MOODY'S
PUBLIC SECTOR EUROPE

CREDIT OPINION
18 March 2022

Rate this Research

RATINGS

Nordrhein-Westfalen, Land of

Domicile	Germany
Long Term Rating	Aa1
Type	LT Issuer Rating
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Harald Sperlein **+49.69.70730.906**
VP-Senior Analyst
harald.sperlein@moodys.com

Max Dietz **+49.69.70730.890**
Associate Analyst
max.dietz@moodys.com

Massimo Visconti, MBA **+39.02.9148.1124**
VP-Sr Credit Officer/Manager
massimo.visconti@moodys.com

Land of Nordrhein-Westfalen (Germany)

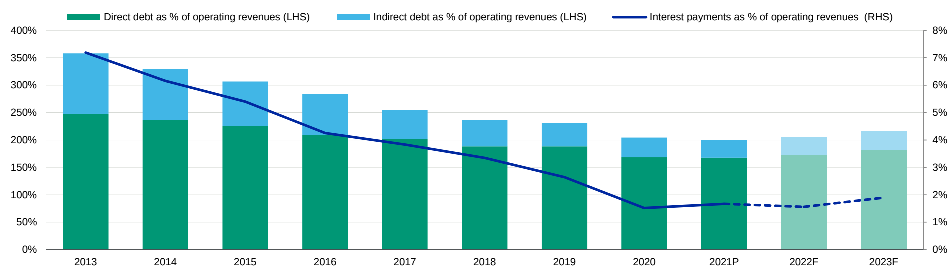
Update to credit analysis

Summary

The credit profile of the Land of Nordrhein-Westfalen (NRW, Aa1 stable) reflects its well-diversified and strong regional economy, as well as its excellent market access and sound debt management. The land's financial performance is quickly recovering from the impact of the coronavirus pandemic and the related economic slowdown in 2020. We expect NRW to reach balanced budgets from 2022 onwards, earlier than initially expected. The land has very high debt, stabilising at around 200% of operating revenue over the next two years (see Exhibit 1). In addition, it has some exposure to contingent liabilities. Similar to all German regions, its financial flexibility is limited. The credit profile also reflects our assessment of a very high likelihood that the Government of Germany (Aaa stable) would provide support if the land were to face acute liquidity stress.

Exhibit 1

Nordrhein-Westfalen has a very high debt level, but debt affordability improved and will remain low



2021P - preliminary data; 2022-23F - Moody's forecast.
Sources: Issuer, German Statistics Office, German Ministry of Finance and Moody's Investors Service

Credit strengths

» Largest regional economy

» Excellent market access and debt management

Credit challenges

» Budgetary challenges that weigh on financial performance

» Very high debt level and some contingent liabilities

» Low revenue and expenditure flexibility

Rating outlook

The rating outlook is stable, reflecting our assumption that NRW will reach financial surpluses from next year and maintain its commitment to reduce its debt burden over the coming three years.

Factors that could lead to an upgrade

Upward rating pressure could arise if there is a significant improvement in NRW's financial performance, including a further reduction in its debt burden, combined with a sustained track record of balanced financial budgets.

Factors that could lead to a downgrade

The following factors, although unlikely at present, could lead to a downgrade of Land of NRW's rating: a significant deterioration in the land's fiscal metrics leading to a substantial increase in debt levels, any alterations in the fundamental supportive structure of the Länder (regional governments) sector or a downgrade of Germany's sovereign rating.

