

CREDIT OPINION

14 July 2025



Contacts

Grayson Nichols +1.214.979.6851 VP-Senior Analyst

grayson.nichols@moodys.com

Adebola Kushimo +1.214.979.6847
Associate Managing Director
adebola.kushimo@moodys.com

CLIENT SERVICES

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

Harris County, TX

Update to credit analysis

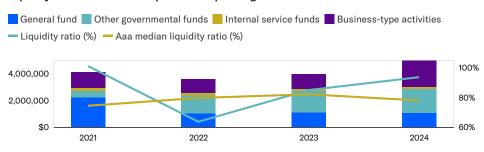
Summary

Harris County, TX's (Aaa stable) credit profile reflects a superior economy anchored by the City of Houston, that continues its steady post pandemic recovery with positive employment performance, driven by the desirability of the area. The economic output with GDP of around \$700 billion is significant, and will continue to dominate in its contribution to the State of Texas' economy, currently estimated at 25%. Economic output has averaged 3.6% over the last four years and its pace of growth is in line with the nation, per the Bureau of Economic Analysis.

Desirability for the area and strong performance in its main sectors will continue to drive tax base growth over the next 18 – 24 months, improving an already high full value per capita; estimated at \$139,000. Even still, resident income of just under 93%, remains lower than peers. The profile also considers the strength of the experienced management team that will continue to sustain the county's long history of strong operating performance that have driven robust reserves. Reserves are on track to remain stable at fiscal year end 2025 (Sept. 30 year end) as revenues have surpassed expenditures by about \$760 million as of the county's April 2025 monthly financial report. Reserves closed at about 38.5% of revenue at fiscal year-end 2024, a figure that understates the county's fiscal strength because of restrictions that tie funds to certain costs.

Exhibit 1

Liquidity remains solid in comparison to operating revenue



Source: Harris (County of) TX's financial statements and Moody's Ratings

The county's long-term leverage will remain a moderate 270% of operating revenue, and benefit from robust revenue growth driven by ongoing development. The area remains exposed to weather events which creates the need for significant flood control initiatives. As such, additional investment will be necessary to continue to improve the area's resiliency to future storms.

Credit strengths

» Regionally and globally important economy

- » Experienced management team drives solid and consistent operating results
- » Ample reserves

Credit challenges

- » Area has high exposure to environmental events especially hurricanes and flooding
- » Sizable debt issuance expected in the next few years, particularly for flood control projects

Rating outlook

The stable outlook reflects the county's important and expansive economy which will sustain its tax base and support property taxes, the largest source of operating revenue. This coupled with prudent fiscal practices will allow its ample reserves to remain stable and allow leverage and fixed costs to remain affordable over the next two to three years.

Factors that could lead to an upgrade

» Not applicable

Factors that could lead to a downgrade

- » Uncontrolled expenditures that significantly surpass revenues pushing reserves to well below 35%
- » Economic weakness such as a significant slowing of GDP relative to the nation and meaningful tax base declines which dampen property tax receipts
- » Additional debt absent offsetting revenue growth which increases leverage beyond 350% of revenue

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.moodys.com for the most updated credit rating action information and rating history.

