

CREDIT OPINION

24 September 2025

Update



Send Your Feedback

RATINGS

Hidrovias do Brasil S.A.

Domicile	Sao Paulo, Brazil
Long Term Rating	Ba3
Type	LT Corporate Family Ratings
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

Erick Rodrigues +55.11.3043.7345
VP-Senior Analyst
erick.rodrigues@moody's.com

Marcos Schmidt +55.11.3043.7310
Associate Managing Director
marcos.schmidt@moody's.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Hidrovias do Brasil S.A.

Update following upgrade to Ba3, outlook stable

Summary

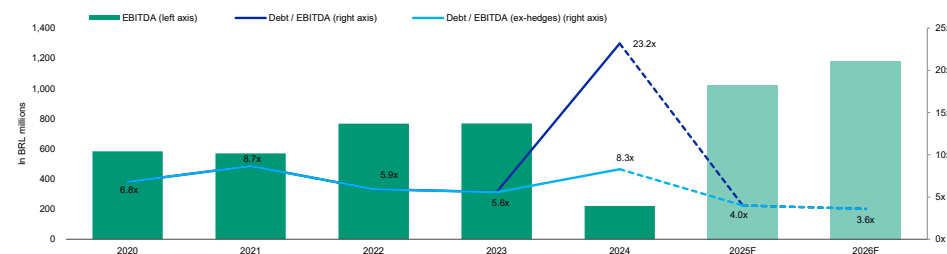
On August 4, 2025, we upgraded [Hidrovias do Brasil S.A.](#)'s ratings to Ba3 and changed the outlook to stable from ratings under review. This rating action concludes the review for upgrade that was initiated on May 20, 2025.

The Ba3 rating incorporates limited support from [Ultrapar Participações S.A.](#) (Ba1 positive) to Hidrovias after the recent liability management executed by the company had 40% of its capital structure guaranteed by Ultrapar. The rating may be upgraded by one or more notches to approach the ratings of Ultrapar if the formal guarantees were to comprise a larger parcel of Hidrovias' capital structure. The ratings also reflect Hidrovias' solid business model, with about 80% of its revenue coming from long-term take-or-pay agreements with strong off-takers, although low river drafts may still expose the company to reduced revenue when navigability is limited. The positive outlook for agricultural production and waterborne transportation in [Brazil](#) (Ba1 stable) and [Paraguay](#) (Baa3 stable), and the strategic location of Hidrovias' operations also support its ratings.

The ratings are constrained by the company's high gross leverage, little business diversification and small size compared with that of rated peers. The high degree of product and geographic concentration exposes the company to adverse weather conditions that periodically limit agricultural production and river navigability. As an inland operator, Hidrovias is exposed to climate-related risks such as low rainfall and river water levels, which hurt volumes and may increase costs. Hidrovias also has a high degree of client concentration, although the clients' good credit quality and history of contract compliance mitigate related risks.

Exhibit 1

Hidrovias' gross leverage will return to a normalized level by Q4 2025



All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

Credit strengths

- » Ultrapar's control, providing both explicit and implicit support to Hidrovias
- » Positive outlook for agricultural production and waterborne transportation in Brazil and Paraguay
- » Strong business model, with long-term contracts and take-or-pay agreements

Credit challenges

- » Significant volatility in results due to substantial dependence on river draft conditions
- » High degree of client, product and geographic concentration
- » Small size compared with that of global peers
- » High gross leverage and delay in leverage reduction over the last few years

Rating outlook

The stable outlook incorporates our expectation that Ultrapar will continue to strengthen its influence over and its support to Hidrovias. We expect credit metrics to remain adequate, with operations performing in line with the terms and conditions established by the existing take-or-pay agreements, and the company to prudently manage its dividend distribution and future investments to preserve its good liquidity profile.

Factors that could lead to an upgrade

- » An upgrade of Hidrovias' ratings could occur if the company is able to reduce leverage sustainably while maintaining its current business model and profitability levels and generating stable cash flow on a sustained basis.
- » Quantitatively, a rating upgrade would require the company to maintain adjusted leverage (measured as debt/EBITDA) sustainably below 4.0x and interest coverage (measured by adjusted funds from operations [FFO] + interest/interest) above 3.5x.
- » A rating upgrade would also require the maintenance of a strong liquidity profile.

