MOODY'S INVESTORS SERVICE

CREDIT OPINION
18 March 2019

Update

Rate this Research

RATINGS

**Deutsche Bahn AG**

| | |
|---|---|
| Domicile | Berlin, Germany |
| Long Term Rating | Aa1 |
| Type | LT Issuer Rating - Dom Curr |
| 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.*


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# Deutsche Bahn AG

## Update to credit analysis

## Summary


Deutsche Bahn AG's (DB) Aa1 issuer rating incorporates a three-notch uplift from its a1 Baseline Credit Assessment (BCA), reflecting the relationship between the company and the Government of Germany (Aaa stable).

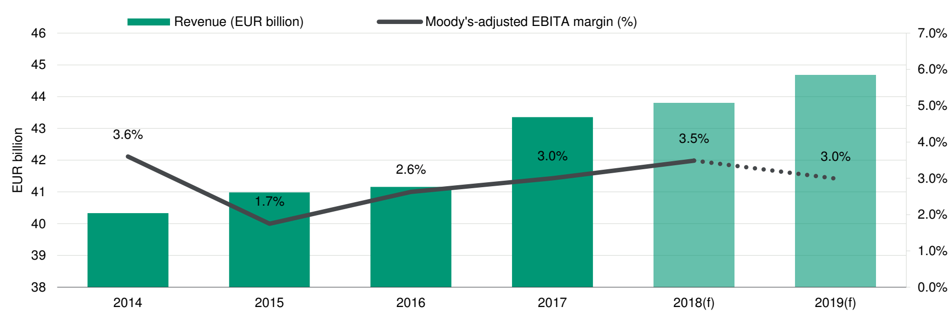
The a1 BCA is weakly positioned because of a number of challenges, particularly in terms of profitability, financial leverage and free cash flow (FCF) generation, which reflect the increasing competition in both the cargo and passenger businesses. DB's management has started a restructuring programme to reduce costs and improve service quality, entailing substantial investments (in excess of €4.5 billion in annual net capital spending) through 2022. We expect this large capital spending to strain DB's FCF, which we estimate will remain negative (around €1.5 billion deficit) in the next 12-18 months, and keep leverage above 6.0x through 2019, a level that is still high for the current BCA.

DB's BCA is supported by the company's size, geographical diversification and leading global market position, as well as the predictability of the legal framework for railway companies in Germany and the stable environment in which the company operates in its domestic market.


Exhibit 1

**Low profit margin remains the main credit challenge**

**Moody's-adjusted revenue (in € billions) and EBITA margin (%)**




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

## Credit strengths

» Solid business profile, supported by a predictable operating environment

» No changes expected in our assumptions of government support and default dependence

## Credit challenges

» Continued pressure on profitability

» Strained FCF generation because of an intense capital spending programme

## Rating outlook

The stable outlook on DB's rating is in line with the stable outlook on the Aaa rating of its support provider, the German government. This reflects the fact that any significant adjustment in the rating of the German government would cause us to reassess the amount of credit uplift incorporated in DB's rating. In addition, a further weakening in DB's BCA could exert negative pressure on the company's Aa1 rating.

## Factors that could lead to an upgrade

DB's rating is one notch lower than the sovereign rating, and we expect this gap to remain because we do not expect any strengthening in government support beyond the current high level, nor do we expect any change in our dependence assumption.

The BCA would most likely come under upward pressure if:

» there is an improvement in DB's operating performance, with its Moody's-adjusted EBITA margin exceeding 6% on a sustained basis

» DB's Moody's-adjusted debt/EBITDA remains well below 5.0x on a sustained basis

## Factors that could lead to a downgrade

DB's Aa1 issuer rating is sensitive to any weakening in the likelihood of support from the federal government, which we expect to remain high, given the constitutional framework and the importance of DB to the German economy.

