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CREDIT OPINION
29 April 2022

Update

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RATINGS

Deutsche Bahn AG

Domicile	Berlin, Germany
Long Term Rating	Aa1
Type	LT Issuer Rating - Dom Curr
Outlook	Negative

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.

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Deutsche Bahn AG

Update to credit analysis

Summary

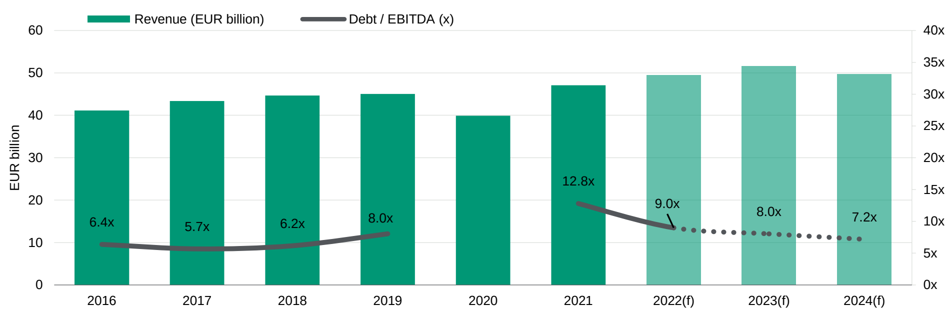
Deutsche Bahn AG's (DB) Aa1 issuer rating combines its a2 Baseline Credit Assessment (BCA) with our assessment of a high likelihood of the company receiving extraordinary support from the Government of Germany (Aaa stable) in times of need. This assessment is based on the government's willingness and very strong ability to provide support to DB, given the sovereign's ample financial reserves, as reflected in its Aaa rating.

DB's BCA is weakly positioned at a2 because of the company's high Moody's-adjusted leverage of 12.8x for 2021 and the significant execution risk surrounding the company's ability to improve its leverage increasingly towards 6.5x in the next 12-18 months and then to around 6.5x over time. The BCA remains supported by the company's size, geographical diversification and leading global market position, and the stability and predictability of the legal framework for railway companies in Germany.

The A3 rating of the hybrid instrument is one notch lower than DB's a2 BCA and five notches lower than the company's Aa1 long-term issuer rating. This reflects certain features of the instrument, which is perpetual, deeply subordinated and allows DB to opt for coupon deferrals on a cumulative basis. Because of these characteristics, government support for this instrument may not be as strong or as timely as it would be for senior unsecured debt.

Exhibit 1

Leverage will remain high despite traffic recovery and government support
Moody's-adjusted debt/EBITDA



All figures and ratios are calculated using our estimates and standard adjustments. The forecasts (f) are our opinion and do not represent the views of the issuer. Periods are fiscal year end unless indicated otherwise. Fiscal 2020 leverage was above 30.0x and, therefore, is not represented in the chart.
Source: Moody's Financial Metrics™

Credit strengths

» High probability of support from the German government

» Large scale, and good geographical and sector diversification

» Vertically integrated business model, including monopolistic railway infrastructure activities

» Solid business profile, supported by a predictable operating environment, given the reliability of the regulations and subsidies that the company receives

Credit challenges

» Volume recovery progress after severe disruptions caused by the coronavirus pandemic

» Persistent strain on profitability, primarily because of the pandemic-induced disruptions and structural difficulties

» Strained free cash flow (FCF) because of an intense capital spending programme

» High leverage for the current a2 BCA and will likely remain above 7.0x in the next 12-18 months

Rating outlook

The negative rating outlook reflects the uncertainty regarding the pace of the recovery in DB's earnings and cash flow over the next few years, and our expectation that it will be difficult for the company to reduce its leverage below 6.5x, a level more commensurate with its a2 BCA.

Factors that could lead to an upgrade

An upgrade is unlikely because DB's rating is one notch lower than the sovereign rating, and we expect this gap to remain.

The BCA could be upgraded if:

» DB's Moody's-adjusted debt/EBITDA remains well below 5.5x on a sustained basis

» its operating performance improves, reflected in a substantial and sustained improvement in its Moody's-adjusted EBITA margin

» its negative FCF improves substantially

Factors that could lead to a downgrade

A downgrade of Germany's sovereign rating will result in a downgrade of DB's ratings.

In addition, we could downgrade DB's ratings if the likelihood of extraordinary support from the government decreases or if the BCA deteriorates further and is not adequately compensated by stronger government support.