Factors that could lead to a downgrade

- » The ratings could be downgraded if Hidrovias' operating performance remains weak, such that leverage remains high and liquidity deteriorates without prospects for improvement. A deterioration in the company's business profile because of the loss of any existing take-or-pay agreement without a financial compensation or further debt-financed expansion into the spot market would also lead to a rating downgrade.
- » Quantitatively, a downgrade could occur if leverage remains sustainably above 5.0x and interest coverage below 2.0x.
- » A deterioration in the company's liquidity profile, stemming from large shareholder distributions or more aggressive financial policies, would also result in a downgrade of the ratings.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody.com> for the most updated credit rating action information and rating history.

Key indicators

Exhibit 2

Hidrovias do Brasil S.A.

	2020	2021	2022	2023	2024	Moody's 12-18 Month Forward View
(in \$ millions)						
Size of Fleet (Number of Ships)	26	29	33	33	33	31
EBIT Margin	22.4%	18.6%	21.4%	21.9%	-16.0%	28.0%
Debt / EBITDA	6.8x	8.7x	5.9x	5.6x	25.4x	4.0x
RCF / Net Debt	11.4%	1.3%	6.8%	13.6%	7.8%	13.0%
(FFO + Interest Expense) / Interest Expense	2.4x	1.2x	1.6x	2.6x	1.9x	2.2x

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Source: Moody's Financial Metrics™ and Moody's Ratings forecasts

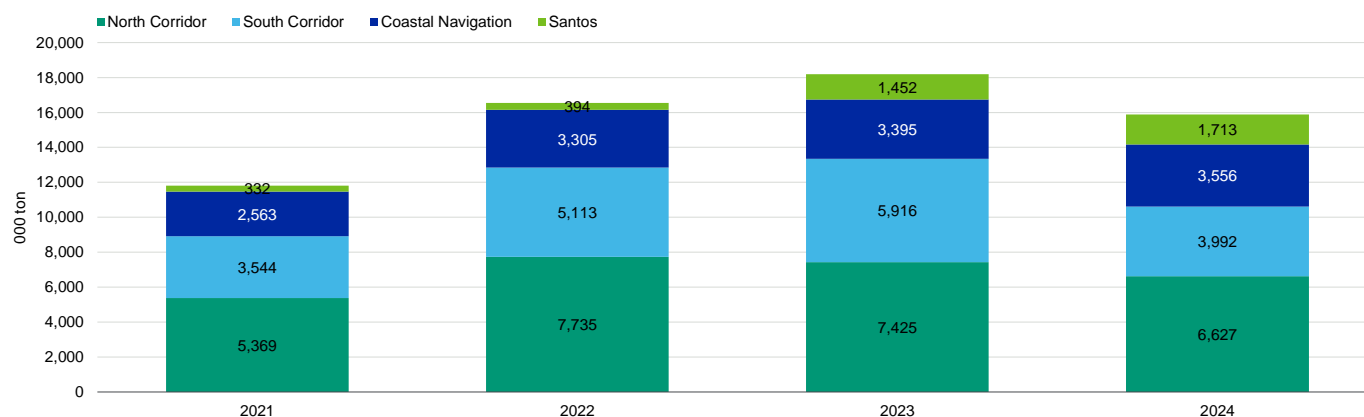
Profile

Headquartered in Sao Paulo, Hidrovias do Brasil S.A. is South America's largest independent provider of integrated logistics focused on waterway transportation. The company's operations include shipping, transshipment, storage and port services for dry bulk cargo, including grains, iron ore, bauxite, fertilizers and pulp in the Paraná-Paraguay waterway and the Amazon river systems. As of June 2025, the company generated BRL1.6 billion (or around \$295 million) in revenue, with a Moody's-adjusted EBITDA margin of 35.4%, mainly from shipping activities and other logistics services.

The main cargoes in the North Corridor are soybean, corn and fertilizers. Hidrovias operates in the Trombetas-Tapajós-Amazonas river system between the Miritituba solid bulk cargo transshipment station and a port terminal of Vila do Conde. The main cargoes in the South Corridor are iron ore, soybean, corn, fertilizers and cellulose. Hidrovias is part of three joint ventures: TGM (grain port operations in Montevideo, Uruguay), Limday (cellulose transportation from Fray Bentos to Nueva Palmira, Uruguay) and Baden (solid bulk port operations in Paraguay). Hidrovias offers inland navigation services, and loading and unloading in ports, terminals, transshipment stations, and waterways in Brazil, Paraguay, Uruguay and Argentina. Santos operation consists of a port area intended for the movement and storage of mainly fertilizers and salts in Santos, Sao Paulo.