In addition, any further weakening in the BCA could result in a downgrade of the Aa1 rating. This weakening could be caused by the following factors:

» A permanent deterioration in the company's operating performance, with its Moody's-adjusted EBITA margin remaining below 4.5%

» Moody's-adjusted debt/EBITDA remaining above 5.5x

» Weakness in the company's business profile, resulting from a change in its integrated business model with a separation from the infrastructure management activities

» A major decline in the ongoing infrastructure subsidies, increasing the burden of infrastructure capital spending for the company

## Key indicators

Exhibit 2
**Deutsche Bahn AG**

| | 12/31/2014 | 12/31/2015 | 12/31/2016 | 12/31/2017 | 6/30/2018(L) | 12/31/2018 (f) | 12/31/2019 (f) |
|---|---|---|---|---|---|---|---|
| Revenue ($ Billion) | $53.6 | $45.5 | $45.5 | $49.0 | $52.3 | $50.3 | $51.3 |
| EBITA Margin | 3.6% | 1.7% | 2.7% | 3.0% | 2.5% | 3.5% | 3.0% |
| EBITA / Avg. Assets | 2.5% | 1.2% | 1.8% | 2.1% | 1.7% | 2.4% | 2.1% |
| Debt / Book Capitalisation | 66.4% | 69.0% | 71.7% | 68.8% | 69.9% | 70.5% | 70.9% |
| Debt / EBITDA | 5.3x | 6.2x | 6.4x | 5.7x | 6.2x | 6.0x | 6.1x |
| FCF / Debt | -0.5% | -4.8% | -1.1% | -6.9% | -5.9% | -8.6% | -4.8% |
| RCF / Net Debt | 23.2% | 20.8% | 18.7% | 20.8% | 19.2% | 14.1% | 12.9% |
| (FFO + Interest) / Interest | 7.0x | 7.5x | 7.6x | 7.9x | 7.5x | 6.0x | 6.0x |

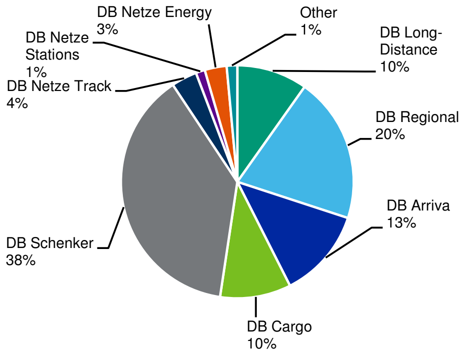
All figures and ratios are calculated using Moody's estimates and standard adjustments. Moody's Forecasts (f) are Moody's opinion and do not represent the views of the issuer. Periods are fiscal year end unless indicated.
*Source: Moody's Financial Metrics™*

## 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 2017, DB generated €42.7 billion of revenue and €4.5 billion of reported EBITDA. The company includes 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 (10% of revenue) and regional (20%) passenger railways in Germany, mass-transit transportation services through the subsidiaries DB Arriva (13%) and DB Cargo (10%), logistic services through the subsidiary DB Schenker (38%), and railway stations and infrastructure management (8%).

Exhibit 3

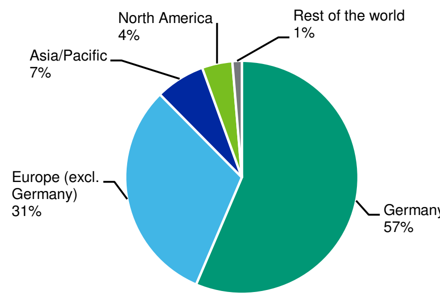
**Revenue breakdown by segment**
**2017**




External revenue.
*Source: Company report*

Exhibit 4

**Revenue breakdown by region**
**2017**




External revenue.
*Source: Company report*

# Detailed credit considerations

## Low profitability will remain a key credit concern

DB's weak profitability remains our main credit concern. We expect the company's EBITA margin (on a Moody's-adjusted basis) have recovered in the second half of 2018 to around 3.5%, driven by revenue growth and implemented cost-saving measures. However, the company's profitability remains low for the current BCA. Besides restrictions in rail operations, in recent years, DB's profitability has been hurt by (1) weak performance in the rail freight division (DB Cargo); (2) increasing competition, particularly in the regional rail services business, with some of DB's existing contracts awarded to its competitors, which exerted significant pressure on its prices and volumes; and (3) cost increases for personnel and energy as well as quality improvement measures.

We expect DB's profitability to remain subdued in the next 12-18 months, mainly as a result of continued price and traffic growth, and inflationary pressure on the cost structure, as well as additional expenses for quality improvement measures.

