised any funding in the capital markets. For 2017, the state has a gross funding volume of EUR 0.3bn (2016: EUR 0.6bn). Due to its low funding requirements, Saxony is not expected to make an appearance on the capital markets this year.

**Strengths/Opportunities**

– Outstanding budgetary performance and lowest debt levels among German states
– Conservative financial policies and committed financial management
– Strong support from the German revenue equalization and solidarity system

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**Weaknesses/Threats**

– Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
– Declining population limits economic growth and state revenue

**Next elections:** Autumn 2019

**Current governing parties:** CDU, SPD

**Rating:** Saxony is rated AAA by **S&P**. The rating agency bases its rating on its view of the state's excellent budgetary performance, its conservative financial policies and its predictable and supportive institutional framework in Germany. The outlook is stable.

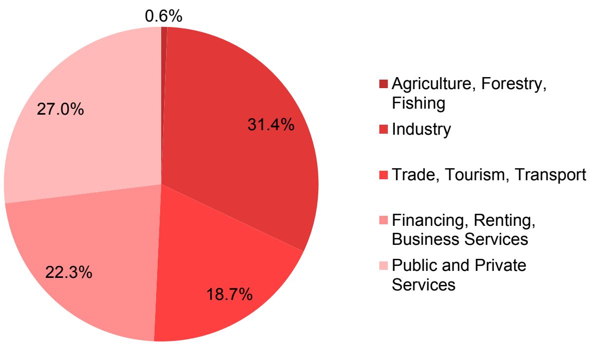
## ECONOMIC INDICATORS – SAXONY

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 88.8 | 93.0 | 94.0 | 91.2 | 95.1 | 99.5 | 101.8 | 104.5 | 108.6 | 112.7 |
| GDP (per capita in EUR '000) | 20.9 | 22.0 | 22.4 | 21.8 | 22.9 | 24.5 | 25.1 | 25.8 | 26.8 | 27.8 |
| Real GDP growth | 4.3% | 3.1% | 0.0% | -4.2% | 3.1% | 3.3% | 0.9% | 0.4% | 2.1% | 1.5% |
| Share of national GDP | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% | 3.7% |
| Unemployment rate (average) | 17.0% | 14.7% | 12.8% | 12.9% | 11.8% | 10.6% | 9.8% | 9.5% | 8.8% | 8.2% |
| Total debt (EUR bn) | 11.6 | 11.1 | 9.6 | 6.9 | 6.5 | 5.8 | 5.0 | 4.1 | 3.2 | 2.3 |
| Total debt as a % of GDP | 13.1% | 11.9% | 10.2% | 7.6% | 6.8% | 5.8% | 4.9% | 3.9% | 2.9% | 2.0% |
| Total revenues (EUR bn) | 16.4 | 17.5 | 17.3 | 16.4 | 16.6 | 17.8 | 16.5 | 17.2 | 17.3 | 18.0 |
| Total expenditure (EUR bn) | 15.8 | 15.5 | 16.1 | 16.2 | 16.8 | 15.8 | 15.2 | 16.3 | 16.7 | 18.1 |
| Financial balance (EUR bn) | 0.6 | 2.0 | 1.2 | 0.2 | -0.2 | 2.0 | 1.3 | 0.8 | 0.7 | -0.1 |
| Net borrowings (EUR bn) | -0.1 | -0.1 | -0.1 | -0.2 | -0.5 | -1.4 | 0.0 | -0.4 | 0.0 | 0.1 |

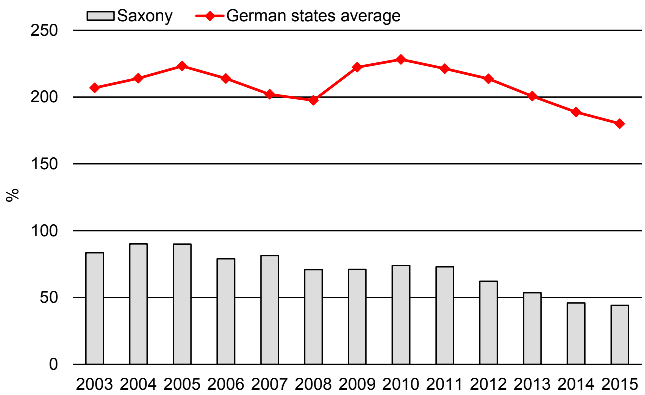
*Based on 2014 population data

Source: FSO, MoF, Federal Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)



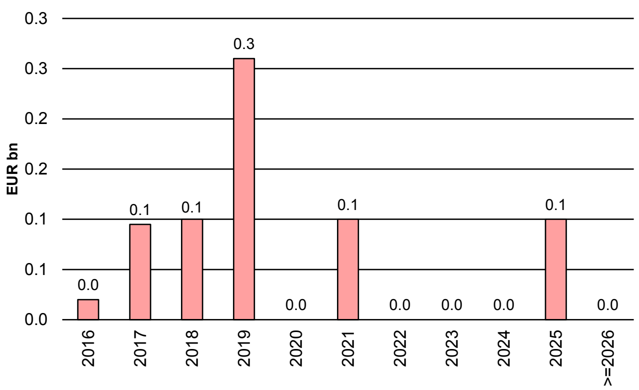

## DEBT DEVELOPMENT*



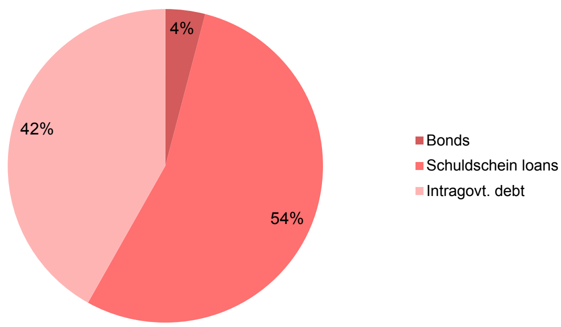

*Tax supported debt as a % of consolidated operating revenues

Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF SAXONY (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | - | - | - | - | 14.7 | 14.2 | 14.8 | 15.3 | 15.6 | 15.8 | 16.4 |
| Operating expenditure | - | - | - | - | 12.9 | 12.8 | 12.8 | 12.5 | 13.3 | 13.6 | 13.9 |
| Operating balance | - | - | - | - | 1.8 | 1.5 | 2.0 | 2.8 | 2.3 | 2.2 | 2.5 |
| Operating balance as a % of operating revenues | 12.0 | 19.8 | 23.8 | 22.0 | 12.5 | 10.3 | 13.8 | 18.6 | 15.0 | 14.2 | 12.7 |
| Tax-supported debt as a % of consolidated operating revenues | 90.0 | 78.9 | 81.3 | 70.8 | 71.1 | 74.0 | 72.9 | 62.2 | 53.5 | 45.9 | 44.2 |
| Balance after debt repayment and on lending as a % of total revenues | -12.3 | -7.1 | 2.7 | -18.0 | -12.6 | -16.3 | -5.3 | -1.4 | -7.6 | -5.4 | -7.2 |