Key indicators

Exhibit 2

Land of Nordrhein-Westfalen

	2018	2019	2020	2021P	2022F	2023F
Population (in mn)	17.9	17.9	17.9	17.9	18.0	18.0
GDP per capita (in EUR)	39,119	39,995	38,876	41,300	43,800	45,700
GDP per capita as % of national average	96.6	96.4	97.0	96.5	96.6	96.7
Intergovernmental revenues as % of operating revenues	15.5	15.3	30.6	29.4	21.6	13.0
Interest payments as % of operating revenues	3.3	2.6	1.5	1.7	1.6	1.9
Gross operating balance (GOB) as % of operating revenues	8.1	9.8	-4.0	3.9	9.0	8.3
Capital expenses (Capex) as % of total expenses	10.0	11.0	9.7	9.1	10.7	10.3
Financing result (surplus or deficit) as % of total revenues	1.5	2.0	-12.7	-3.7	0.1	0.6
Net direct and indirect debt (NDID) as % of operating revenues	236.6	230.5	204.5	200.4	205.8	215.6
Short-term direct debt as % of total direct debt	13.6	11.4	10.6	8.7	8.0	7.4

2021P - preliminary data; 2022-23F - Moody's forecast.
Sources: Issuer, German Statistics Office, German Ministry of Finance and Moody's Investors Service

Detailed credit considerations

The credit profile of NRW, as expressed in its Aa1 (stable) rating, combines its Baseline Credit Assessment (BCA) of aa3 and a very high likelihood of extraordinary support coming from the federal government in the event that the land faces acute liquidity stress.

Baseline Credit Assessment

Largest regional economy

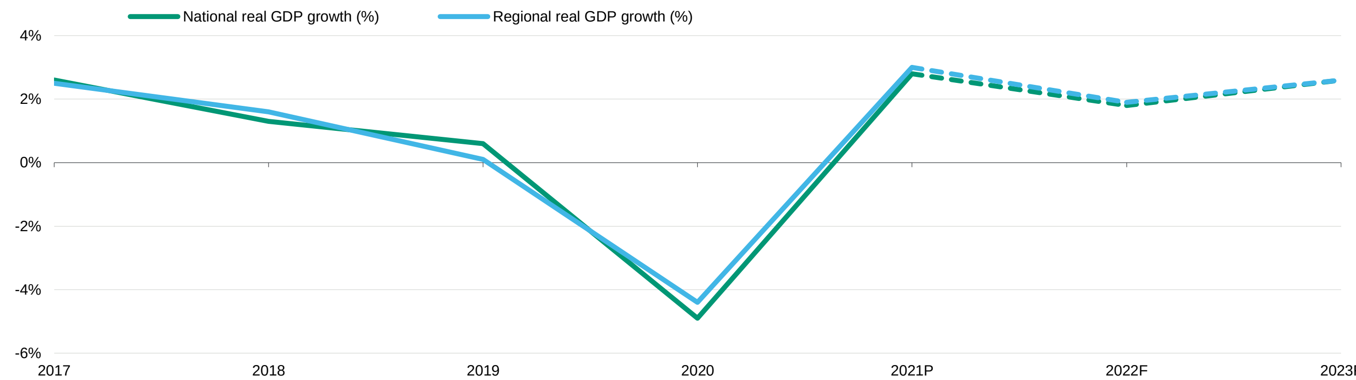
Because of its size and economic relevance, NRW's determines a large part of Germany's economy. NRW is by far the most populous land in Germany, with around 18 million inhabitants, or around 22% of the national population. Its GDP makes up around 21% of Germany's GDP and its per capita GDP is broadly in line with the German average.

The land's economy tends to grow in line with the German average, despite the structural decline and ongoing transition of its emission-intensive heavy industry (steel and coal), which is located primarily in NRW. In 2020, the land's economy was slightly less burdened by the pandemic than the German average, as regions that are more dependent on industrial production in the automotive sector suffered more. Yet, similar to the German economy as a whole, the economic rebound in 2021 was less strong than initially expected as pandemic-related restrictions and supply chain bottlenecks continued to weigh on private consumption and industrial activity. With the easing of supply-side constraints, increasing private consumption and industrial activity will be the main drivers of growth.

