

## CREDIT OPINION

13 March 2024



### Contacts

Heather Guss +1.214.979.6881  
AVP-Analyst  
heather.guss@moodys.com

Gera M. McGuire +1.214.979.6850  
Associate Managing Director  
gera.mcguire@moodys.com

### CLIENT SERVICES

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

# City of Oklahoma City, OK

## Update to credit analysis

### Summary

The credit profile of [Oklahoma City, OK](#) (Aaa stable) benefits from several strengths including a diverse and stable economy and well managed financial operations with strong fund balance and liquidity ratios. Resident income and property wealth (measured by full value per capita) are below the national Aaa medians. Leverage metrics are slightly elevated relative to the Aaa median but will remain manageable given fast payout and moderate future debt plans.

### Credit strengths

- » Large, regionally important economy anchored by governmental employment with a sizeable tax base
- » High level of financial reserves and history of conservative budgeting; experienced management team
- » Moderate pension liability; city's charter mandates city contribution at 100% of actuarial requirements

### Credit challenges

- » Below median resident income and full value per capita
- » High dependence on economically sensitive sales and use taxes
- » Revenue raising flexibility is restricted by requirement of voter approval

### Rating outlook

The stable outlook reflects the expectation that the city will maintain a satisfactory level of reserves over the long term. Management's continued ability to navigate weak economic or financial cycles while maintaining a strong financial position is key to maintaining the rating and outlook. The stable outlook also reflects the stabilizing economic influence of the various governmental employers within the city that will help to offset fluctuations in the private sector.

### Factors that could lead to an upgrade

- » Not applicable

### Factors that could lead to a downgrade

- » Weakened liquidity ratio to below 100%

- » Decline in economic activity that drives loss in sales tax revenue
- » Increase in long-term liabilities or fixed costs ratios to above 350% and 15%, respectively
- » Unwillingness or inability to budget for debt service on the outstanding annual appropriation debt, if necessary

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 1

### Oklahoma City (City of) OK

	2020	2021	2022	2023	Aaa Medians
<b>Economy</b>					
Resident income ratio (%)	93.6%	93.2%	N/A	N/A	173.0%
Full Value (\$000)	\$55,687,785	\$58,682,807	\$60,542,375	\$65,280,622	\$8,668,233
Population	649,821	673,183	681,088	N/A	35,992
Full value per capita (\$)	\$85,697	\$87,172	\$88,891	N/A	\$225,444
Annual Growth in Real GDP	-4.1%	0.9%	N/A	N/A	N/A
<b>Financial Performance</b>					
Revenue (\$000)	\$1,034,836	\$1,075,221	\$1,111,299	\$1,233,258	\$101,177
Available fund balance (\$000)	\$558,373	\$568,586	\$681,048	\$712,562	\$58,570
Net unrestricted cash (\$000)	\$1,481,960	\$1,535,872	\$1,593,929	\$1,749,835	\$82,803
Available fund balance ratio (%)	54.0%	52.9%	61.3%	57.8%	61.7%
Liquidity ratio (%)	143.2%	142.8%	143.4%	141.9%	88.4%
<b>Leverage</b>					
Debt (\$000)	\$1,096,062	\$1,158,890	\$1,226,428	\$1,292,780	\$71,733
Adjusted net pension liabilities (\$000)	\$1,390,246	\$2,008,064	\$1,509,353	\$1,285,045	\$120,941
Adjusted net OPEB liabilities (\$000)	\$473,430	\$508,281	\$471,952	\$335,619	\$14,374
Other long-term liabilities (\$000)	\$145,727	\$140,982	\$144,086	\$147,136	\$3,750
Long-term liabilities ratio (%)	300.1%	354.9%	301.6%	248.2%	263.2%
<b>Fixed costs</b>					
Implied debt service (\$000)	\$72,977	\$78,492	\$81,284	\$85,653	\$4,989
Pension tread water contribution (\$000)	\$51,394	\$61,698	\$26,770	N/A	\$3,389
OPEB contributions (\$000)	\$14,557	\$13,314	\$13,307	\$13,306	\$523
Implied cost of other long-term liabilities (\$000)	\$11,165	\$10,436	\$9,888	\$10,063	\$245
Fixed-costs ratio (%)	14.5%	15.2%	11.8%	11.0%	11.6%

The real GDP annual growth metric cited above is for the Oklahoma City, OK Metropolitan Statistical Area [issuer specific] Metropolitan Statistical Area.

For definitions of the metrics in the table above please refer to the [US Cities and Counties Methodology](#) 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 [US Cities and Counties Median Report](#).

Sources: US Census Bureau, Oklahoma City (City of) OK's financial statements and Moody's Investors Service, US Bureau of Economic Analysis

## Profile

The City of Oklahoma City is the state's capital and the largest city within the state. The city serves as an economic hub for the area, with energy, government/defense, and healthcare as the main sources of employment. The current population is about 690,000.