The BCA could be downgraded if:

» DB's Moody's-adjusted debt/EBITDA appears unlikely to improve towards 6.5x from 2023

» its EBITA margin fails to improve towards 5%

» the company's business profile weakens as a result of a change in its integrated business model

Key indicators

Exhibit 2
Deutsche Bahn AG

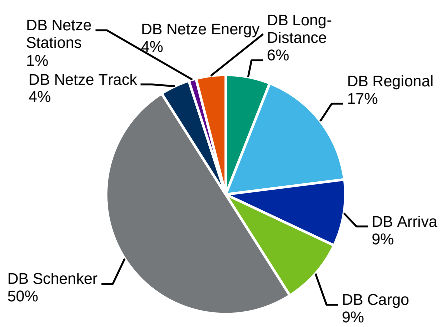
EUR billion	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	2022 (f)	2023 (f)	2024 (f)
Revenue	€ 43.4	€ 44.7	€ 45.0	€ 39.9	€ 47.1	€ 49.5	€ 51.6	€ 49.7
EBITA margin %	3.0%	3.1%	2.0%	-8.0%	-1.0%	1.7%	2.5%	3.2%
Debt / EBITDA	5.7x	6.2x	8.0x	98.1x	12.8x	9.0x	8.0x	7.2x
FCF / Debt	-6.9%	-3.9%	-6.5%	-12.1%	-6.3%	-2.5%	-6.7%	-4.4%
RCF / Net Debt	20.8%	18.4%	15.2%	4.2%	15.3%	12.0%	11.3%	12.8%
(FFO + Int. Exp.) / Interest Exp.	7.9x	7.6x	8.4x	3.9x	9.4x	6.7x	7.3x	8.2x

All figures and ratios are calculated using our estimates and standard adjustments. The forecasts (f) are our opinion and do not represent the views of the issuer. Periods are fiscal year end unless indicated.
Source: Moody's Financial Metrics™

Profile

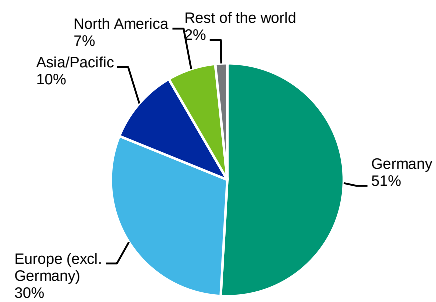
Deutsche Bahn AG (DB) is a vertically integrated rail and logistics group that owns and operates the German national rail transportation network. DB is one of the largest rail and logistics companies in the world. In 2021, DB generated company adjusted revenue of €47.1 billion and reported EBIT (excluding effects from Covid-related reduction of train-path prices) of negative €1.6 billion. The company provides rail track infrastructure, and passenger and freight transportation services under its holding umbrella. DB holds leading market positions in most of the segments in which it operates. These segments include long-distance rail (6% of revenue), regional passenger rail in Germany (17%), mass-transit transportation services in various European countries outside of Germany, through its subsidiaries DB Arriva (9%) and DB Cargo (9%), world-wide logistic services through its subsidiary DB Schenker (50%), energy supply (4%) and railway stations and infrastructure management (5%).

Exhibit 3
Revenue breakdown by segment
2021



Source: Company report

Exhibit 4
Revenue breakdown by region
2021



External revenue.
Source: Company report

Detailed credit considerations

Further recovery of passenger revenue as mobility restrictions ease, logistics revenue continues to offset shortfall

In 2021, DB's overall revenue improved by 18% from that in 2020, driven mainly by strong growth in logistics activities because of the robust economic recovery in Germany and across the world, as well as significant increase in freight rates.

Although performance was still hurt by the pandemic-led disruption, long-distance passenger revenue recovered substantially from March 2021. In the nine months from March to December 2021, passenger travel increased 30% from that in the year-earlier period. Although we expect travel to resume gradually and reach 2019 levels in the next 12-24 months, we expect increased levels of working from home even after the effects of the pandemic abate to permanently affect business travel. We expect cargo and logistics revenue to improve further, well beyond pre-corona levels in 2022 and beyond. However, the rise in geopolitical risks and inflation could dampen our forecasts.