The land's real GDP increase for 2021 is likely close to Germany's 2.9%. In 2022, we expect the economic recovery to continue, however at a slower pace due to the heightened uncertainty brought about by the Russia-Ukraine military conflict. We recently revised our real GDP growth forecasts for Germany downwards to 1.8% from 3.8% before the invasion to reflect the German industrial sector's exposure to higher energy prices, broader supply chain disruption and a drop in household consumption. We expect NRW's economic growth to be close to the national average.

Exhibit 3

NRW's and Germany's real GDP growth rates are closely connected because of the size of the region's economy



2021P - preliminary data; 2022-23F - Moody's forecast.
Sources: German Statistics Office and Moody's Investors Service

Excellent market access and debt management

NRW has excellent access to the capital markets because of a sophisticated state treasury, as well as excellent liquidity and debt management. The region has financial relationships with a broad range of investors, which are willing to grant it continued access to liquidity based on their confidence in the German Länder solidarity system. Its bonds are eligible for the European Central Bank's public-sector purchasing programme, which supports the very low interest levels. Since 2019, NRW has been able to issue bonds with an extremely long maturity of 100 years, which reduces refinancing risk for the land and, at the same time, locks in relatively low interest payments.

In the money markets, NRW has access to the inter-Länder liquidity pool, whereby individual Länder offer their surplus cash to other Länder, as well as access to the German state financing agency (BRD Finanzagentur GmbH).

The land's access to capital markets is supported by a broad set of instruments and currencies. Since 2015, the land has issued several sustainability bonds and is committed to allocate the proceeds for a range of sustainability-related initiatives. The issuance of sustainability bonds is credit positive because it widens NRW's investor base, and helps communicate and support its sustainable development policy[1].

Budgetary discipline is a constitutional requirement (debt-brake mechanism) that mandates each region to maintain structurally balanced budgets from 2020. However, the federal constitutional requirement has been suspended for 2020, 2021 and 2022 because of the extraordinary emergency situation, which allows for the funding of measures to alleviate the economic and social impact of the pandemic. Accordingly, NRW's special fund (Sondervermögen NRW-Rettungsschirm), which was set up with a supplementary budget in 2020 to fund pandemic-related additional expenditure and tax revenue losses (with a volume of up to €25 billion), will be phased out at year-end 2022; the fund had effectively raised €15.8 billion in total through borrowings[2].

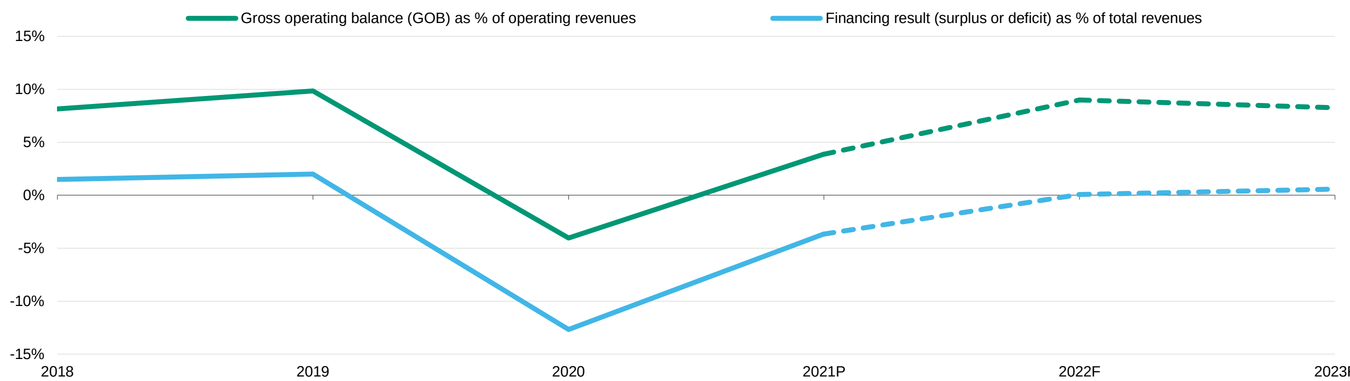
Budgetary challenges weigh on financial performance

The pandemic and the resulting economic and financial effects have hurt the land's financial performance. Additionally, devastating summer floods in some areas of Nordrhein-Westfalen required a budget update during 2021 to address additional spending requirements. While the effects of the pandemic are likely to recede from 2022, we expect some uncertainty around the predictability and planning of budget and execution to persist. We expect financial performance in 2022 and 2023 to improve further, with a small financial surplus likely to be achieved in 2023.