Exhibit 3

Evolution of the volume transported by Hidrovias



Sources: Hidrovias and Moody's Ratings

Detailed credit considerations

Ratings incorporate Ultrapar ownership and support

On February 28, 2025, Hidrovias launched a capital increase of up to BRL1.2 billion. The capital increase was fully subscribed and approved by Hidrovias' board of directors on May 8. At the conclusion of the transaction, Ultrapar indicated that its subsidiary Ultrapar Logística Ltda had subscribed to more than 682 million shares, reaching a 50.15% stake, thereby acquiring the control of Hidrovias.

Along with the acquisition of control by Ultrapar, Hidrovias proposed an issuance of debentures to be guaranteed by Ultrapar. The proceeds of this issuance targeted the tender of Hidrovias' 2031 notes. At the conclusion of the tender, Hidrovias had received valid offers totaling \$178.6 million, representing 64.2% of the outstanding notes, and issued debentures of BRL1.38 billion. We expect around 40% of Hidrovias' capital structure to be guaranteed by Ultrapar ([Hidrovias do Brasil S.A.: Update following changes in direction of review to upgrade](#)).

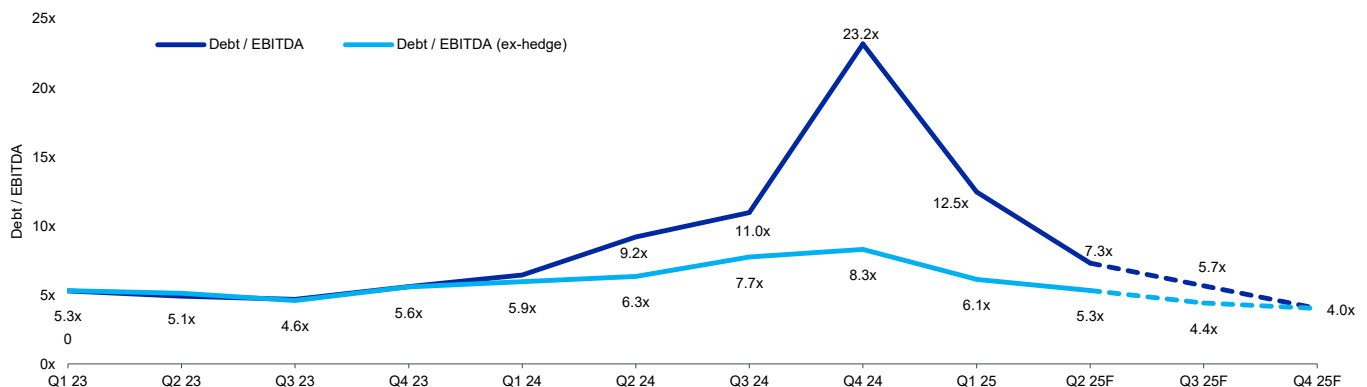
With the proceeds from the capital increase, Hidrovias eliminated a BRL500 million liability relating to Advance for Future Capital Increase provided by Ultrapar Logística, amortized BRL400 million in debentures raised in January 2025 and reinforced its cash balance. Additionally, Hidrovias sold its Coastal Navigation business to Companhia de Navegação Norsul for BRL715 million (with BRL195 million referring to the equity value and BRL521 million of debt balance). This business involves the transportation of bauxite from Trombetas to the Alunorte aluminum plant.

Extremely low river draft leads to lower volumes, increased costs and reduced EBITDA for full-year 2024, driving gross leverage up

Hidrovias' Moody's-adjusted gross leverage will reach 4.0x by December 2025 and 3.6x by December 2026, compared with 7.2x as of the 12 months that ended March 2025 (or 5.3x excluding non-cash effects of hedges). We expect the company's EBITDA to reach BRL1 billion in 2025, compared with BRL202 million in 2024. This improvement represents a gradual return to a normalized level of operations following severe navigability restrictions in the rivers covering both the South and North corridors. The sharp reduction in EBITDA in 2024 was caused by a 55% reduction in iron ore volumes in the South Corridor and a 13% drop in grain volumes in the North Corridor.