Low profitability and high leverage will remain key credit concerns

On a consolidated group level we expect revenues to continue growing, (they are already significantly above 2019), while we expect EBITDA and operating cash flow to continue to recover and reach 2019 levels by 2023. The recovery will be driven by a gradual normalisation of passenger traffic levels and the success of the company's cost-saving programme, which aims at reducing costs by about €5 billion by 2024. The programme, which is ahead of plan, achieved €1.7 billion of cost savings in 2021 and has achieved €2.8 billion to date (€1 billion is linked to capital expenditures).

Including the government's support measures (see subheading below: Increased importance of DB to achieve the government's CO_2 reduction targets in the transportation sector in Germany), we expect DB's funded debt to slightly increase by 2023, due to ongoing high level of capex. In 2021 funded debt actually decreased marginally to €29.1 billion from €29.3 billion, assisted by the €4.7 billion inflows from the government's Climate Action Programme and Covid-19 support measures.

While DB's EBITDA will only recover gradually, its debt will remain high because the company will need to finance its large capital spending programme in the coming years, in addition to government grants. As a result, we expect the company's leverage to move towards 6.5x in the next 12-18 months and then to around 6.5x over time.

High and increasing capital spending will strain FCF

We expect DB's FCF to be significantly negative over the next 12-18 months, driven by reduced passenger volumes and the ongoing high capital spending (averaging above €6 billion a year until 2025, after deducting investment grants and post IFRS16). We also expect DB to realize the sale of DB Arriva not before 2024 or until market conditions improve.

Vertically integrated business model is credit positive

DB's weak leverage and FCF coverage are largely because of the company's vertically integrated business model and substantial investment needs in rail track infrastructure and rolling stock. The combination of the two businesses provides DB with an advantage, given the breadth of its operations. Therefore, DB can accommodate higher leverage in the a2 BCA rating category than pure rail operators such as Ceske drahy, a.s. (Baa2 stable, ba2). SNCF S.A. (Aa3 stable, a3) is DB's closest peer following the integration of the infrastructure manager SNCF Réseau's (Aa2 stable) monopolistic activities on 1 January 2020. SNCF S.A.'s lower BCA reflects the risks related to the upcoming liberalisation of the passenger railway market in France and DB's more favourable operating environment.

Solid business profile, supported by a predictable operating environment

The operating environment in Germany is stable and supportive of DB's credit quality. Germany has set the pace for the liberalisation of the rail sector. For this purpose, the government has put in place a stable legal framework that entails a constitutional obligation on its part to provide functional rail infrastructure, which implies that it will sustain most of the investments in infrastructure; the budgeting of funds for regional transportation according to the German regionalisation act; and the existence of a performance and financing agreement between DB and the federal government for the existing rail infrastructure, with well-defined quality levels.

As a result of the opening of the German rail sector to competition, more than 25 years ago, DB's market shares in both regional passenger transport and rail freight have declined, but very gradually. The market share of rail freight was slightly below 50% in 2021 and regional passenger market share was c. 60%. The decline has been offset by an increase in the absolute number of passengers, and the company has also benefitted from the ability to regain previously lost routes in recent years, for example, DB Regional managed to acquire parts of the North Rhine-Westphalia network in early 2022 as the operator withdrew from German market. Moreover, DB's business profile is supported by the company's large size and broad diversification in terms of both business segment (rail and bus passenger transport, rail freight, logistics and rail infrastructure) and geography.

DB's business profile is also underpinned by its leading market positions. DB is the market leader in the European rail freight business and is the second-largest passenger railway operator in Europe after SNCF S.A. In addition, DB is one of the leading groups in European land transport, air freight, ocean freight and contract logistics.

Increased importance of DB to achieve the government's CO_2 reduction targets in the transportation sector in Germany

We expect the German government to provide timely support to DB if the viability of the German rail infrastructure and operation is at risk because the company has a strategic role in guaranteeing a public rail service across Germany and is one of the key drivers of the government's climate action plan (Climate Action Programme 2030). The plan is aimed at significantly reducing pollution in the transportation sector.

The government has also established a very strong track record of ongoing and extraordinary support for DB. For instance, DB benefits from around €6 billion support measures from the government to compensate for the pandemic-induced disruptions, of which €4.5 billion has been received in 2020 and 2021. This government support is in addition to a €11 billion capital injection (equity and investment grants) that the government will make by 2030 as part of its Climate Action Programme, and other indirect measures such as value-added tax (VAT) reductions for long-distance rail services since 1 January 2020 and surcharges on domestic air travel aimed at promoting the increased use of rail transport in Germany.