In 2021, the land's operating balance recovered to a small operating surplus of 4% of operating revenue, compared with an operating deficit of -4% in 2020. We expect operating surplus to improve over the next three years and return to its pre-crisis level of around 9%.

Exhibit 4

Nordrhein-Westfalen's financial performance weakened because of the pandemic, but will recover gradually



2021P - preliminary data; 2022-23F - Moody's forecast.
Sources: Issuer, German Statistics Office, German Ministry of Finance and Moody's Investors Service

In 2021, because of the economic recovery and catch-up effects, tax revenue recovered by a surprisingly high 11% compared with 2020, when tax revenue fell as a result of the pandemic and the related slowdown in economic activity. Over the course of the pandemic, central government transfers, which were higher than initially expected, have helped the land limit its financial impact.

The havoc because of the devastating summer floods exerted additional pressure on the land's budget, with immediate emergency relief costing NRW around €200 million, but the overall burden was mitigated by the federal government, which also provided €200 million for immediate support. Furthermore, the federal and regional government set up a reconstruction aid fund (Aufbauhilfe 2021) with a volume of up to €30 billion, with a pre-funding of €16 billion provided entirely by the federal government. The remaining funding will be provided by all Länder between 2021 and 2050 through an adjustment of the value-added tax revenue sharing agreement with the federal government, which NRW estimates will result in yearly tax revenue losses of €50 million for its budget.

Germany has a strong and predictable equalisation system that combines tax sharing and financial transfers. With the amended financial equalisation scheme, from 2020, the Länder sector benefitted financially because of a higher share in value-added tax revenue, higher general federal transfers and higher supplementary transfers.

In 2021, the land reported a financing deficit of €3.5 billion, or 3.7% of total revenue, following a financing deficit of 13% a year earlier. The recent deficit was driven by borrowing receipts that were transferred to the special fund "NRW-Rettungsschirm", which as of year-end 2021 had remaining liquidity of €5.4 billion earmarked for pandemic-related spending in 2022. We expect NRW to reach a balanced budget in 2022 and a small surplus in 2023, earlier than initially expected.

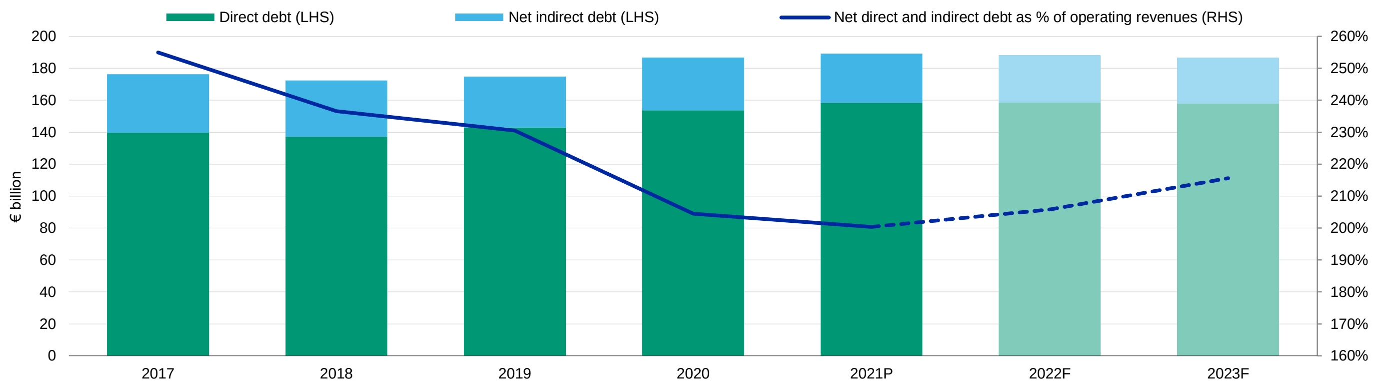
Very high debt level and some contingent liabilities