Source: S&P, UniCredit Research

# State of Saxony-Anhalt

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding |
|---|---|---|---|---|
| Aa1s/AA+s/AAAs | 0% | Yes | SACHAN | EUR 9.6bn |

Source: Bloomberg, UniCredit Research

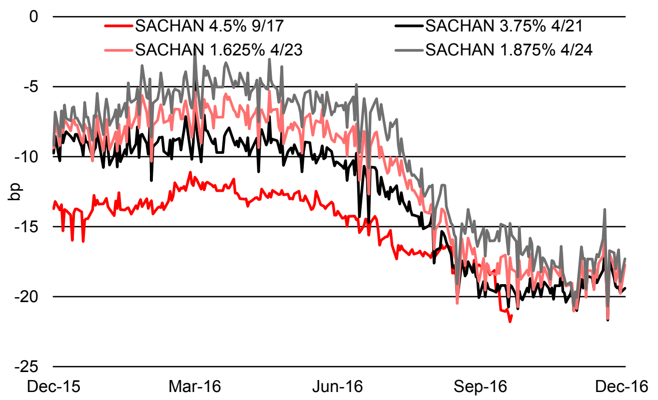
**Profile:** The State of Saxony-Anhalt is one of the smaller German states in terms of population (2.2mn, 2.8% of total). As one of the former East German states, Saxony-Anhalt has GDP per capita levels below the German average (EUR 25,198 vs. EUR 37,099 for Germany). Its economy contributes 1.9% to German GDP.

**Economy:** Saxony-Anhalt has undergone successful structural change in the past 25 years. As a result, several modern and high-tech companies have emerged and a stronger, increasingly dynamic medium-sized corporate sector has developed. Despite a generally positive backdrop to Saxony-Anhalt's economy as a result of the state's restructuring efforts, the declining population (down to 2.2mn inhabitants in 2015 from 2.6mn in 2000) acts as a constraint on economic growth and poses a challenge to sustainable budgetary developments in the long run. The unemployment rate is – similar to other former East German states – above the German average (10.2% on average in 2015, compared to 6.7% for Germany). However, the overall trend is favorable.

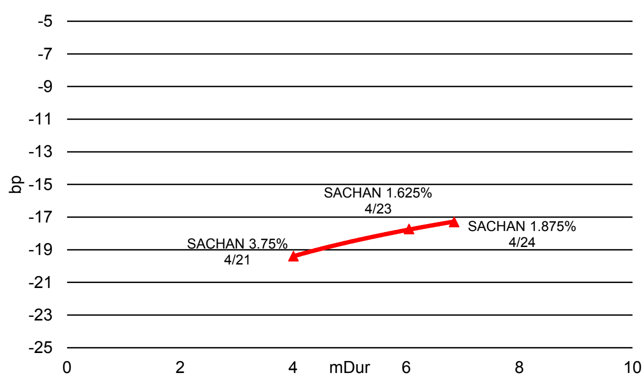
**Budget & debt:** Saxony-Anhalt has a strong commitment to fiscal consolidation and to reducing debt levels. The state has made remarkable progress in cutting expenditure and taking steps towards budgetary austerity. Moreover, it has voluntarily implemented a policy to refrain from net new borrowing as of 2012 (well ahead of the constitutional target of 2020) and has been reducing nominal debt levels since 2011. Tax-supported debt is 218.2% of consolidated operating revenues, above the average of 180% for German states (S&P data). Saxony-Anhalt is a net beneficiary of the German system of financial equalization and obtains additional transfer payments (e.g. EUR 80mn annually to assist it in reaching the zero-deficit target by 2020).

**Funding strategy:** Saxony-Anhalt has a sophisticated and innovative funding strategy that aims to broaden and diversify the investor base. The state issues bonds and Schuldschein loans. Saxony-Anhalt has a benchmark program, an MTN program and a commercial paper program (utilized frequently in USD and EUR). Bonds are denominated in EUR, but the state issued its first dollar bond in May 2015, followed by a further dollar issue in 2016. Saxony-Anhalt uses derivatives to optimize its risk profile. For 2017, Saxony-Anhalt has an unchanged gross funding allowance of EUR 2.6bn (2015: EUR 2.6).

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iBoxx, UniCredit Research

**Strengths/Opportunities**

- Strong commitment to reducing debt levels
- Sound budgetary performance with rising surpluses
- Strong support from the German revenue equalization and solidarity system

**Weaknesses/Threats**

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Declining population

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A1TNA47 | SACHAN 1 ⅝ 04/25/23 | Aa1/AA+/AAA | 1,000mn |
| DE000A11QP00 | SACHAN 1 ⅞ 04/10/24 | --/AA+/AAA | 1,000mn |
| DE000A1KQYE3 | SACHAN 3 ¾ 04/06/21 | Aa1/AA+/AAA | 1,000mn |
| DE000A0KP056 | SACHAN 4 09/26/16 | Aa1/AA+/AAA | 1,000mn |
| DE000A0S8XM4 | SACHAN 4 ½ 09/11/17 | Aa1/AA+/AAA | 1,000mn |

Source: Bloomberg, UniCredit Research

**Next elections:** Spring 2021
**Current governing parties:** CDU, SPD, Greens

**Rating:** Saxony-Anhalt is rated by all three rating agencies. It is assigned a AAA rating by **Fitch**. **Moody's** assigns a Aa1 rating and **S&P** AA+. The ratings benefit from the solid budgetary performance and the government's commitment to debt reduction. Saxony-Anhalt has a stable outlook at S&P and Fitch and a stable outlook at Moody's (in line with the outlook on the sovereign rating).