Because of DB's 100% ownership by the German government, we apply our Government-Related Issuers rating methodology to the company. Therefore, DB's rating reflects a combination of the following inputs:

» the a2 BCA

» the Aaa domestic-currency rating of the Federal Republic of Germany

» the high default dependence between DB and the government

» the high probability of support from the government

Our assessment of the high default dependence between DB and the German government reflects the country's status as a key hub of European rail traffic, and the strong integration of railway infrastructure into the international economy and trade flow. These factors are balanced by DB's geographical diversification, mainly through its international logistics and freight-forwarding activities, and its rail freight activities in the neighbouring European rail markets.

Our expectation that the government will provide DB with a high level of support in case of need is based on the constitutional requirement that the government remains the owner of the rail infrastructure in the country and is responsible for ensuring the functionality of the rail infrastructure; DB's 100% state ownership; the strategic importance of a functioning, well-funded rail infrastructure for Germany's economy; an overall strong political consensus regarding the public role of DB and the importance of its activities for the German economy; and DB's dominant role as a regional transport provider, in addition to its de facto monopoly in the long-distance passenger rail segment.

ESG considerations

We take into consideration the impact of environmental, social and governance (ESG) factors when assessing companies' credit quality. In the case of DB, the main ESG-related drivers are the following:

Environmental

» The shift to greener forms of transport supports DB's volume growth. Passenger railways tend to be environmentally clean and highly energy-efficient. With more than 90% of rail operations electrified in Germany as of December 2021, rail transport produces lower emissions than alternative means of transport such as air, bus or car. Passenger railway volumes will be driven by the increasing awareness among travellers, and the governments' or local authorities' incentives to choose public transportation. However, DB's ongoing efforts to reduce its environmental impact will continue to strain the company's cash flow.

» DB is already experiencing the consequences of climate change. Record temperatures and fiercer storms strain the company's punctuality and the viability of its rail tracks, leading to potential disruptions and higher capital spending. In July 2021, DB experienced extensive flood damages, which will be largely reimbursed by the government.

Social

» We regard the pandemic as a social risk. The passenger railway sector in Germany has been significantly hurt by the shock caused by the pandemic, given its sensitivity to consumer demand and sentiment.

» Social risks also stem from the company's high exposure to human capital, with 323,716 employees as of December 2021 and a high number of unionised employees. Passenger railways are highly exposed to the risk of collective bargaining and industrial actions. Three strikes took place from August to early September 2021 by GDL members (German Train Drivers' Union), which is the second largest railway union in Germany. DB and GDL union reached an agreement in September 2021. The agreement included a raise in salaries of around 3.3% over the next 32 months and two bonus payments of €700-€1200. Strikes such as the ones mentioned above can have both reputational and financial consequences.

Governance

» DB's corporate governance structure is in line with the German law and articles of association. The supervisory board consists of 20 members and, consistent with the German Codetermination Act (MitBestiG), includes equal numbers of shareholders and employee representatives with an additional vote for the chairman in case of a draw. Despite the company's high leverage, DB's financial policy is relatively balanced, with a track record of support from the Government of Germany.

Liquidity analysis

We expect DB to maintain good liquidity over the next 12 months, supported by its cash position of €4.6 billion as of 31 December 2021; its fully available commercial paper programme of €3 billion as of 31 December 2021; its undrawn €2.6 billion committed credit lines as of 31 December 2021; its recovering cash flow from operations, which we expect to be €4.3 billion in 2022; and the planned government support.

DB's major cash needs in 2022 include its high capital spending, which we estimate at around €6.5 billion (including leasing), net of grants from the German government, and around €2.8 billion in debt maturities (excluding bank debt).

We also expect DB to maintain its excellent access to the capital markets.

Methodology and scorecard

DB's BCA of a2 is three notches higher than the historical scorecard-indicated outcome of our Passenger Railways and Bus companies, published in December 2021. The BCA is three notches above the forward-looking scorecard-indicated outcome. The deviations in both scorecard-indicated outcomes from the actual BCA of a2 reflect our expectation that DB will recover to a leverage of around 6.5x and EBITA margin around 5% only after 2024, which is not captured in the current forward-looking view.