Key indicators

Exhibit 2
Harris (County of) TX

	2021	2022	2023	2024	Aaa Medians
Economy		,		 ,	
Resident income ratio (%)	95.6%	95.3%	92.9%	N/A	121.1%
Full Value (\$000)	\$504,850,540	\$511,186,361	\$578,808,817	\$643,583,023	\$60,715,203
Population	4,697,957	4,726,177	4,758,579	N/A	413,001
Full value per capita (\$)	\$107,462	\$108,161	\$121,635	N/A	\$150,347
Annual Growth in Real GDP	4.8%	4.3%	5.4%	N/A	2.2%
Financial Performance		•	•		
Revenue (\$000)	\$4,059,598	\$5,626,633	\$4,674,201	\$5,306,676	\$556,827
Available fund balance (\$000)	\$2,570,402	\$1,456,069	\$1,612,989	\$2,037,426	\$251,309
Net unrestricted cash (\$000)	\$4,099,150	\$3,574,670	\$3,967,226	\$4,963,031	\$420,472
Available fund balance ratio (%)	63.3%	25.9%	34.5%	38.4%	47.7%
Liquidity ratio (%)	101.0%	63.5%	84.9%	93.5%	79.5%
Leverage					
Debt (\$000)	\$5,218,249	\$5,448,574	\$5,914,975	\$7,285,759	\$425,678
Adjusted net pension liabilities (\$000)	\$7,609,189	\$6,320,939	\$3,814,127	\$3,936,432	\$492,825
Adjusted net OPEB liabilities (\$000)	\$3,158,486	\$2,451,811	\$2,400,221	\$3,126,015	\$62,594
Other long-term liabilities (\$000)	\$56,814	\$77,410	\$69,117	\$82,389	\$27,845
Long-term liabilities ratio (%)	395.2%	254.1%	261.0%	271.9%	178.9%
Fixed costs					
Implied debt service (\$000)	\$359,889	\$366,007	\$380,527	\$410,888	\$27,654
Pension tread water contribution (\$000)	\$117,689	\$164,080	\$91,704	\$155,394	\$10,470
OPEB contributions (\$000)	\$61,703	\$107,967	\$73,177	\$79,084	\$3,449
Implied cost of other long-term liabilities (\$000)	\$4,072	\$3,985	\$5,406	\$4,801	\$1,961
Fixed-costs ratio (%)	13.4%	11.4%	11.8%	12.3%	7.5%

For definitions of the metrics in the table above please refer to the <u>US Cities and Counties Methodology</u> or see the Glossary in the Appendix below. Metrics represented as N/A indicate the data were not available at the time of publication. The medians come from our most recently published <u>US Cities and Counties Median Report</u>.

The real GDP annual growth metric cited above is for the Houston-The Woodlands-Sugar Land, TX Metropolitan Statistical Area. Sources: US Census Bureau, Harris (County of) TX's financial statements and Moody's Ratings, US Bureau of Economic Analysis

Profile

Harris County, home to the City of Houston (Aa3 stable), is the third most populous county in the nation with a total population of over 4.5 million people. The economy is driven by energy and resources, healthcare and life sciences, logistics and transportation and tourism. The county's total operations include governmental and business type activities which is largely dominated by the county's toll road.

Detailed credit considerations

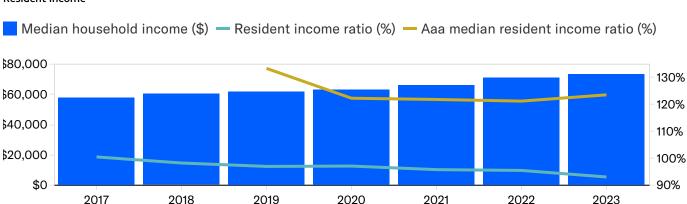
Economy: massive globally important economy, economic trends for Houston are in line with large city peers

This diversity has served as a catalyst to boost the economy because it is an attractive option for an array of employers while at the same time remaining a draw for employment prospects, ultimately contributing to population growth. As such, the county's unemployment levels have strengthened, reaching 4% as of April 2025, well under the pandemic high of 9% reported in 2020 per the Bureau of Labor Statistics. Demand for the area has sustained construction activity as shown by a well over 30% increase in full value in the past five years through fiscal 2025, keeping the full value per capita solid at almost \$139,000.

Real property accounts for almost 90% of the county's tax base with the rest from personal property. Occupancy rates in the Houston area, the largest city in the county, remained relatively unchanged through and post the pandemic significantly reducing the risk that a high concentration of workers on a hybrid/work from home schedule will disrupt property tax receipts, the county's largest revenue source.

The area's economic output remains substantial with real GDP exceeding \$500 billion in 2024, a figure that is in line with peers with a pace of growth comparable to the nation according to the Bureau of Economic Analysis.