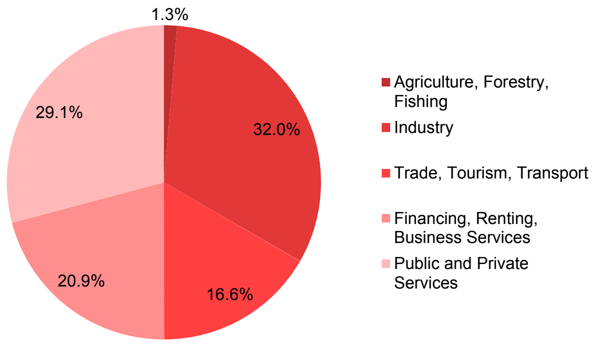
## ECONOMIC INDICATORS – SAXONY-ANHALT

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 47.9 | 50.2 | 50.9 | 48.5 | 51.3 | 52.0 | 53.8 | 54.6 | 55.1 | 56.2 |
| GDP (per capita in EUR '000) | 19.5 | 20.7 | 21.2 | 20.5 | 21.9 | 22.8 | 23.7 | 24.3 | 24.6 | 25.2 |
| Real GDP growth | 3.5% | 2.4% | 0.2% | -5.5% | 4.3% | -0.9% | 1.8% | -0.3% | -0.4% | 0.1% |
| Share of national GDP | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 1.9% | 2.0% | 1.9% | 1.9% | 1.9% |
| Unemployment rate (average) | 18.3% | 15.9% | 14.0% | 13.6% | 12.5% | 11.6% | 11.5% | 11.2% | 10.7% | 10.2% |
| Total debt (EUR bn) | 19.3 | 20.1 | 19.8 | 19.8 | 20.5 | 20.7 | 20.6 | 20.4 | 20.5 | 20.0 |
| Total debt as a % of GDP | 40.3% | 40.1% | 38.9% | 40.8% | 39.9% | 39.7% | 38.4% | 37.3% | 37.2% | 35.6% |
| Total revenues (EUR bn) | 9.5 | 9.9 | 9.9 | 9.7 | 9.3 | 9.8 | 9.8 | 10.1 | 10.0 | 10.8 |
| Total expenditure (EUR bn) | 10.1 | 9.8 | 9.8 | 9.8 | 9.9 | 10.0 | 9.8 | 9.9 | 9.9 | 10.4 |
| Financial balance (EUR bn) | -0.5 | 0.1 | 0.1 | -0.2 | -0.6 | -0.2 | 0.0 | 0.2 | 0.1 | 0.4 |
| Net borrowings (EUR bn) | 0.7 | 0.0 | 0.0 | 0.0 | 0.6 | 0.3 | 0.0 | 0.0 | 0.0 | -0.1 |

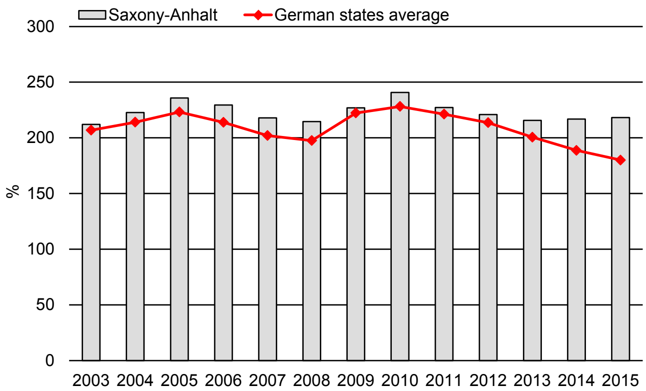
*Based on 2014 population data

Source: FSO, MoF, Federal Statistical Office, VGR der Länder, Bundesagentur fur Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)



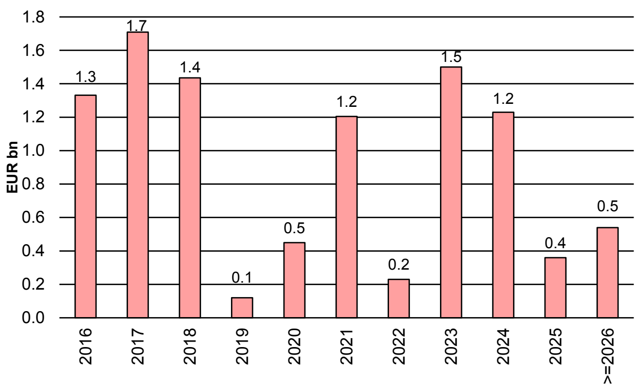

## DEBT DEVELOPMENT*



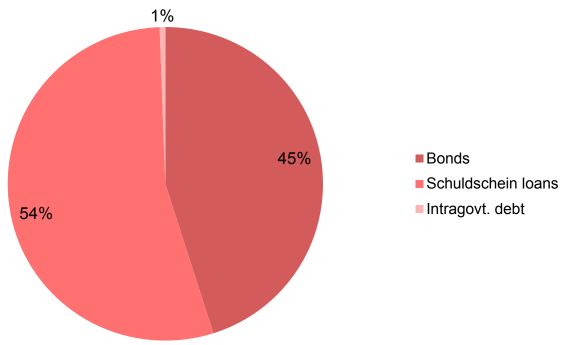

*Tax supported debt as a % of consolidated operating revenues

Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF SAXONY-ANHALT (3Q16)




Source: VGR der Länder, Bloomberg, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | - | - | - | - | 8.8 | 8.5 | 9.1 | 9.4 | 9.5 | 9.5 | 9.8 |
| Operating expenditure | - | - | - | - | 8.3 | 8.4 | 8.6 | 8.6 | 8.7 | 8.7 | 9.0 |
| Operating balance | - | - | - | - | 0.5 | 0.1 | 0.5 | 0.8 | 0.8 | 0.7 | 0.9 |
| Operating balance as a % of operating revenues | -0.2 | 3.4 | 10.2 | 10.3 | 5.5 | 1.1 | 5.7 | 8.9 | 8.7 | 8.5 | 6.8 |
| Tax-supported debt as a % of consolidated operating revenues | 235.8 | 229.4 | 218.0 | 214.5 | 226.9 | 240.8 | 227.2 | 221.0 | 215.7 | 216.9 | 218.2 |
| Balance after debt repayment and on lending as a % of total revenues | -70.2 | -60.5 | -43.6 | -56.4 | -45.3 | -47.8 | -38.2 | -43.2 | -39.8 | -43.0 | -41.9 |

Source: S&P, UniCredit Research

# State of Schleswig-Holstein

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding* |
|---|---|---|---|---|
| --/--/AAAs | 0% | No | SCHHOL | EUR 12.2bn |

*Without LANDER issues

Source: Bloomberg, UniCredit Research

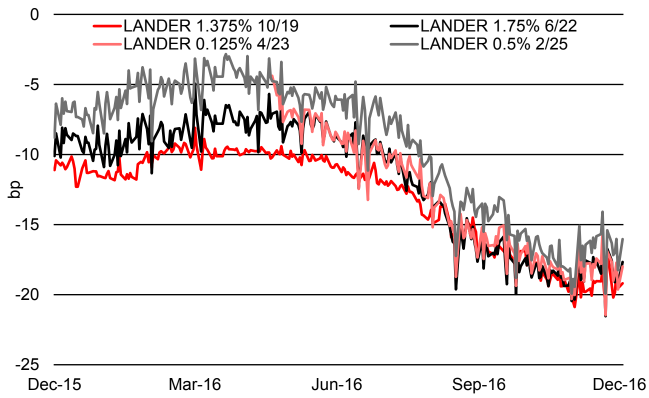
**Profile:** The State of Schleswig-Holstein is located in northern Germany and borders Denmark, the North Sea and the Baltic Sea. It is the second-smallest state by area and eighth-smallest by population (without taking the city-states into account). GDP per capita of EUR 30,134 represents 81% of the German average at the end of 2015.