Exhibit 4

Quarterly evolution of last-12-month gross leverage Total debt/EBITDA



All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer

Sources: Hidrovias, Moody's Financial Metrics™ and Moody's Ratings forecasts

The river draft in the South Corridor remained below the normal level throughout 2024, causing a 55% decline in iron ore shipments and an 80% drop in the segment EBITDA in 2024. In Q2 2025, iron ore volumes reached 1,020,000 tons from 620,000 tons in Q2 2024, with the EBITDA margin for the South Corridor reaching 49% from 36% over the same period. In Q2 2025, volumes in the North Corridor were up 7% year despite the lower shipments of fertilizers and flattish volume of grain shipments.

In the South and North corridors, river levels improved in the first half of 2025. In the Paraguay river (Ladario rule), the river level entered normality, exceeding 100 centimeters (cm), recovering from as low as -69 cm in October 2024, the lowest level in over 115 years of recorded series. In the North system (Itaituba rule), the river level returned to normality in November 2024 after experiencing a significant negative anomaly.

In the coming years actions to prevent, or reduce the severity, of the negative impacts of low river drafts to navigability conditions will be put in place. Since 2024, the local government of Paraguay has been implementing a series of measures to remove bottleneck points on the Paraguay river and in the North rivers to improve navigability. Going forward, the Brazilian government has indicated

its intent focus on the development of managed riverway concessions. It has indicated the possibility of developing five riverway concessions in river systems Tiete-Paraná (Southeast and Mid-west), Madeira (Amazon), Tapajós (Amazon), São Francisco (Northeast), and Paraguai River (Mid-west). On February 2025, National Waterway Transportation Agency (ANTAQ) made a public hearing to discuss the documentation and model of the Paraguai River Riverway, in the state of Mato Grosso do Sul. The proposal is that in the first five years of the concession, services will be carried out including dredging, rock removal, proper marking and signaling, construction of an industrial warehouse, acquisition of a dredger, hydrological monitoring and hydrographic surveys, improvements in crossings and convoy separation points, implementation of waterway traffic management systems, including vessel traffic service and river information service, as well as river intelligence services.

Solid business model, supported by long-term take-or-pay agreements and a high-quality asset base

Hidrovias is an integrated build-to-suit logistics provider and has a stronger business model than that of its peers we rate because of the existence of take-or-pay agreements. The existence of such agreements results in predictable cash flow, high capacity utilization rates and high operating margins for the company. These agreements (Exhibit 5) also provide a certain degree of visibility into Hidrovias' future performance, but, as seen in the last two years, results may still be hurt by low river drafts, which limit navigability and the ability of Hidrovias to transport cargoes.

Exhibit 5

Take-or-pay contracts cover 80% of the company's revenue

	2025	2026	2027	2028	2029	2030	2031	2032	2033+
LHG Mining Corumba'									
Sodrugestvo South									
Sodrugestvo North									
COFCO North									

Sources: Hidrovias and Moody's Ratings

In addition, the strong legal structure of the existing contracts, illustrated by their compliance with terms and conditions even under adverse market conditions; the company's adequate pricing structure, comprising competitive flat rates that provide an adequate return on invested capital, and variable rates adjusted for fuel, labor and inflation expenses; and the current strong credit profiles of some of Hidrovias' counterparties — LHG Mining Corumba which is guaranteed by [Vale S.A.](#) (Baa2 stable), COFCO Corporation, Sodrugestvo and [Norsk Hydro ASA](#) (Baa2 stable) — reduce the risks associated with a potential termination or renegotiation of these contracts.

The positive outlook for agricultural production and waterborne transportation in Brazil and Paraguay supports operations in the long term

The demand for waterborne transportation of dry bulk cargo will remain robust in the regions in which Hidrovias operates because of the lower costs of this mode than truck and rail transportation, the lack of infrastructure alternatives and increasing agricultural production. Brazil is the largest exporter of coarse grains in the world, and we expect the country's crop output to continue to grow, mainly in the state of Mato Grosso, driven by technological improvements, higher agricultural yields and increased planted area. Furthermore, Paraguay is the sixth-largest producer and third-largest exporter of soybeans globally, and should also benefit from strong outputs in the long term because of the favorable soil and climate conditions.