Exhibit 3
Resident Income



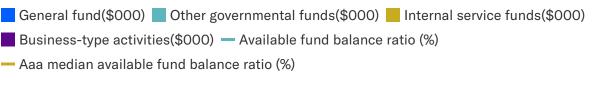
Source: Moody's Ratings

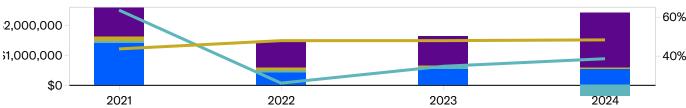
Financial operations: financial history has long record of strong operating performance

The county's finances will remain favorable for the next 18 to 24 months supported by a management team with a long history of good fiscal practices that continue to drive strong operating performance. As of the April 2025 monthly reporting, revenues surpassed expenditures by over \$673 million across governmental funds. While this performance is impressive, expected costs will reduce the positive variance but year-end results will likely keep reserves relatively stable compared with the prior year.

As of fiscal 2024, the Moody's adjusted available fund balance and business activities' net current assets topped \$2 billion, 38.4% of revenue. This number significantly understates the county's reserves because it excludes a large portion of the county's governmental funds which are classified as restricted because they are derived from special revenue for a specific purpose, grants or local property taxes for roads and bridges. Nevertheless, these funds are available for general county purposes. When considering the restricted funds, the total resources are almost two times stronger.

Exhibit 4
Fund Balance





Source: Moody's Ratings

Liquidity

The county's liquidity remains robust providing significant buffer to absorb any unforeseen challenges. As of the April 2025 monthly financial report, cash and investments across all governmental funds was over \$3 billion. There is no of borrowing to meet cash flow needs, consistent with the county's history over the prior decade.

Leverage: leverage should remain moderate despite expected debt issuance

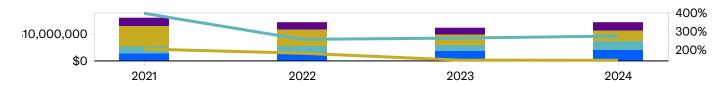
Harris County's leverage will remain moderate over the next several years because growing property tax revenue will absorb needed investment in infrastructure and other needs to serve its populace. Long term liabilities reached about 272% of revenue in fiscal 2024 and these numbers are relatively unchanged including the Series 2025 issuance. Most of the liabilities are derived from governmental activities and more than 50% is attributed to debt.

As of the most recent capital improvement plan, the county has a total of about \$8.8 billion in capital needs slated for the next five years. Over \$5 billion will address flood control needs and another \$3.8 billion will be used for transportation. The balance will address a variety of other needs that range from justice and safety to economic opportunity and housing. Funding will come from a variety of sources including the toll road authority and property taxes even as the county will benefit from partners. Current authorized unissued debt is about \$1.6 billion.

Exhibit 5
Total Primary Government - Long Term Liabilities



- Adjusted net pension liabilities(\$000) Adjusted net other post-employment liabilities(\$000)
- Other long-term liabilities(\$000) Long-term liabilities ratio (%)
- Aaa median long-term liabilities ratio (%)



Source: Moody's Ratings

Hotel occupancy debt

The county's hotel occupancy tax collection trends have been favorable and fiscal year 2024 collections provided very strong coverage of nearly 17 times maximum annual debt service. The county's HOT collections experienced significant volatility during the pandemic, in which pledged revenues declined by over 40% in fiscal 2021, but surged and outpaced pre-pandemic levels in fiscal 2023. HOT collections have grown favorably at an average of roughly 4.6% annually over the past 10 years through fiscal year-end 2024 on an accrual basis, with similar growth in fiscal 2024 which is expected to flatten out in fiscal 2025.

Debt structure

All of the county's general obligation debt is fixed rate with final maturity scheduled for 2054.