Exhibit 5

Rating factors

Deutsche Bahn AG

Passenger Railways and Bus Companies Industry Scorecard [1]	Current Fiscal 12/31/2021		Moody's 12-18 Month Forward View As of 4/28/2022 [2]	
Factor 1 : Scale (15%)	**Measure**	**Score**	**Measure**	**Score**
a) Revenue (USD Billion)	$55.7	Aaa	$56.4 - $58.6	Aaa
Factor 2 : Business Profile (25%)				
a) Stability of Operating Environment	Aaa	Aaa	Aaa	Aaa
b) Market Characteristics	Aaa	Aaa	Aaa	Aaa
c) Competitive Environment	Aa	Aa	Aa	Aa
Factor 3 : Profitability and Efficiency (10%)				
a) EBIT Margin	-1.4%	Ca	1.1% - 1.9%	Caa
Factor 4 : Leverage and Coverage (35%)				
a) Debt / EBITDA	12.8x	Ca	8x - 9x	Caa
b) RCF / Net Debt	15.3%	Baa	11.3% - 12%	Baa
c) (FFO + Interest) / Interest	9.4x	Aa	6.7x - 7.3x	Aa
Factor 5 : Financial Policy (15%)				
a) Financial Policy	Ba	Ba	Ba	Ba
Rating:				
a) Scorecard-Indicated Outcome		Baa2		Baa2
b) Actual Rating Assigned				Aa1
Government-Related Issuer	**Factor**			
a) Baseline Credit Assessment	a2			
b) Government Local Currency Rating	Aaa Stable			
c) Default Dependence	High			
d) Support	High			
e) Actual Rating Assigned	Aa1 Neg			

(1) All ratios are based on adjusted financial data and incorporate our Global Standard Adjustments for Non-Financial Corporations.
(2) This represents our forward view, not the view of the issuer, and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source: Moody's Financial Metrics™

Appendix

Exhibit 6
Peer comparison

	Deutsche Bahn AG (P)Aa1 Negative			SNCF Réseau Aa3 Stable			Ceske drahy, a.s. Baa2 Stable		
(in USD million)	FYE Dec-19	FYE Dec-20	FYE Dec-21	FYE Dec-19	FYE Dec-20	FYE Dec-21	FYE Dec-19	FYE Dec-20	LTM Jun-21
Revenue	$50,424	$45,541	$55,697	$39,317	$34,212	$41,117	$1,773	$1,573	$1,712
EBITDA	$4,952	$481	$3,801	$6,483	$3,289	$6,585	$399	$222	$246
EBITA Margin %	2.0%	-8.0%	-1.0%	6.4%	-2.5%	6.0%	5.3%	-6.4%	-5.8%
EBITA / Average Assets	1.4%	-4.9%	-0.7%	2.4%	-0.7%	1.7%	2.3%	-2.4%	-2.3%
(FFO + Int. Exp.) / Interest Exp.	8.4x	3.9x	9.4x	3.0x	1.4x	2.4x	7.3x	6.2x	25.8x
Total Debt / Capital	71.6%	86.5%	80.8%	112.9%	86.7%	84.8%	48.9%	53.9%	54.7%
Debt / EBITDA	8.0x	98.1x	12.8x	13.9x	28.7x	14.6x	4.6x	8.9x	8.7x
FCF / Debt	-6.5%	-12.1%	-6.3%	-4.2%	-5.9%	-1.7%	-7.3%	-12.4%	-18.5%
RCF / Net Debt	15.2%	4.2%	15.3%	4.2%	0.1%	6.6%	22.2%	14.1%	15.6%

All figures and ratios are calculated using our estimates and standard adjustments. FYE = Financial year end. LTM = Last 12 months. RUR* = Ratings under review, where UPG = for upgrade and DNG = for downgrade.
Source: Moody's Financial Metrics™

Exhibit 7
Moody's-adjusted debt breakdown
Deutsche Bahn AG

(in EUR million)	FYE Dec-17	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-21
As Reported Total Debt	**22,076**	**23,244**	**28,693**	**33,324**	**34,486**
Pensions	3,940	4,823	5,354	6,517	5,031
Operating Leases	5,310	5,406	0	0	0
Hybrid Securities	0	0	999	1,001	1,001
Securitization	375	524	526	453	543
Moody's Adjusted Total Debt	**31,701**	**33,997**	**35,572**	**41,295**	**41,061**