**Economy:** Schleswig Holstein's economy benefits from a strong service sector, comprising mostly SMEs. Tourism is another important sector due to its proximity to the North Sea and to the Baltic Sea. Innovative industries have developed in Schleswig-Holstein in recent years (e.g. renewable energy, life science and aerospace). Unemployment levels are in line with the German average. The unemployment rate was the sixth-lowest on average among the German states in 2015 (6.5% vs. 6.7% for Germany). This is due to the lower volatility of the regional economy compared with other states and the above-average proportion of medium-sized companies in diversified sectors, which offers stable employment.

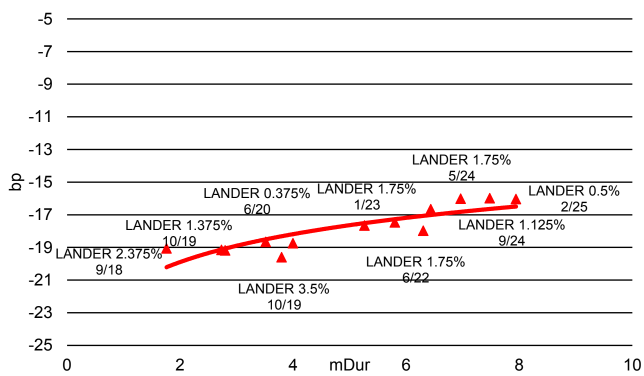
**Budget & debt:** Schleswig-Holstein's budgetary performance increased slightly in 2015, and the state closed the year with a budget surplus of EUR 100mn (2014: deficit of EUR 200mn). Also, the state's debt levels remain at the upper end in Germany. Total debt as a percentage of GDP is 31%, although this number has declined for four years in a row now. Schleswig-Holstein is one of the four states currently supervised by the stability board, which monitors progress made towards achieving the zero-budget balance rules by 2020. Schleswig-Holstein targets a net funding surplus in 2016. Schleswig-Holstein owns HSH Nordbank (jointly with the state of Hamburg); the two states together issued a EUR 10bn guarantee for HSH Nordbank, which will likely be fully drawn in coming years; the guarantee will likely lead to EUR 5bn of additional liabilities for each of the two states; EUR 1.3bn of the guarantee have already been drawn. In its latest evaluation report from December 2016, the Stability Board said that Schleswig Holstein completed its consolidation efforts in 2016.

**Funding strategy:** Schleswig-Holstein follows a conservative funding strategy. It raises funds through bonds and Schuldschein loans (mainly structured), which are predominantly EUR-denominated. The state has twelve EUR-denominated bonds with an issue size of EUR 500mn or larger outstanding. Schleswig-Holstein also participates in the joint jumbo issues of the German states ("Ländergemeinschaftsbonds"). Derivatives are actively used to optimize funding costs. In 2016, Schleswig-Holstein had a gross funding allowance of EUR 4.2bn (2015: EUR 4.0bn). The state had not communicated its 2017 allowance at the time of writing.

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iBoxx, UniCredit Research

**Strengths/Opportunities**

- Strong support from the German revenue equalization and solidarity system
- Strong service sector

**Weaknesses/Threats**

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Schleswig-Holstein owns HSH Nordbank (jointly with the state of Hamburg); the two states together issued a EUR 10bn guarantee for HSH Finanzfonds, the guarantee entity of HSH Nordbank
- Relatively high debt levels

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000SHFM402 | SCHHOL 1 ⅛ 07/29/22 | --/--/AAA | 500mn |
| DE000SHFM188 | SCHHOL 2 03/05/19 | --/--/AAA | 500mn |
| DE000SHFM543 | SCHHOL 0 07/27/18 | --/--/AAA | 300mn |
| DE000SHFM527 | SCHHOL 0 ½ 05/19/26 | --/--/AAA | 250mn |
| DE000SHFM014 | SCHHOL 1.2 09/20/17 | --/--/AAA | 150mn |

Source: Bloomberg, UniCredit Research

**Next elections:** 7 May 2017

**Current governing parties:** SPD, Greens, SSW

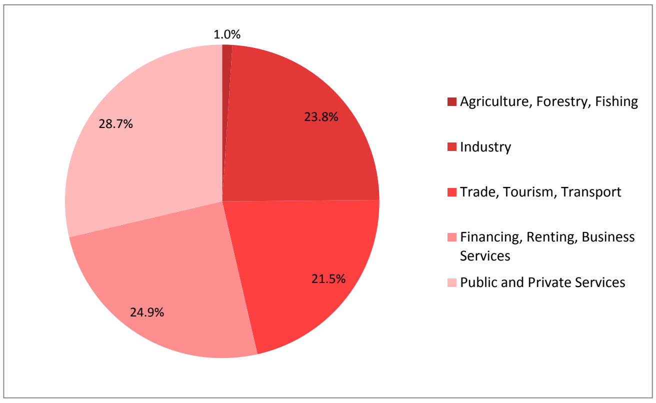
**Rating:** Schleswig-Holstein is assigned a AAA rating by **Fitch**. The rating agency bases its rating on the stability and sustainability of the solidarity system for the German states. Thus, Fitch considers the system under which the states operate to bear a AAA risk.

## ECONOMIC INDICATORS – SCHLESWIG-HOLSTEIN

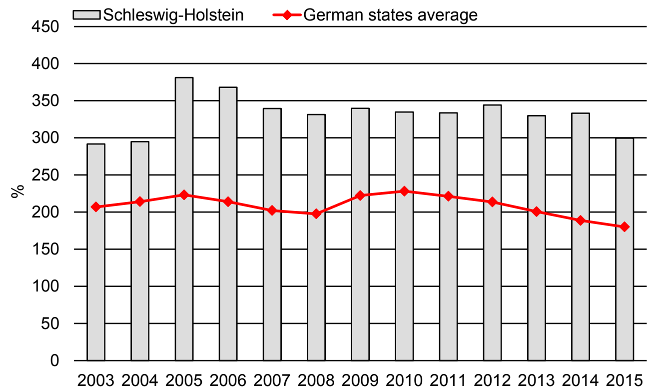
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 70.1 | 72.0 | 74.4 | 72.2 | 73.9 | 76.6 | 79.4 | 80.5 | 82.8 | 85.6 |
| GDP (per capita in EUR '000) | 24.8 | 25.4 | 26.3 | 25.6 | 26.1 | 27.3 | 28.3 | 28.6 | 29.3 | 30.1 |
| Real GDP growth | 2.8% | 1.5% | 2.7% | -3.7% | 0.9% | 2.5% | 2.7% | -0.8% | 1.2% | 1.4% |
| Share of national GDP | 2.9% | 2.9% | 2.9% | 2.9% | 2.9% | 2.8% | 2.9% | 2.9% | 2.8% | 2.8% |
| Unemployment rate (average) | 10.0% | 8.4% | 7.6% | 7.8% | 7.5% | 7.4% | 6.9% | 6.9% | 6.8% | 6.5% |
| Total debt (EUR bn) | 21.3 | 22.2 | 22.0 | 22.4 | 24.2 | 26.7 | 27.0 | 26.4 | 26.8 | 26.7 |
| Total debt as a % of GDP | 30.4% | 30.8% | 29.6% | 31.0% | 32.7% | 34.8% | 34.0% | 32.8% | 32.4% | 31.2% |
| Total revenues (EUR bn) | 7.3 | 8.0 | 8.3 | 7.9 | 8.0 | 8.6 | 9.1 | 9.8 | 9.6 | 10.6 |
| Total expenditure (EUR bn) | 8.2 | 8.3 | 8.6 | 8.9 | 9.3 | 9.3 | 9.3 | 9.6 | 9.9 | 10.6 |
| Financial balance (EUR bn) | -0.9 | -0.4 | -0.3 | -1.0 | -1.3 | -0.7 | -0.2 | 0.1 | -0.2 | 0.1 |
| Net borrowings (EUR bn) | 0.9 | 0.5 | 0.5 | 1.0 | 1.4 | 0.1 | -0.1 | -0.7 | 0.0 | -0.3 |