The county's debt portfolio includes a \$2.1 billion commercial paper (CP) program (about \$142.2 million outstanding as of fiscal year end 2024 excluding the program secured by toll revenue, making up about 4% of the county's total debt. Commercial paper is used for capital purposes, in anticipation of periodic long-term bond issues. External liquidity for the program is provided by several banks with staggered expiration dates; all have short term ratings of P-1.

Pensions and OPEB

The county has substantial pension and other post-employment benefits (OPEB) liabilities. However, contributions have been strong and puts the county on track to pay down its liabilities over time, on a reported basis. Notably, the county's high 7.6% discount rate makes it vulnerable to higher contributions should the market confront lower interest rates. Even still, contributions will likely remain a manageable portion of the county's debt. Adjusted fixed costs including implied debt service, pension tread water and OPEB was moderate at under 13% of revenue in fiscal 2024.

ESG considerations

Harris (County of) TX's ESG credit impact score is CIS-2

Exhibit 6

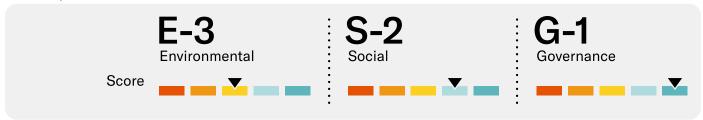
ESG credit impact score



Source: Moody's Ratings

Harris County's ESG Credit Impact Score is **CIS-2** incorporates exposure to environmental risks that is mitigated in part by the county's extensive infrastructure development and planning, low exposure to social risks and a very strong governance profile. These factors as well as an exceptionally strong balance sheet and external financial and capital investment from higher levels of government to combat environmental challenges support the county's rating, resilience and capacity to respond to shocks.

Exhibit 7
ESG issuer profile scores



Source: Moody's Ratings

Environmental

Harris County's overall E issuer profile score is **E-3** reflecting some exposure to environmental risks particularly physical climate risks, and carbon transition, even though risks across all other categories including water management, waste and pollution and natural capital is low. The county has developed extensive flood control infrastructure and undergoes multiyear capital planning for future infrastructure development. These practices supported by voter approved funding and policies that govern building codes and development will increase the county's resiliency. Absent these mitigating initiatives or if the county fails to continue pursuing similar initiatives, the E IPS score will weaken. Exposure to carbon transition risks is inherent in the area's role as a global energy leader. Sustained demand for green alternatives will weigh on the county but its effects will play out over a much longer period.

Social

The county's S issuer profile score is **S-2** reflecting positive exposure to demographics supported by a young populace and high net migration and low housing exposure. Exposure to risks from labor and income, education, health and safety and access to basic services are low.

Governance

Harris County's strong governance profile is captured in a G issuer profile score of **G-1**. This reflects a strong institutional framework and policy credibility and effectiveness demonstrated by solid budget management evidenced in budget outcomes that are significantly favorable compared to expectations. The county's commitment to transparency and disclosure is also evident in monthly

reporting of key financial information. The county also produces long range financial forecasts and capital planning that encompass population projections to guide a forward planning view for its resources.

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.

Rating methodology and scorecard factors

The US Cities and Counties Methodology includes a scorecard, which summarizes the rating factors generally most important to city and county credit profiles. Because the scorecard is a summary, and may not include every consideration in the credit analysis for a specific issuer, a scorecard-indicated outcome may or may not map closely to the actual rating assigned.

The final rating is higher than the scorecard-indicated outcome because the scorecard does not fully capture the magnitude of the county's available reserves given that a significant portion is restricted in the audit, the strength and effect of the county's economy and its strong management.