DB's management is implementing a restructuring programme to address the weaknesses in its operating performance via service improvements and cost-saving initiatives. However, the improving profitability trend started in 2015 was partially reversed in H1 2018 because operating costs increased faster than revenue. Profitability margin, as measured by Moody's-adjusted EBITA margin, decreased to 2.5% in the 12 months ended June 2018 from 3.0% in 2017. The decline is attributable to higher personnel costs, increasing energy costs as well as quality improvement and digitalisation costs.

Revenue in H1 2018 increased 2.3% from that in H1 2017, supported by favourable macroeconomic conditions, which resulted in (1) an increase in the number of passengers and volumes sold mainly in Germany; and (2) a recovery in world trade, with a significant increase in both ocean and air freight volumes. We expect H2 2018 revenue to exhibit a growth trend similar to that in H1 2018, despite weaker cargo volumes.

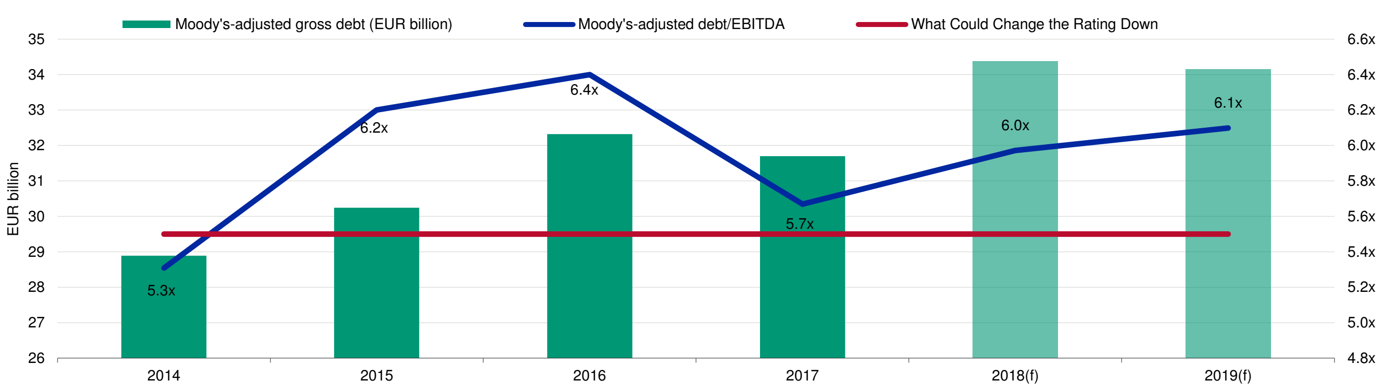
## High and increasing capital spending will keep leverage high for the BCA and FCF under strain

We expect DB to maintain leverage (measured as Moody's-adjusted gross debt/EBITDA) above 6.0x over the next 12-18 months, which is still high for the current BCA. We expect the reported net debt to marginally increase to around €22 billion by year-end 2019 from €18.7 as of year-end 2017 as a result of the company's ongoing dividend payments and the expected higher capital spending requirements of around €4.5 billion annually, on average, in 2019-22. Similarly, this large capital spending will strain the company's FCF, which we expect to remain negative (around €1.5 billion deficit) through the forecast period.

Exhibit 5

**Leverage will remain high for the BCA**

**Moody's-adjusted gross debt (in € billions) and debt/EBITDA**

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*Source: Moody's Financial Metrics™*

More positively, the decision of the federal government to provide a support package totalling more than €2.7 billion over 2017-21, of which €1.7 billion has been completed, will ease some of the pressure on DB's financial leverage in the coming years. DB's management and the German government are also considering a possible resumption of the privatisation plans of DB's international subsidiaries (DB Arriva (passenger transport services outside Germany) and/or DB Schenker (logistics services)) to contain the company's increasing debt load.