*Based on 2014 population data
Source: FSO, MoF, Federal Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

## STRUCTURE OF GDP (2015)

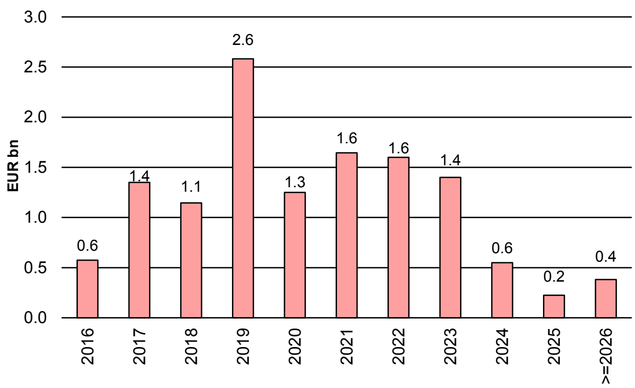



## DEBT DEVELOPMENT*

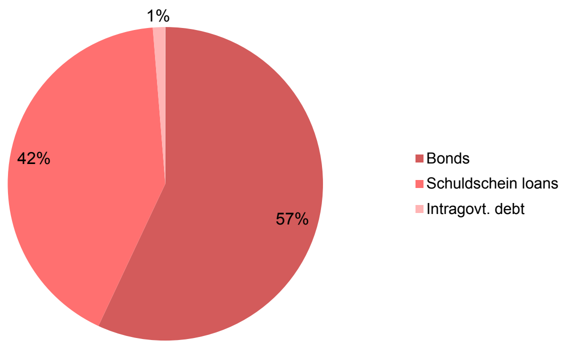



*Tax supported debt as a % of consolidated operating revenues
Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

## OUTSTANDING BOND MATURITY PROFILE




## DEBT STRUCTURE OF SCHLESWIG-HOLSTEIN (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

## CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 7.7 | 7.6 | 8.1 | 8.8 | 9.5 | 9.4 | 10.4 |
| Operating expenditure | -- | -- | -- | -- | 8.1 | 8.3 | 8.3 | 8.5 | 8.9 | 9.2 | 9.8 |
| Operating balance | -- | -- | -- | -- | -0.4 | -0.7 | -0.2 | 0.3 | 0.6 | 0.1 | 0.6 |
| Operating balance as a % of operating revenues* | -16.1 | -5.5 | 2.0 | 2.9 | -5.7 | -8.8 | -2.5 | 3.3 | 5.9 | 1.6 | 5.5 |
| Tax-supported debt as a % of consolidated operating revenues* | 381.2 | 368.2 | 339.6 | 331.3 | 339.8 | 334.8 | 333.7 | 344.2 | 329.8 | 333.2 | 299.6 |
| Balance after debt repayment & on lending as a % of total revenues* | -41.6 | -46.1 | -46.7 | -38.2 | -55.4 | -57.5 | -43.7 | -34.3 | -31.6 | -- | -- |

*numbers provided by S&P until 2013
Source: S&P, UniCredit Research

# State of Thuringia

| Ratings (Moody's/S&P/Fitch) | Risk weight | iBoxx | TICKER | Bonds outstanding* |
|---|---|---|---|---|
| --/--/-- | 0% | No | THRGN | EUR 6.2bn |

*Without LANDER issues;

Source: Bloomberg, UniCredit Research

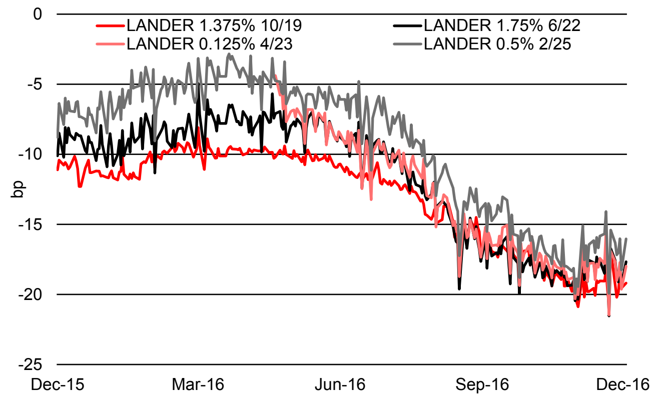
**Profile:** The State of Thuringia is located in the geographical center of Germany. It is one of the smaller states by GDP and size. GDP per capita has converged up towards the national average since German reunification, but it still has some catching-up to do. At 71% of the national average, it is broadly in line with that of other former East German states. Generally, credit fundamentals are in line with those of other former East German states and strengthened by the German revenue equalization and solidarity system.

**Economy:** Similar to other former East German states, Thuringia has had to address the challenge of structural change against the backdrop of an adverse demographic trend. Thuringia's economy is dominated by the manufacturing sector. Manufacturing's contribution to the state's GDP is the highest among all the other former East German states. Major industries are automotive, machinery, microelectronics and optical electronics. Financial services are under-represented. Real GDP growth between 2013 and 2015 was in line with that of Germany (1.3% vs. 1.3% for Germany). The unemployment rate has decreased substantially to 7.4% in 2015 from 16% in 2006, but is still above the 6.0% in Germany as a whole.