The city provides services such as public safety, fire protection, parks and recreation, infrastructure, water and sewer service, airport facilities, and refuse collection.

## Detailed credit considerations

### Economy: exposure to oil/gas offset by significant government presence

The local economy has proven resilient in previous economic shocks and will continue to be a positive factor for the foreseeable future. Oklahoma City is the largest city in the state with a large and growing population of nearly 700,000 residents and also serves as the state capital. The local economy is a regional service center and is anchored largely by government, defense and energy employers. Education and healthcare are also key contributors. The stabilizing influence of the defense and government employment base is an important offset for the volatility inherent in the energy sector due to commodity price fluctuations. The largest single employer within the city is Tinker Air Force Base, a key maintenance and logistics base for the military. Combined, federal/military, state government, and local government employ roughly half of the local labor force. The tax base is not concentrated; the 10 largest taxpayers account for a low 6% of fiscal 2023 assessed value. Several new economic development projects will contribute to continued tax base growth which has averaged over 5% over the past five year.

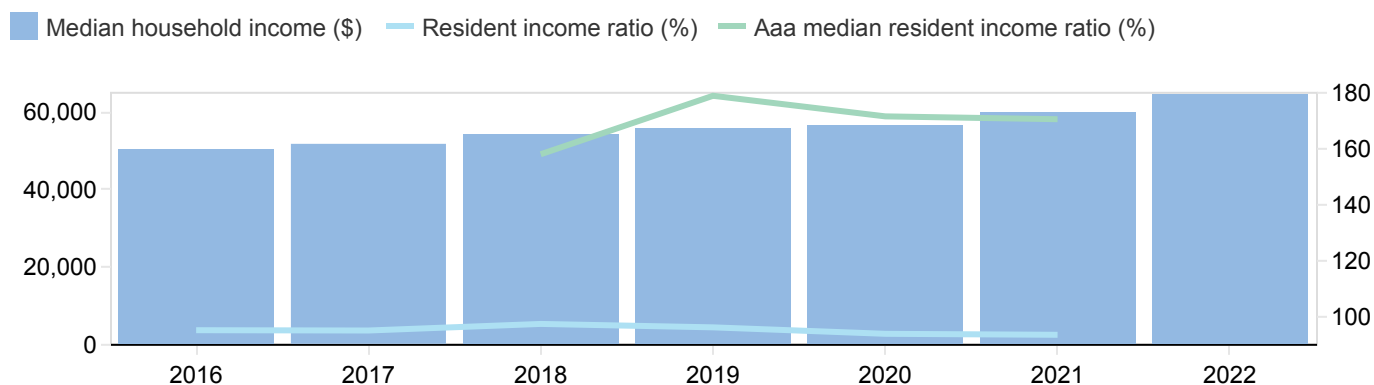
The city's real GDP (based on the Oklahoma City MSA) has been growing for the past several years though the rate of growth has been slower than that of the US; the city's five year economic growth ratio is -1.9% (though 2021). We do not expect the city's real

GDP growth to outpace that of the nation any time soon, but nevertheless the city's economy should continue to grow given modest population gains and the strength of the various employment sectors.

The city's full valuer per capita is well below the national Aaa median, but the city has some tax-exempt property. Full value per capita has been increasing every year, driven by tax base growth that has averaged 5.1% annually over the past five years. Median household income adjusted for regional price parity has been stable but remains below median and is impacted by the sizeable institutional presence. The city is quite affordable with a median home value at 70% of the nation. The unemployment rate is on par with the state and slightly below the US.

Exhibit 2

### Resident Income



Source: Moody's Investors Service

### Financial operations: strong and stable reserves despite reliance on sales tax

The city's financial performance is a strength of its credit profile and we expect reserves will be maintained or increased over the next several years. Because of the city's experienced and prudent management team and conservative budgeting, the city has proven adept at maintaining its financial reserves despite the volatile nature of Oklahoma's energy based economy and the COVID-19 pandemic. As of fiscal 2023 audited results (ending June 30), the available fund balance and liquidity ratios were unchanged from the previous year at 59% and 142%, respectively. The fund balance ratio is in line with the Aaa national median and the liquidity ratio is stronger. The ratios include fund balances and cash and investments (excluding restricted) across all governmental and business-type activities funds. We note that the city has significant fund balance classified as restricted but is available for things like capital projects and debt service.

Sales tax is the city's largest revenue source at 48% of governmental revenue as of fiscal 2023. Use tax, which is assessed on online sales, accounts for 10%. Oklahoma sales tax is broad, levied on essentially all purchases inclusive of groceries and medical supplies. This, as well as the collection of tax on online sales, is a positive factor. However these taxes are more economically sensitive than other revenue streams, such as property taxes.