The region's direct debt was 168% of operating revenue in 2021. While positive financial results will lead to nominal debt decreases, as operating revenue will also decrease with the phaseout of central government support, we expect the land's direct debt level (compared with operating revenue) to increase up to around 175% in 2023, before likely resuming a declining trend to around 165% by 2025.

The land's indirect debt exposure (mainly consisting of guarantees to non-self-supporting entities) remained relatively stable in 2021. Overall, the land's net direct and indirect debt was 200% of operating revenue in 2021, which we expect to temporarily increase slightly to 215% in 2023 (because of the denominator effect outlined above), before likely resuming a declining trend.

Exhibit 5

Nordrhein-Westfalen's lower-than-pre-crisis debt levels to temporarily increase again as operating revenue temporarily decreases because of the phaseout of support



2021P - preliminary data; 2022-23F - Moody's forecast.
Sources: Issuer, German Statistics Office, German Ministry of Finance, Erste Abwicklungsanstalt and Moody's Investors Service

The decrease in the debt burden over the last decade was driven by budget consolidation, mainly through strong tax collection and low interest cost, but also by the winding down of Erste Abwicklungsanstalt (EAA, Aa1 stable), which is guaranteed by the land and included in its indirect debt.

NRW's most significant contingent liability is NRW.BANK (Aa1/P-1 stable), which provides services to local small and medium-sized enterprises, the public sector and real estate development. The bank is well capitalised, and its total regulatory capital and Common Equity Tier 1 capital ratios were extremely strong at 44.2% and 43.9% of risk-weighted assets (RWA) as of year-end 2020, respectively, which we consider an extraordinarily strong loss-absorption buffer. We deem the entity to be self-supporting. NRW owns and guarantees NRW.BANK.

Another contingent liability is the public law agency EAA, which we account for mostly as indirect debt. Under the legal framework, EAA's owners, who are also the former sole owners of WestLB AG (now Portigon AG), will likely remain liable for any future losses. For both EAA and Portigon, we expect NRW to step in, if need be. This commitment was demonstrated in March 2021, when a decision was taken to increase Portigon's capital by €160 million, fully provided by the land.

Based on the available information, we expect the additional cost for the EAA wind-down, as well as any additional need to step in for Portigon, to be very limited. The land has built reserves of around €1 billion to cope with the payments stemming from the guarantees for its former bank.

As is the case for most German Länder, NRW's pension obligations are only partially funded. The land established a pension fund, which we regard as a positive step in addressing the budget impact of its unfunded pension liabilities and rising pension cost. Currently, the pension fund has assets of around €14 billion, but may cover less than 10% of pension obligations. This level of coverage of pension liabilities may be relatively low, but is medium-to-high in the German context.

Debt service (including debt repayments and interest) accounted for around 18% of the land's total revenue in 2021, which is moderate. Interest expenditure was at 1.7% of operating revenue in 2021, which is low compared with that of other German Länder and international peers. We expect both the ratios to remain favourable over the next three years, supported mainly by declining refinancing needs, as well as the low interest rate environment.

Low revenue and expenditure flexibility

As is the case for all German Länder, Nordrhein-Westfalen has a rigid expenditure structure and limited revenue-raising flexibility. Even if its regional tax base grew above the national average, it would have only a limited effect on the land's budgetary performance. The above-average tax revenue growth would be partly offset by the equalisation system. In general, more than 90% of its revenue stems from shared taxes and transfers, and the German Länder have only limited tax-setting rights.

The tax rates, with very few exceptions, are set at the national level, and some of the expenses are also set and defined at central government level and are not adjustable by the land. Personnel expenses (including pension payments), which account for up to 40% of the land's operating expenses, are adjustable only over a very long period.