In this context, the strategic location of Hidrovias' operations; its competitive position as the only independent water transportation provider on its route in the north of Brazil and the largest independent provider in the Hidrovias river system by average capacity; and the industry's high entry barriers related to high setup costs and the complex regulatory framework will allow the company to benefit from demand growth.

High degree of client, product and geographic concentration is mitigated by long-term take-or-pay agreements

About 76% of Hidrovias' volume in the North Corridor comes from the transportation of grains (mainly soy and corn), with particularly high reliance on the Miritituba-Vila do Conde route, which exposes the company to adverse weather conditions such as droughts or floods, which limit agricultural production and river navigability.

Hidrovias is also exposed to risks related to changing regulations, and the inability to renew existing operational and environmental licenses. Take-or-pay agreements that cover potential tariff increases and force majeure events with minimum volumes only mitigate these risks, as Hidrovias remains liable for operational issues.

Although Hidrovias has a high degree of client concentration, with its top three consumers accounting for about 56% of its total net revenue, the good credit quality of these companies supports future compliance with the take-or-pay agreements. Still, a sharp deterioration in the credit quality of any of Hidrovias' clients or the loss of any existing contracts could significantly reduce its cash flow and weaken its credit profile. On April 6, 2022, Vale announced the sale of its mines in Corumbá (Mineração Corumbense Reunida S.A. [MCR]) to J&F Mineração Ltda., controlled by J&F Investimentos S.A. Vale International remains the guarantor of Hidrovias' contracts to transport iron ore from Corumbá, and the sale of MCR has not led to any changes to the contract.

Finally, Hidrovias' small scale of operations compared with that of its rated peers in the global shipping industry, in terms of fleet size and revenue, makes it more susceptible to regional macroeconomic conditions and the event risks typical in shipping.

ESG considerations

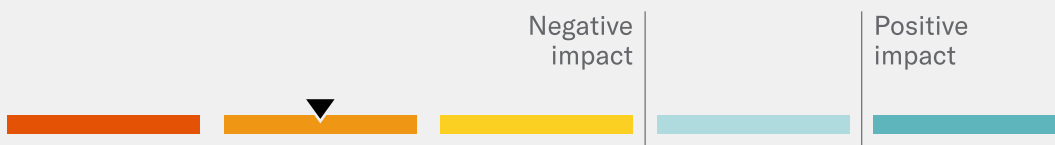
Hidrovias do Brasil S.A.'s ESG credit impact score is CIS-4

Exhibit 6

ESG credit impact score

CIS-4

Score



Negative
impact

Positive
impact

ESG considerations have a discernible impact on the current rating, which is lower than it would have been if ESG risks did not exist. The negative impact of ESG considerations on the rating is higher than for an issuer scored CIS-3.

Source: Moody's Ratings

Credit Impact Score for Hidrovias reflects its environmental risk exposure, including the carbon transition risk facing the shipping sector and the company's climate-related risks related to its inland operations. Social risks include health & safety concerns and societal & demographic trends. Governance issues reflect the company's high-risk tolerance in times of growth and persistently high leverage because volatile EBITDA generation caused by lower river drafts.

Exhibit 7

ESG issuer profile scores



Source: Moody's Ratings

Environmental

Hidrovias environmental risks exposure is primarily driven by sector-wide and regulatory efforts to reduce emissions, a process that is at an early stage. Waste & pollution related risks, with exhaust regulations being the biggest drivers of regulatory tightening for the sector, as well as water management such as marine ecology protection add to environmental risks. As an inland operator the company is also exposed to climate-related risks such as low rainfall and river water levels causing reduced volumes or higher cost.

Social

Hidrovias exposure to social risks is primarily driven by health & safety as well as demographic & societal trends. Health & safety reflects risks associated with the handling of heavy equipment, transportation of flammable or toxic materials, but also piracy or criminal activities. Societal & demographic trends include societal pressure to reduce emissions, but the long-time horizon currently limits the risks. The industry transports a wide variety of goods and materials and some companies may have to adapt.