Exhibit 8
Harris (County of) TX

	Measure	Weight	Score
Economy			
Resident income ratio	92.9%	10.0%	Α
Full value per capita	138,593	10.0%	Aa
Economic growth metric	0.0%	10.0%	Aa
Financial Performance			
Available fund balance ratio	38.4%	20.0%	Aaa
Liquidity ratio	93.5%	10.0%	Aaa
Institutional Framework			
Institutional Framework	Aa	10.0%	Aa
Leverage			
Long-term liabilities ratio	271.9%	20.0%	Α
Fixed-costs ratio	12.3%	10.0%	Aa
Notching factors			
No notchings applied			
Scorecard-Indicated Outcome			Aa2
Assigned Rating			Aaa

The Economic Growth metric cited above compares the five-year CAGR of real GDP for Houston-The Woodlands-Sugar Land, TX Metropolitan Statistical Area to the five-year CAGR of real GDP for the US.

Sources: US Census Bureau, Harris (County of) TX's financial statements and Moody's Ratings

Appendix

Exhibit 9

Key Indicators Glossary

	Definition	Typical Source*
Economy	2	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Resident income ratio	Median Household Income (MHI) for the city or county, adjusted for Regional Price Parity (RPP), as a % of the US MHI	MHI: US Census Bureau - American Community Survey 5-Year Estimates RPP: US Bureau of Economic Analysis
Full value	Estimated market value of taxable property in the city or county	State repositories; audited financial statements; continuing disclosures
Population	Population of the city or county	US Census Bureau - American Community Survey 5-Year Estimates
Full value per capita	Full value / population	
Economic growth metric	Five year CAGR of real GDP for Metropolitan Statistical Area or county minus the five-year CAGR of real GDP for the US	Real GDP: US Bureau of Economic Analysi
Financial performance		
Revenue	Sum of revenue from total governmental funds, operating and non- operating revenue from total business-type activities, and non- operating revenue from internal services funds, excluding transfers and one-time revenue, e.g., bond proceeds or capital contributions	Audited financial statements
Available fund balance	Sum of all fund balances that are classified as unassigned, assigned o committed in the total governmental funds, plus unrestricted current assets minus current liabilities from the city's or county's business-type activities and internal services funds	
Net unrestricted cash	Sum of unrestricted cash in governmental activities, business type activities and internal services fund, net of short-term debt	Audited financial statements
Available fund balance ratio	Available fund balance (including net current assets from business- type activities and internal services funds) / Revenue	
Liquidity ratio	Net unrestricted cash / Revenue	
Leverage		
Debt	Outstanding long-term bonds and all other forms of long-term debt across the governmental and business-type activities, including debt of another entity for which it has provided a guarantee disclosed in its financial statements	statements
Adjusted net pension liabilities (ANPL)	Total primary government's pension liabilities adjusted by Moody's to standardize the discount rate used to compute the present value of accrued benefits	o Audited financial statements; Moody's Ratings
Adjusted net OPEB liabilities (ANOL)	Total primary government's net other post-employment benefit (OPEB) liabilities adjusted by Moody's to standardize the discount rate used to compute the present value of accrued benefits	Audited financial statements; Moody's Ratings
Other long-term liabilities (OLTL)	Miscellaneous long-term liabilities reported under the governmental and business-type activities entries	Audited financial statements
Long-term liabilities ratio	Debt + ANPL + ANOL + OLTL / Revenue	
Fixed costs		
Implied debt service	Annual cost to amortize city or county's long-term debt over 20 years with level payments	Audited financial statements; official statements; Moody's Ratings
Pension tread water contribution	Pension contribution necessary to prevent reported unfunded pension liabilities from growing, year over year, in nominal dollars, if all actuarial assumptions are met	Audited financial statements; Moody's Ratings
OPEB contribution	City or county's actual contribution in a given period	Audited financial statements
Implied cost of OLTL	Annual cost to amortize city or county's other long-term liabilities over 20 years with level payments	Audited financial statements; Moody's Ratings
Fixed-costs ratio	Implied debt service + Pension tread water + OPEB contributions + Implied cost of OLTL / Revenue	

^{*}Note: If typical data source is not available then alternative sources or proxy data may be considered. For more detailed definitions of the metrics listed above please refer to the US Cities and Counties Methodology . 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 crudian 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 irmoodys.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 Calificadora 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 657AFSL 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

1454365

CLIENT SERVICES

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454