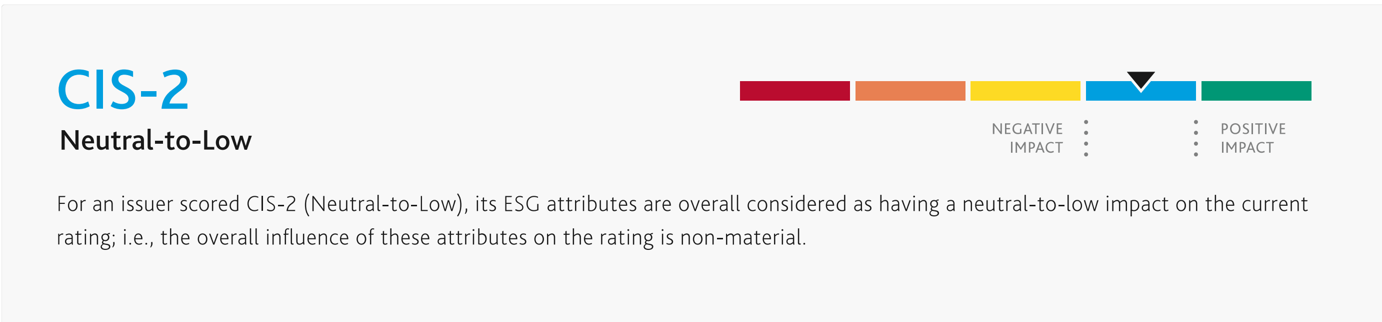
Extraordinary support considerations

NRW has a very high likelihood of receiving extraordinary support from the federal government, which reflects our assessment of the high reputational risk for Germany as a whole in case of default by a land. Furthermore, under the Bundestreuekonzept, all German Länder must express mutual solidarity in the event that one of them or the Federal Republic faces a severe budgetary crisis. Also, the debt volumes and structure of the German Länder are extremely complex, and an event of nonpayment would be considered to have a corresponding impact on Germany as a whole. The principle of solidarity is firmly entrenched in the Grundgesetz (basic law), thereby providing a reassurance that, if required, financial support for a member in distress would be forthcoming. We have, therefore, incorporated two notches of uplift, to Aa1 from aa3, into NRW's final rating.

ESG considerations

Land of Nordrhein-Westfalen's ESG Credit Impact Score is Neutral-to-Low CIS-2

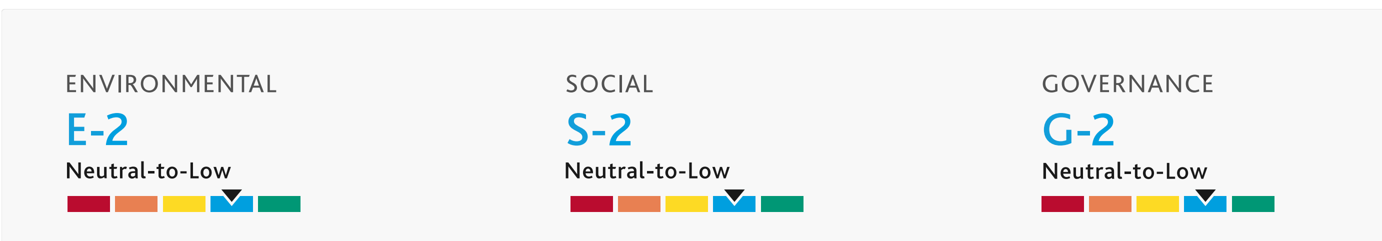
Exhibit 6
ESG Credit Impact Score



Source: Moody's Investors Service

The Land of Nordrhein-Westfalen's ESG Credit Impact Score is neutral-to-low (**CIS-2**), reflecting it neutral-to-low exposure to environmental and social risks, along with very strong governance and policy effectiveness that mitigate the region's susceptibility to these risks.