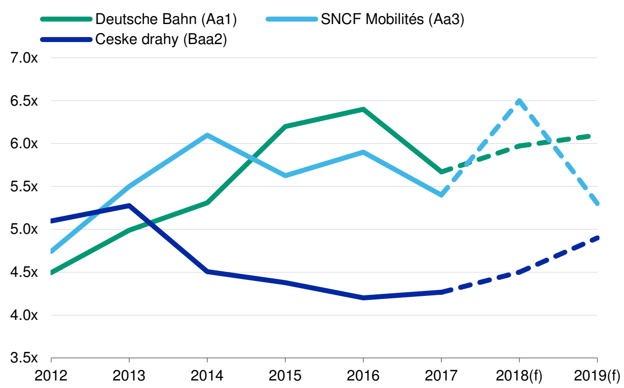
### Integration with infrastructure is credit positive

DB's weak leverage and FCF coverage are largely driven by the company's vertically integrated business model and substantial investment needs in rail track infrastructure. This set-up is unusual in the European rail operators market, where the infrastructure and rail operating businesses are mostly managed and run separately. We believe that 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 a1 category than other rail operators. For example, in France, the railway operator SNCF Mobilités (BCA of baa1 and long-term rating of Aa3 stable) has a similar leverage level (5.7x Moody's-adjusted debt/EBITDA for the 12 months ended June 2018), while the infrastructure manager SNCF Réseau (Aa2 positive) has leverage in excess of 30x.

Exhibit 6

**DB's leverage is one of the highest among its European peers and will remain elevated**

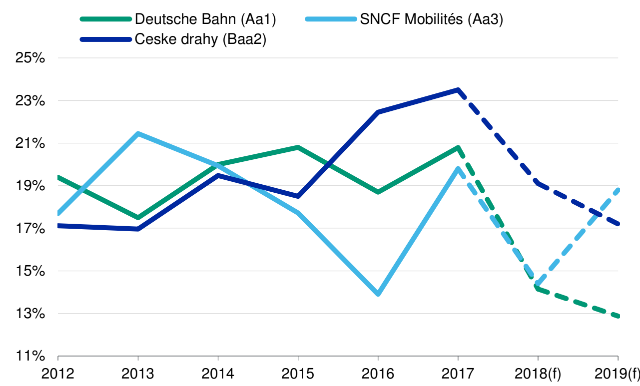
**Moody's-adjusted debt/EBITDA**




*SNCF leverage increase in 2018 is mainly because of the impact of strikes on EBITDA.
*Source: Moody's Financial Metrics™*

Exhibit 7

**Retained cash flow/net debt is likely to remain in the mid to high teens (in percentage terms)**




*Source: Moody's Financial Metrics™*

### Solid business profile, supported by a predictable operating environment

We consider DB's operating environment in Germany to be stable and supportive of the company's credit quality. Germany has set the pace for rail sector liberalisation. For this purpose, the government has put in place a stable legal framework, entailing (1) the government's constitutional obligation to provide a functional rail infrastructure, implying that it will sustain most of the investments in infrastructure; (2) the budgeting of funds in the medium-term planning process for regional transportation; and (3) the existence of a service and financing agreement between DB and the federal government, with well-defined quality levels.

As a result of the opening of the German rail sector to competition, DB's market shares in both passenger transport and rail freight have been declining gradually. However, this decline has been 1%-2% per year (based on our analysis and external market research) and, in the passenger segment, has been offset by an increase in the absolute number of passengers, and is, therefore, manageable. Moreover, DB's business profile is supported by its large size and broad diversification by both business segment (rail and bus passenger transport, rail freight, logistics and rail infrastructure) and geography (around 43% of revenue in 2017 was generated abroad, including 31% in Europe [excluding Germany], 7% in Asia-Pacific and 4% in North America, mainly in the cargo and logistics businesses, and from DB Arriva).

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 after SNCF Mobilités. In addition, DB is one of the leading groups in European land transport, air freight, ocean freight and contract logistics.

### No changes expected to our assumptions of government support and default dependence

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

» A BCA of a1

» 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 a high default dependence between DB and the German government reflects (1) Germany's status as a key hub of European rail traffic, and (2) the strong integration of railway infrastructure into the international economy and trade flow. These factors are balanced by (1) DB's geographical diversification, mainly via its international logistics and freight-forwarding activities; and (2) the increasing presence of the company's rail freight activities in 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 (1) the constitutional requirement that the government remains the owner of rail infrastructure in the country and is responsible for ensuring that it is functional; (2) DB's 100% state ownership; (3) the strategic importance of functioning, well-funded rail infrastructure for Germany's economy; (4) an overall strong political consensus regarding the public role of DB and the importance of its activities for the German economy; and (5) DB's dominant role as a regional transport provider, in addition to its de facto monopoly in the long-distance passenger rail segment.