Governance

Hidrovias' governance score reflects the company's high-risk tolerance in times of growth and persistently high leverage over the last few years. Hidrovias is a public company listed in the São Paulo stock exchange and complies with corporate governance requirements applicable to listed companies in Brazil. Since 2024 Ultrapar has overtaken Pátria as Hidrovias largest shareholder. After the capital increase executed in May 2025, Ultrapar became the controlling shareholder of Hidrovias.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order 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.

Liquidity analysis

Hidrovias has an adequate liquidity profile. As of June 2025, the cash balance was BRL1.1 billion. The debt maturing in 2025-27 totals about BRL600 million.

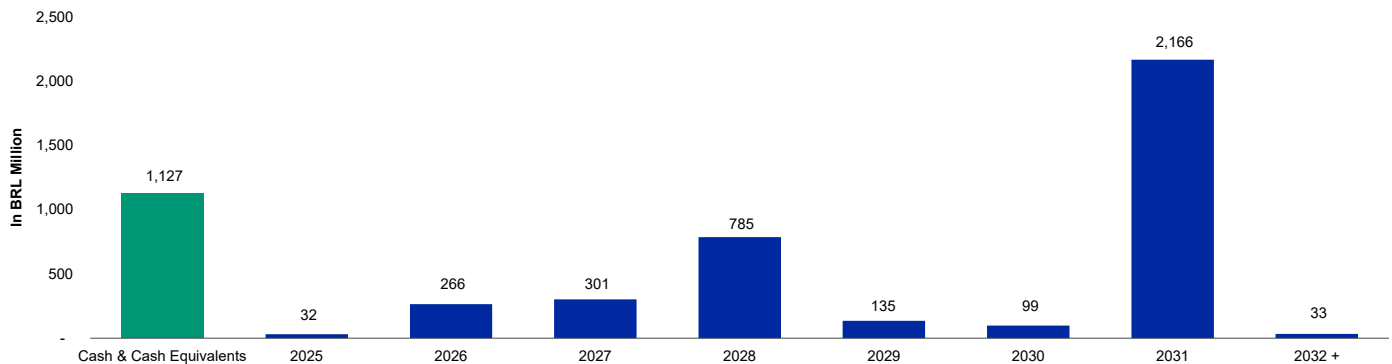
Liquidity risk for Hidrovias decreased substantially with the execution of the BRL1.2 billion capital increase. The proceeds were used to eliminate the Advance for Future Capital Increase provided by Ultrapar Logística, to amortize BRL400 million in debentures raised in January 2025 and to reinforce the company's cash balance. Additionally, Hidrovias announced the sale its Coastal Navigation business for BRL715 million, considering BRL195 million in equity value and BRL521 million in debt, which will be carved out along with the sale of the assets. The transaction is currently waiting for CADE's (Brazilian anti-trust authority) approval.

Hidrovias' bylaws establish a mandatory dividend payout of 1% of the company's net income, but dividend payments could increase up to the limit allowed by the 2031 notes' indentures (50% of net income). The notes' indentures contain incurrence covenants setting consolidated net debt/EBITDA below 3.5x. We positively view the existing incurrence covenants, which set maximum reported net leverage, because the covenants limit the risks related to sizable debt-funded expansion plans and large dividend payments because of basket restrictions.

Exhibit 8

Liquidity position is supported by the capital increase; Debt Amortization Schedule as of June 2025

BRL million



Sources: Hidrovias and Moody's Ratings

Methodology and scorecard

Hidrovias' scorecard-indicated outcome under our Shipping rating methodology maps to Ba3, in line with the current assigned rating, as of the 12 months that ended on June 2025. Our 12-18-month forward view maps to a Ba3 rating, also in line with the current rating. Hidrovias' rating benefits from the control by Ultrapar, with its explicit guarantee and implicit support. Additionally, in 2024 metrics have been depressed because of weak operating performance caused by severe navigability restrictions and lower transported volumes.

Exhibit 9

Rating factors

Hidrovias do Brasil S.A.

HIDROVIAS DO BRASIL S.A.