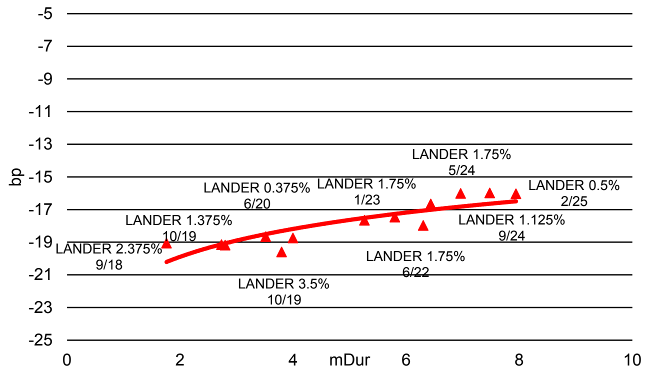
**Budget & debt:** Thuringia is strongly committed to financial discipline and budgetary consolidation. At the end of 2015, the state recorded a budget surplus of EUR 0.2bn, unchanged to the year before. Debt levels are below the German average. Total debt as a percentage of GDP stands at 27.5%, in line with the 26.1% average of all 16 German states. Nominal debt has declined slightly to EUR 15.6bn.

**Funding strategy:** Thuringia has a conservative funding strategy focusing on fixed-coupon and EUR-denominated issuance. Instruments used are bonds and Schuldschein loans (plain vanilla). Since 2011, the state has increased its standalone issuance activity by placing various smaller EUR-denominated bonds (fixed and floating). Moreover, the state raises funds through the joint jumbo issues of the German states ("Ländergemeinschaftsbonds"), most recently in October 2016. Thuringia has a gross funding allowance of EUR 1.9bn in 2017, in line with this year (2016: EUR 1.9bn).

## ASW DEVELOPMENT OF MAJOR BOND ISSUES




## CREDIT CURVE




Source: iBoxx, UniCredit Research

## Strengths/Opportunities

- Strong support from the German revenue equalization and solidarity system
- Strong commitment to financial discipline
- Skilled labor force and good infrastructure

## Weaknesses/Threats

- Moderate fiscal flexibility with limited revenue-raising powers, like all other German states
- Adverse demographic developments

## MAJOR BOND ISSUES (IN EUR)

| ISIN | Ticker/Issue | Issue Rating | Amount |
|---|---|---|---|
| DE000A13SMR9 | THRGN 0 ¼ 12/09/19 | --/--/AAA | 750mn |
| DE000A14KJ84 | THRGN 0 ½ 05/12/25 | --/--/AAA | 700mn |
| DE000A1REW10 | THRGN 1 ⅝ 08/17/20 | --/--/AAA | 600mn |
| DE000A14KGW6 | THRGN 0 ¼ 12/21/20 | --/--/AAA | 600mn |
| DE000A0NKNC9 | THRGN 4 03/15/17 | --/--/AAA | 600mn |

Source: Bloomberg, UniCredit Research

**Next elections:** Autumn 2019

**Current governing party:** Left Party ("Die Linke"), SPD, Greens

**Rating:** Thuringia is not rated by Fitch, but the rating agency has assigned a AAA rating to individual bonds. Fitch bases its assessment on the stability and sustainability of the solidarity system for the German states. Thus, Fitch considers the system under which the states operate as bearing a AAA risk. The outlook is stable. Most recent developments: Thuringia was assigned a AAA bond rating by Fitch in October 2015 for a EUR 500mn 0.25% issue, due 21 December 2020.

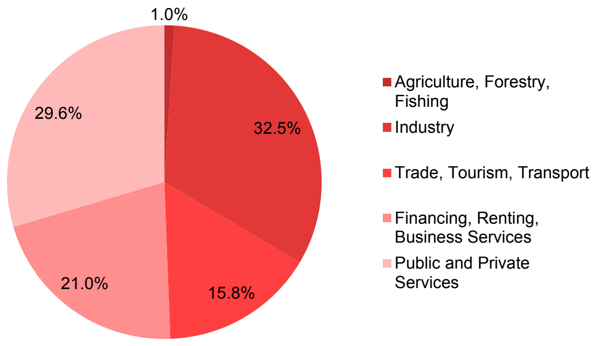
### ECONOMIC INDICATORS – THURINGIA

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| GDP (nominal in EUR bn) | 44.9 | 46.9 | 47.4 | 45.5 | 48.2 | 51.0 | 51.6 | 53.4 | 55.0 | 56.8 |
| GDP (per capita in EUR '000) | 19.3 | 20.4 | 20.8 | 20.2 | 21.5 | 23.3 | 23.7 | 24.7 | 25.5 | 26.4 |
| Real GDP growth | 3.4% | 2.7% | -0.2% | -5.1% | 4.7% | 4.3% | -0.3% | 1.4% | 1.3% | 1.1% |
| Share of national GDP | 1.9% | 1.9% | 1.9% | 1.8% | 1.9% | 1.9% | 1.9% | 1.9% | 1.9% | 1.9% |
| Unemployment rate (average) | 15.6% | 13.1% | 11.2% | 11.4% | 9.9% | 8.8% | 8.5% | 8.2% | 7.8% | 7.4% |
| Total debt (EUR bn) | 15.1 | 15.8 | 15.7 | 15.3 | 15.7 | 16.3 | 16.1 | 15.8 | 15.7 | 15.6 |
| Total debt as a % of GDP | 33.7% | 33.7% | 33.1% | 33.6% | 32.6% | 32.0% | 31.3% | 29.7% | 28.5% | 27.5% |
| Total revenues (EUR bn) | 8.5 | 9.3 | 9.4 | 8.8 | 8.7 | 9.0 | 9.1 | 9.3 | 9.1 | 9.4 |
| Total expenditure (EUR bn) | 9.0 | 9.1 | 9.0 | 9.0 | 9.3 | 9.3 | 8.8 | 9.0 | 9.0 | 9.1 |
| Financial balance (EUR bn) | -0.5 | 0.2 | 0.4 | -0.2 | -0.6 | -0.3 | 0.3 | 0.3 | 0.2 | 0.2 |
| Net borrowings (EUR bn) | 0.7 | 0.0 | 0.0 | 0.0 | 0.4 | 0.2 | -0.2 | -0.4 | -0.3 | -0.3 |

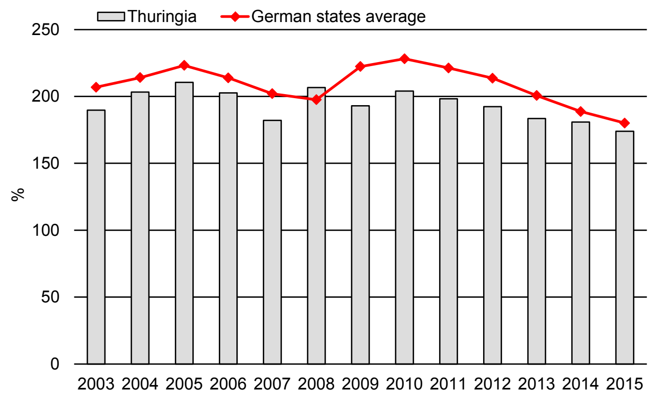
*Based on 2014 population data

Source: FSO, MoF, Federal Statistical Office, VGR der Länder, Bundesagentur für Arbeit, UniCredit Research