## Liquidity analysis

We expect DB to maintain satisfactory liquidity over the next 12 months, supported by (1) its cash position of €3.7 billion as of June 2018, (2) its fully available €2 billion commercial paper programme, (3) €2 billion of unused committed credit lines, and (4) its sizeable cash flow from operations, which we expect to be €3.8 billion in 2018. Major cash needs include high capital spending, which we estimate at about €4.5 billion in 2018, net of grants from the German government, and around €2.7 billion in debt maturities in the next 12-18 months (until June 30, 2020).

We also expect DB to maintain its excellent access to the capital markets. In addition, our liquidity assessment assumes that, in case of need, the company would receive support from the federal government, which would provide timely cash injections. These liquidity injections would go beyond the government's statutory duty to preserve DB's operations from insolvency.

## Rating methodology and scorecard

DB's BCA of a1 is one notch higher than the grid-indicated outcome of our Global Passenger Railway Companies rating methodology, published in June 2017. The one-notch differential reflects our view that DB can accommodate higher leverage in the a1 category than other rail operators because of its integrated business model, with the railways network and rail operations under one roof.

Exhibit 8

**Rating factors**

**Deutsche Bahn AG**

| Passenger Railway Industry Grid (1)(2) | Current LTM 6/30/2018 | | Moody's 12-18 Month Forward View (3) | |
|---|---|---|---|---|
| **Factor 1 : SIZE (15%)** | **Measure** | **Score** | **Measure** | **Score** |
| a) Revenue ($ Billion) | $52.3 | Aaa | $50.3 - $51.3 | Aaa |
| b) Number of Passenger Transported (PKM billion) | Aaa | Aaa | Aaa | Aaa |
| **Factor 2 : MARKET POSITION (40%)** | | | | |
| 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 : COST POSITION AND PROFITABILITY (15%)** | | | | |
| a) EBITA Margin | 2.5% | Caa | 3% - 4% | B |
| b) EBITA / Avg. Assets | 1.7% | B | 2% - 2.5% | B |
| **Factor 4 : CAPITAL STRUCTURE (15%)** | | | | |
| a) Debt / Book Capitalisation | 69.9% | A | 70% - 72% | Baa |
| b) Debt / EBITDA | 6.2x | B | 5.8x - 6.1x | Ba |
| **Factor 5 : CASH FLOW AND INTEREST COVERAGE (15%)** | | | | |
| a) FCF / Debt | -5.9% | B | -9% - -5% | B |
| b) RCF / Net Debt | 19.2% | Baa | 13% - 14% | Baa |
| c) (FFO + Interest) / Interest | 7.5x | Aa | 6x - 6.5x | A |
| **Rating:** | | | | |
| a) Indicated Rating from Grid | | A2 | | A2 |
| b) Actual Rating Assigned (BCA) | | a1 | | a1 |
| | | | | |
| Government-Related Issuer | **Factor** | | | |
| a) Baseline Credit Assessment | a1 | | | |
| b) Government Local Currency Rating | Aaa Stable | | | |
| c) Default Dependence | High | | | |
| d) Support | High | | | |
| e) Final Rating Outcome | Aa1 Stable | | | |

(1) All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
(2) As of 6/30/2018(L). Source: Moody's Financial Metrics™
(3) This represents Moody's 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 9