Exhibit 7
ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

The environmental issuer profile score is neutral-to-low (**E-2**), reflecting neutral-to-low risks for most environmental factors, other than physical and climate risk (which scores moderately negative). Nordrhein-Westfalen's economy is well diversified, currently transitioning away from its historical emission-intensive heavy industry (steel and coal).

Social

The neutral-to-low social issuer profile score (**S-2**) reflects broadly neutral-to-low risks from most social factors, other than health and safety (which scores positive) and demographics (which scores moderately negative). As for Germany overall, the region faces a similar trend of ageing population, resulting in declining labour supply and higher pension and social cost. The pandemic is a social risk under our ESG framework, given the substantial implications for public health and safety in the region.

Governance

The neutral-to-low governance issuer profile score (**G-2**) captures the risk from the nationally very strong institutional and governance framework. Budgetary discipline in Germany is a constitutional requirement, which requires each of the regions to maintain structurally balanced budgets. Budget planning in Nordrhein-Westfalen is prudent, transparent and predictable.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on www.moodys.com. To view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

All of these considerations are further discussed in the Detailed credit considerations section above. Our approach to ESG is explained in our report on how the scores depict limited impact of ESG factors in advanced economy RLGs, negative in emerging markets and our cross-sector methodology General Principles for Assessing Environmental, Social and Governance Risks Methodology.

Rating methodology and scorecard factors

The assigned BCA of aa3 is in line with the scorecard-indicated BCA. The matrix-generated BCA of aa3 reflects an Idiosyncratic Risk score of 4 (presented below) on a 1-9 scale, where 1 represents the strongest relative credit quality and 9 the weakest; and a Systemic Risk score of Aaa, as reflected in the sovereign bond rating for Germany.

For details about our rating approach, please refer to Rating Methodology: Regional and Local Governments, published on 16 January 2018.

Exhibit 8

Land of Nordrhein-Westfalen

Regional and Local Governments

Baseline Credit Assessment – Scorecard	Score	Value	Sub-factor Weighting	Sub-factor Total	Factor Weighting	Total
Factor 1: Economic Fundamentals				**3.80**	**20%**	**0.76**
Economic Strength [1]	5	96.62%	70%			
Economic Volatility	1		30%			
Factor 2: Institutional Framework				**3**	**20%**	**0.60**
Legislative Background	1		50%			
Financial Flexibility	5		50%			
Factor 3: Financial Position				**3.75**	**30%**	**1.13**
Operating Margin [2]	5	2.46%	12.5%			
Interest Burden [3]	3	1.76%	12.5%			
Liquidity	1		25%			
Debt Burden [4]	9	200.35%	25%			
Debt Structure [5]	1	8.68%	25%			
Factor 4: Governance and Management				**5**	**30%**	**1.50**
Risk Controls and Financial Management	5					
Investment and Debt Management	1					
Transparency and Disclosure	1					
Idiosyncratic Risk Assessment						**3.99 (4)**
Systemic Risk Assessment						**Aaa**
Scorecard-Indicated BCA Outcome						**aa3**
Assigned BCA						**aa3**

[1] Local GDP per capita as a percentage of national GDP per capita.
[2] Gross operating balance/operating revenue.
[3] Interest payments/operating revenue.
[4] Net direct and indirect debt/operating revenue.
[5] Short-term direct debt/total direct debt.
Source: Moody's Investors Service, fiscal 2021P

Ratings

Exhibit 9

Category	Moody's Rating
NORDRHEIN-WESTFALEN, LAND OF	
Outlook	Stable
Issuer Rating	Aa1
Senior Unsecured	Aa1
Other Short Term -Dom Curr	(P)P-1

Source: Moody's Investors Service

Endnotes

1 See also Land of Nordrhein-Westfalen (Germany): The only German Land issuing sustainability bonds, October 2019.

2 This sum was not entirely spent, and NRW will use the remaining liquidity in 2023 to pay off existing debt.

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