### STRUCTURE OF GDP (2015)



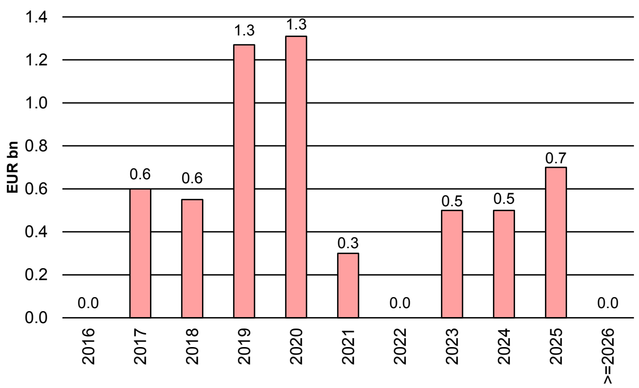

### DEBT DEVELOPMENT*



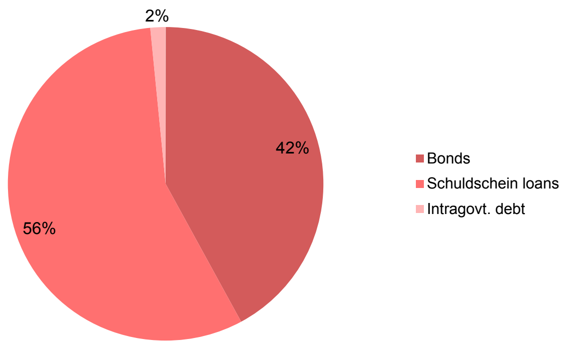

*Tax supported debt as a % of consolidated operating revenues

Source: Federal Statistical Office, VGR der Länder, S&P, UniCredit Research

### OUTSTANDING BOND MATURITY PROFILE




### DEBT STRUCTURE OF THURINGIA (3Q16)




Source: Bloomberg, Ministry of Finance, UniCredit Research

### CREDIT METRICS

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating revenues | -- | -- | -- | -- | 8.1 | 8.0 | 8.2 | 8.4 | 8.7 | 8.7 | 9.0 |
| Operating expenditure | -- | -- | -- | -- | 7.7 | 7.8 | 7.9 | 7.6 | 7.7 | 7.8 | 7.9 |
| Operating balance | -- | -- | -- | -- | 0.5 | 0.1 | 0.3 | 0.8 | 0.9 | 0.9 | 1.1 |
| Operating balance as a % of operating revenues* | 0.3 | 6.5 | 13.8 | 13.5 | 5.6 | 1.9 | 3.9 | 9.4 | 11.1 | 9.9 | 12.0 |
| Tax-supported debt as a % of consolidated operating revenues* | 210.6 | 202.6 | 182.1 | 206.6 | 193.0 | 204.0 | 198.2 | 192.3 | 183.5 | 180.8 | 174.0 |
| Balance after debt repayment & on lending as a % of total revenues* | -31.4 | -23.6 | -17.2 | -13.6 | -21.6 | -28.4 | -24.9 | -13.0 | -13.6 | -- | -- |

*numbers provided by S&P until 2013

Source: S&P, UniCredit Research

# Comparative data

### STATISTICAL DATA OF THE GERMAN STATES (2015)

| German states | Population (mn)* | Share of population* | Area (km²) | GDP (EUR bn) | GDP per capita (EUR th)* | Share of National GDP |
|---|---|---|---|---|---|---|
| Baden-Württemberg | 10.7 | 13.2% | 35,751 | 460.7 | 42.745 | 15.2% |
| Bavaria | 12.7 | 15.6% | 70,550 | 549.2 | 43.092 | 18.1% |
| Berlin | 3.5 | 4.3% | 892 | 124.2 | 35.627 | 4.1% |
| Brandenburg | 2.5 | 3.0% | 29,482 | 65.3 | 26.493 | 2.2% |
| Bremen | 0.7 | 0.8% | 404 | 31.6 | 47.603 | 1.0% |
| Hamburg | 1.8 | 2.2% | 755 | 109.3 | 61.729 | 3.6% |
| Hessen | 6.1 | 7.5% | 21,115 | 263.4 | 43.073 | 8.7% |
| Lower Saxony | 7.8 | 9.6% | 47,635 | 258.5 | 32.890 | 8.5% |
| Mecklenburg-Western Pomerania | 1.6 | 2.0% | 23,189 | 39.9 | 24.909 | 1.3% |
| North Rhine-Westphalia | 17.6 | 21.7% | 34,080 | 645.6 | 36.509 | 21.3% |
| Rhineland-Palatinate | 4.0 | 4.9% | 19,854 | 132.0 | 32.814 | 4.4% |
| Saarland | 1.0 | 1.2% | 2,569 | 35.0 | 35.409 | 1.2% |
| Saxony | 4.1 | 5.0% | 18,420 | 112.7 | 27.776 | 3.7% |
| Saxony-Anhalt | 2.2 | 2.8% | 20,449 | 56.2 | 25.198 | 1.9% |
| Schleswig-Holstein | 2.8 | 3.5% | 15,799 | 85.6 | 30.134 | 2.8% |
| Thuringia | 2.2 | 2.7% | 16,172 | 56.8 | 26.364 | 1.9% |
| **Total** | **81.2** | **100.0%** | **357,116** | **3,025.9** | **Average: 37.099** | **100.0%** |