### Peer comparison

| | Deutsche Bahn AG (P)Aa1 Stable | | | SNCF Mobilites Aa3 Stable | | | Ceske drahy, a.s. Baa2 Stable | | |
|---|---|---|---|---|---|---|---|---|---|
| (in US millions) | FYE Dec-16 | FYE Dec-17 | LTM Jun-18 | FYE Dec-16 | FYE Dec-17 | LTM Jun-18 | FYE Dec-16 | FYE Dec-17 | LTM Dec-17 |
| Revenue | $45,535 | $48,985 | $52,343 | $33,766 | $35,965 | $37,366 | $1,362 | $1,460 | $1,460 |
| EBITDA | $5,614 | $6,318 | $6,376 | $3,374 | $4,125 | $3,992 | $394 | $397 | $397 |
| EBITA Margin | 2.7% | 3.0% | 2.5% | 4.0% | 5.4% | 4.3% | 7.7% | 5.9% | 5.9% |
| EBITA / Avg. Assets | 1.8% | 2.1% | 1.7% | 3.1% | 4.2% | 3.1% | 2.8% | 2.2% | 2.2% |
| FFO + Int Exp / Int Exp | 7.6x | 7.9x | 7.5x | 6.2x | 8.0x | 6.8x | 6.2x | 6.6x | 6.6x |
| Total Debt/Capital | 71.7% | 68.8% | 69.9% | 69.0% | 69.7% | 62.6% | 52.5% | 49.3% | 49.3% |
| Debt / EBITDA | 6.4x | 5.7x | 6.2x | 5.9x | 5.4x | 5.7x | 4.4x | 4.3x | 4.3x |
| FCF / Debt | -1.1% | -6.9% | -5.9% | -5.9% | -1.0% | -2.6% | -1.6% | 3.8% | 3.8% |
| RCF / Net Debt | 18.7% | 20.8% | 19.2% | 13.9% | 19.8% | 15.2% | 22.3% | 23.5% | 23.5% |

All figures and ratios calculated using Moody's 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 10

### Moody's-adjusted debt breakdown

**Deutsche Bahn AG**

| (in EUR Millions) | FYE Dec-13 | FYE Dec-14 | FYE Dec-15 | FYE Dec-16 | FYE Dec-17 | LTM Ending Jun-18 |
|---|---|---|---|---|---|---|
| **As Reported Debt** | **19,313.0** | **20,334.0** | **22,428.0** | **22,481.0** | **22,076.0** | **23,468.0** |
| Pensions | 3,562.0 | 4,357.0 | 3,688.0 | 4,522.0 | 3,940.0 | 3,940.0 |
| Operating Leases | 4,452.1 | 4,223.0 | 4,013.7 | 5,037.5 | 5,310.0 | 5,310.0 |
| Securitizations | 0.0 | 0.0 | 144.0 | 323.0 | 375.0 | 375.0 |
| **Moody's-Adjusted Debt** | **27,327.1** | **28,914.0** | **30,273.7** | **32,363.5** | **31,701.0** | **33,093.0** |

*Source: Moody's Financial Metrics™*

Exhibit 11

### Moody's-adjusted EBITDA breakdown

**Deutsche Bahn AG**

| (in EUR Millions) | FYE Dec-13 | FYE Dec-14 | FYE Dec-15 | FYE Dec-16 | FYE Dec-17 | LTM Ending Jun-18 |
|---|---|---|---|---|---|---|
| **As Reported EBITDA** | **5,039.0** | **5,092.0** | **4,387.0** | **4,536.0** | **4,572.0** | **4,341.0** |
| Pensions | -4.0 | -51.0 | -85.0 | -96.0 | 8.0 | 8.0 |
| Operating Leases | 1,112.5 | 1,221.1 | 1,337.9 | 1,419.9 | 1,770.0 | 1,770.0 |
| Interest Expense – Discounting | -52.0 | -87.0 | -51.0 | -50.0 | 0.0 | 0.0 |
| Unusual | -617.0 | -720.0 | -707.0 | -703.0 | -744.0 | -766.0 |
| Non-Standard Adjustments | -3.0 | -8.0 | -22.0 | -33.0 | -14.0 | -8.0 |
| **Moody's-Adjusted EBITDA** | **5,475.5** | **5,447.1** | **4,859.9** | **5,073.9** | **5,592.0** | **5,345.0** |

*Source: Moody's Financial Metrics™*

## Ratings

Exhibit 12

| Category | Moody's Rating |
|---|---|
| **DEUTSCHE BAHN AG** | |
| Outlook | Stable |
| 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 | Stable |
| Bkd Senior Unsecured | Aa1 |
| 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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