Source: Moody's Financial Metrics™

Exhibit 8
Moody's-adjusted EBITDA breakdown
Deutsche Bahn AG

(in EUR million)	FYE Dec-17	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-21
As Reported EBITDA	**4,572**	**4,529**	**5,055**	**617**	**3,599**
Pensions	8	11	26	12	(49)
Operating Leases	1,770	1,802	0	0	0
Unusual	(744)	(811)	(670)	(208)	(337)
Non-Standard Adjustments	(14)	(12)	12	0	0
Moody's Adjusted EBITDA	**5,592**	**5,519**	**4,423**	**421**	**3,213**

Source: Moody's Financial Metrics™

Exhibit 9

Select historical and projected Moody's-adjusted financial data

Deutsche Bahn AG

(in EUR million)	FYE Dec-17	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-21	2022 (f)	2023 (f)
INCOME STATEMENT							
Revenue	43,355	44,698	45,041	39,901	47,075	49,455	51,623
EBITDA	5,592	5,519	4,423	421	3,213	4,639	5,263
EBIT	1,093	1,193	735	(3,420)	(670)	554	956
Interest Expense	946	915	735	779	669	774	792
BALANCE SHEET							
Cash & Cash Equivalents	3,397	3,544	3,993	3,411	4,591	4,743	3,509
Total Debt	31,701	33,997	35,572	41,295	41,061	41,678	42,278
Net Debt	28,304	30,453	31,579	37,884	36,470	36,935	38,769
CASH FLOW							
Funds from Operations (FFO)	6,496	6,057	5,458	2,256	5,599	4,428	5,013
Cash Flow From Operations (CFO)	3,896	4,834	3,603	1,483	3,797	4,374	4,864
Capital Expenditures	(5,482)	(5,684)	(5,242)	(5,811)	(6,369)	(5,412)	(7,049)
Dividends	612	463	662	667	20	0	650
Retained Cash Flow (RCF)	5,884	5,594	4,796	1,589	5,579	4,428	4,363
RCF / Debt	18.6%	16.5%	13.5%	3.8%	13.6%	10.6%	10.3%
RCF / Net Debt	20.8%	18.4%	15.2%	4.2%	15.3%	12.0%	11.3%
Free Cash Flow (FCF)	(2,198)	(1,313)	(2,301)	(4,995)	(2,592)	(1,038)	(2,835)
FCF / Debt	-6.9%	-3.9%	-6.5%	-12.1%	-6.3%	-2.5%	-6.7%
PROFITABILITY							
% Change in Sales (YoY)	5.3%	3.1%	0.8%	-11.4%	18.0%	5.1%	4.4%
EBIT margin %	2.5%	2.7%	1.6%	-8.6%	-1.4%	1.1%	1.9%
EBITDA margin %	12.9%	12.3%	9.8%	1.1%	6.8%	9.4%	10.2%
INTEREST COVERAGE							
(FFO + Interest Exp.) / Interest Exp.	7.9x	7.6x	8.4x	3.9x	9.4x	6.7x	7.3x
(EBITDA-CAPEX) / Interest Expense	0.1x	-0.2x	-1.1x	-7.0x	-4.7x	-1.0x	-2.3x
EBIT / Interest Expense	1.2x	1.3x	1.0x	-4.4x	-1.0x	0.7x	1.2x
EBITDA / Interest Expense	5.9x	6.0x	6.0x	0.5x	4.8x	6.0x	6.6x
LEVERAGE							
Debt / EBITDA	5.7x	6.2x	8.0x	98.1x	12.8x	9.0x	8.0x
Net Debt / EBITDA	5.1x	5.5x	7.1x	90.0x	11.4x	8.0x	7.4x

FYE = Financial year end. LTM = Last 12 months. RUR* = Ratings under review, where UPG = for upgrade and DNG = for downgrade.

Source: Moody's Financial Metrics™

Ratings

Exhibit 10

Category	Moody's Rating
DEUTSCHE BAHN AG	
Outlook	Negative
Issuer Rating -Dom Curr	Aa1
Senior Unsecured MTN	(P)Aa1
Commercial Paper -Dom Curr	P-1
Other Short Term -Dom Curr	(P)P-1
DEUTSCHE BAHN FINANCE GMBH	
Outlook	Negative
Senior Unsecured	Aa1
Bkd Subordinate -Dom Curr	A3
Bkd Commercial Paper -Dom Curr	P-1
Bkd Other Short Term -Dom Curr	(P)P-1

Source: Moody's Investors Service

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