*Based on 2014 population data

Source: FSO, Regional Statistical Offices, UniCredit Research

### STATISTICAL DATA OF THE GERMAN STATES (2015)

| German states | Unemployment rate | Total debt (EUR bn) | Total revenues (EUR bn) | Expenditures (EUR bn) | Financial balance (EUR bn) | Net borrowing (EUR bn) |
|---|---|---|---|---|---|---|
| Baden-Württemberg | 3.8% | 40.7 | 44.1 | 44.0 | 0.0 | 0.0 |
| Bavaria | 3.6% | 22.6 | 54.0 | 51.9 | 2.1 | -2.5 |
| Berlin | 10.7% | 58.6 | 24.7 | 24.3 | 0.4 | -2.0 |
| Brandenburg | 8.7% | 16.7 | 10.9 | 10.6 | 0.3 | -1.7 |
| Bremen | 10.9% | 21.2 | 4.8 | 5.1 | -0.3 | 0.2 |
| Hamburg | 7.4% | 23.2 | 12.8 | 12.6 | 0.2 | 0.0 |
| Hessen | 5.5% | 42.6 | 24.5 | 24.7 | -0.3 | -0.3 |
| Lower Saxony | 6.1% | 58.1 | 28.8 | 29.1 | -0.3 | -1.0 |
| Mecklenburg-W. Pomerania | 10.4% | 9.2 | 7.7 | 7.2 | 0.5 | -0.1 |
| North Rhine-Westphalia | 8.0% | 136.9 | 63.6 | 65.5 | -1.9 | -2.3 |
| Rhineland-Palatinate | 5.2% | 32.1 | 15.3 | 15.9 | -0.6 | 0.6 |
| Saarland | 7.2% | 14.1 | 3.8 | 3.9 | -0.1 | 0.1 |
| Saxony | 8.2% | 2.3 | 18.0 | 18.1 | -0.1 | 0.1 |
| Saxony-Anhalt | 10.2% | 20.0 | 10.8 | 10.4 | 0.4 | -0.1 |
| Schleswig-Holstein | 6.5% | 26.7 | 10.6 | 10.6 | 0.1 | -0.3 |
| Thuringia | 7.4% | 15.6 | 9.4 | 9.1 | 0.2 | -0.3 |
| **Total** | **6.0%** | **540.6** | **343.8** | **343** | **0.6** | **-9.6** |

Source: Ministry of Finance, Bundesagentur für Arbeit, Reuters, UniCredit Research

## ECONOMIC AND FINANCIAL PERFORMANCE

| | GDP Growth, as a % | | | | Tax-supported Debt, as a % of consolidated operating revenues | | | |
|---|---|---|---|---|---|---|---|---|
| **German states** | **2012** | **2013** | **2014** | **2015** | **2012** | **2013** | **2014** | **2015** |
| Baden-Württemberg | 0.3% | 0.4% | 1.5% | 3.1% | 147.1 | 142.6 | 128.0 | 127.5 |
| Bavaria | 1.0% | 0.9% | 1.9% | 2.1% | 78.3 | 68.7 | 51.3 | 47.2 |
| Berlin | -0.2% | 0.2% | 2.1% | 3.0% | 387.3 | 298.2 | 260.7 | 246.1 |
| Brandenburg | 0.5% | 0.9% | 1.6% | 2.7% | 188.0 | 171.6 | 171.9 | 162.2 |
| Bremen | 2.7% | -0.7% | 0.8% | 2.7% | 476.2 | 466.0 | 429.2 | 447.7 |
| Hamburg | 0.1% | 2.4% | 0.8% | 1.9% | 224.3 | 254.7 | 228.4 | 222.7 |
| Hessen | -0.6% | 0.3% | 2.4% | 1.7% | 216.6 | 204.0 | 211.5 | 210.0 |
| Lower Saxony | 0.2% | -1.1% | 1.0% | 2.1% | 229.5 | 222.5 | 218.1 | 206.5 |
| Mecklenburg-Western Pomerania | -0.8% | 0.5% | 1.0% | 1.9% | 146.4 | 142.8 | 137.5 | 129.3 |
| North Rhine-Westphalia | 0.2% | 0.2% | 1.8% | 0.0% | 284.9 | 280.0 | 266.2 | 246.7 |
| Rhineland-Palatinate | 0.6% | 0.1% | 0.8% | 1.4% | 261.3 | 250.7 | 243.1 | 230.8 |
| Saarland | -0.8% | -1.7% | 1.3% | 2.4% | 412.4 | 411.3 | 401.4 | 381.7 |
| Saxony | 0.9% | 0.4% | 2.1% | 1.5% | 62.2 | 53.5 | 45.9 | 44.2 |
| Saxony-Anhalt | 1.8% | -0.3% | -0.4% | 0.1% | 221.0 | 215.7 | 216.9 | 218.2 |
| Schleswig-Holstein | 2.7% | -0.8% | 1.2% | 1.4% | 344.2 | 329.8 | 333.2 | 299.6 |
| Thuringia | -0.3% | 1.4% | 1.3% | 1.1% | 192.3 | 183.5 | 180.8 | 174.0 |
| **Total** | 1.91% | 2.39% | 3.36% | 3.78% | | | | |

Source: VGR, S&P, Moody's, UniCredit Research

## ECONOMIC AND FINANCIAL PERFORMANCE

| | Operating balance, as a % of operating revenues | | | | Balance after debt repayment and onlending (% of total revenues) | | | |
|---|---|---|---|---|---|---|---|---|
| **German states** | **2012** | **2013** | **2014** | **2015** | **2012** | **2013** | **2014** | **2015** |
| Baden-Württemberg | 6.3 | 5.7 | 8.6 | 7,2 | -14.1 | -13.2 | -8.1 | -16.5 |
| Bavaria | 10.5 | 12.0 | 11.6 | 12.0 | -5.3 | -2.2 | -0.5 | 1.8 |
| Berlin | 5.1 | 4.4 | 6.2 | 7.3 | -32.7 | -32.9 | -- | -- |
| Brandenburg | 8.6 | 12.6 | 9.2 | 9.8 | -47.1 | -31.4 | -- | -- |
| Bremen | -3.8 | -0.3 | 4.1 | 3.5 | -238.5 | -217.0 | -- | -- |
| Hamburg | -0.2 | 0.8 | 9.2 | 6.1 | -35.4 | -39.4 | -- | -- |
| Hessen | -0.7 | 4.2 | 3.2 | 2.4 | -32.6 | -28.6 | -25.4 | -24.8 |
| Lower Saxony | 0.2 | 2.4 | 2.0 | 2.9 | -26.3 | -26.1 | -- | -- |
| Mecklenburg-Western Pomerania | 11.0 | 10.7 | 11.2 | 12.6 | -11.9 | -12.8 | -- | -- |
| North Rhine-Westphalia | 1.0 | 1.7 | 2.6 | 4.7 | -42.1 | -49.9 | -35.0 | -34.2 |
| Rhineland-Palatinate | 1.4 | 3.4 | -0.8 | -0.8 | -66.7 | -50.2 | -- | -- |
| Saarland | -12.0 | -4.4 | -1.6 | 2.6 | -56.8 | -48.2 | -- | -- |
| Saxony | 18.6 | 15.0 | 14.2 | 12.7 | -1.4 | -7.6 | -5.4 | -7.2 |
| Saxony-Anhalt | 8.9 | 8.7 | 8.5 | 6.8 | -43.2 | -39.8 | -43.0 | -41.9 |
| Schleswig-Holstein | 3.3 | 5.9 | 1.5 | 5.5 | -34.3 | -31.6 | -- | -- |
| Thuringia | 9.4 | 11.1 | 9.9 | 12.0 | -13.0 | -13.6 | -- | -- |

Source: S&P, Moody's, UniCredit Research

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| Company | Date | Rec. | Company | Date | Rec. | Company | Date | Rec. |
|---|---|---|---|---|---|---|---|---|
| – | – | – | – | – | – | – | – | – |

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