Shipping Scorecard	Current LTM June 30 2025		12-18 Month Forward View As of 2025	
	Measure	Score	Measure	Score
Factor 1: Scale (10%)				
a) Size of fleet (number of ships)	33	Caa	31	Caa
Factor 2: Business Profile (20%)				
a) Business Profile	Ba	Ba	Ba	Ba
Factor 3: Profitability And Efficiency (5%)				
a) EBIT Margin	8.6%	B	27% - 29%	A
Factor 4: Leverage And Coverage (45%)				
a) Debt / EBITDA	7.3x	Caa	4.0x - 3.6x	Ba
b) RCF / Net Debt	24.2%	Ba	10% - 15%	B
c) (FFO + Interest Expense) / Interest Expense	3.2x	B	2.0x - 2.5x	B
d) Unencumbered Assets	A	A	A	A
Factor 5: Financial Policy (20%)				
a) Financial Policy	B	B	B	B
Rating:				
a) Scorecard-Indicated Outcome		Ba3		Ba3
b) Actual Rating Assigned		-		Ba3

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Moody's forecasts are Moody's opinion and do not represent the views of the issuer.

Source: Moody's Financial Metrics™ and Moody's Ratings forecasts

Appendix

Exhibit 10

Peer comparison

Hidrovias do Brasil S.A.

(in US millions)	Hidrovias do Brasil S.A.			Kirby Corporation			Global Ship Lease, Inc.		
	Ba3 Stable			Baa2 Stable			Ba2 Stable		
	FYE Dec-23	FYE Dec-24	LTM Jun-25	FYE Dec-23	FYE Dec-24	LTM Mar-25	FYE Dec-23	FYE Dec-24	LTM Jun-25
Revenue	\$386	\$252	\$281	\$3,092	\$3,266	\$3,244	\$675	\$711	\$739
EBITDA	\$154	\$38	\$100	\$596	\$744	\$755	\$460	\$494	\$516
Total Debt	\$884	\$829	\$764	\$1,199	\$1,062	\$1,284	\$812	\$684	\$762
Size of fleet (# ships)	33	33	33	311	309	326	68	71	69
EBIT Margin	21.9%	-9.5%	8.6%	11.3%	14.3%	14.5%	54.6%	55.5%	54.8%
ROA(NPATBUI)/Avg Assets	0.8%	-8.4%	-4.2%	3.9%	5.6%	5.5%	15.1%	15.6%	15.0%
FFO + Int Exp / Int Exp	2.6x	1.9x	3.2x	9.9x	12.5x	13.2x	9.1x	11.0x	10.6x
Debt / EBITDA	5.6x	25.4x	7.3x	2.0x	1.4x	1.7x	1.8x	1.4x	1.5x
RCF / Net Debt	13.6%	7.8%	24.2%	46.4%	67.6%	54.8%	46.3%	65.2%	96.9%

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

RUR* = Ratings under review, where UPG = for upgrade.

LTM = Last 12 months.

Source: Moody's Financial Metrics™

Exhibit 11

Moody's-adjusted debt breakdown

Hidrovias do Brasil S.A.

(in \$ millions)	2020	2021	2022	2023	2024
As reported debt	762.7	886.4	861.8	884.5	828.7
Cash & Cash Equivalents	(198.5)	(118.3)	(139.1)	(167.6)	(160.0)
Moody's-adjusted net debt	564.2	768.1	722.7	716.9	668.7

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Source: Moody's Financial Metrics™

Exhibit 12

Moody's-adjusted EBITDA breakdown

Hidrovias do Brasil S.A.

(in \$ millions)	2020	2021	2022	2023	2024
As reported EBITDA	76.9	74.2	173.3	144.0	37.6
Unusual Items	37.4	31.5	(24.5)	9.9	0.0
Moody's-adjusted EBITDA	114.3	105.8	148.7	153.9	37.6

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology.

Source: Moody's Financial Metrics™

Ratings

Exhibit 13

Category	Moody's Rating
HIDROVIAS DO BRASIL S.A.	
Outlook	Stable
Corporate Family Rating	Ba3
HIDROVIAS INTERNATIONAL FINANCE S.A.R.L	
Outlook	Stable
Bkd Senior Unsecured	Ba3

Source: Moody's Ratings

© 2025 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at ir.moody.com under the heading "Investor Relations — Corporate Governance — Charter and Governance Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Clasificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs and NZAs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

REPORT NUMBER 1453361

Contacts

Erick Rodrigues
VP-Senior Analyst
erick.rodrigues@moodys.com

+55.11.3043.7345

Vitoria Flosi
Ratings Associate
vitoria.flosi@moodys.com

+55.11.3956.8713

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454