The city reports that fiscal 2024 is trending favorably due in part to expenditure savings from vacancies as well as sales taxes that are ahead of budget by 1.3% and use taxes that are up 0.6%. The city should end the year with an addition to general fund balance. The general fund policy is to maintain a fund balance equal to 17-22% of the subsequent year's expenses; as of fiscal 2023 year-end, the city was ahead of the policy at 25%.

As the city begins to develop its fiscal 2025 budget, it will take its usual conservative approach and expects to budget for around a 2% increase in sales taxes and a 7% increase in use taxes. The fiscal 2025 budget will be balanced.

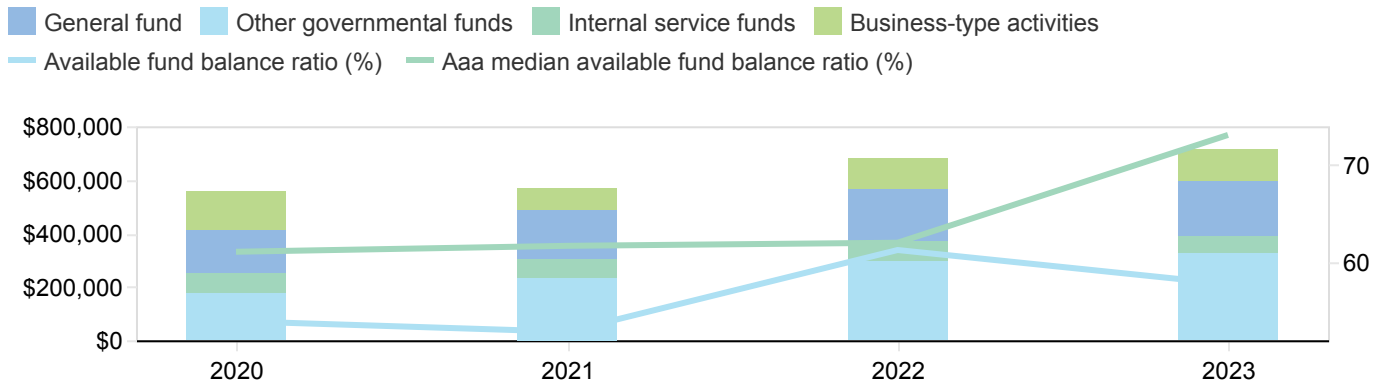
### Oklahoma City Public Property Authority hotel tax revenue bonds

The city has several series of bonds issued by the Oklahoma City Public Property Authority that are backed by 10/11ths of a 5.5% hotel occupancy tax levied citywide. Following declines in fiscal 2020 and 2021 because of the pandemic, pledged revenue increased 50% in

2022 and another 10% in 2023. Fiscal 2023 revenue provided a solid 1.7x coverage over maximum annual debt service, which is in line with our projections last year when the city sold new bonds.

Exhibit 3

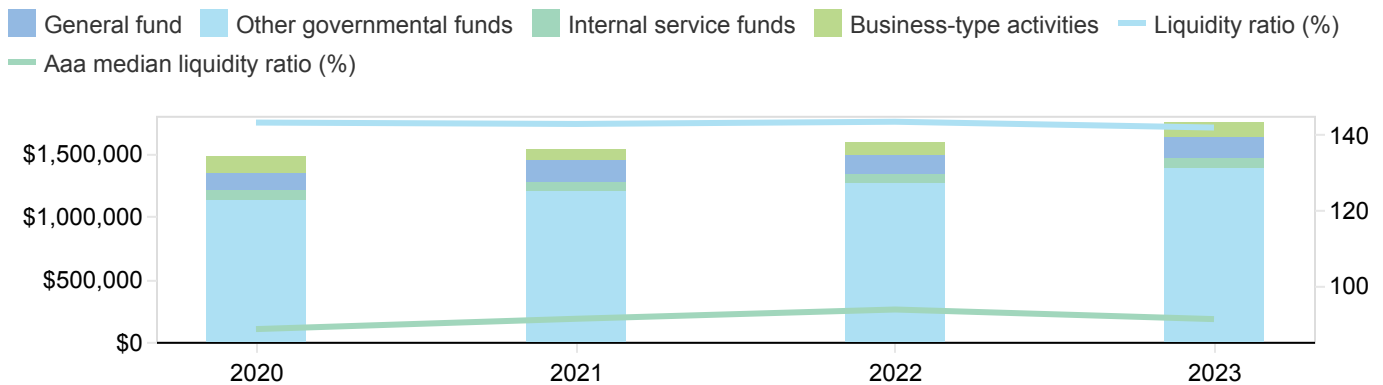
**Fund Balance**



Source: Moody's Investors Service

Exhibit 4

**Cash**



Source: Moody's Investors Service

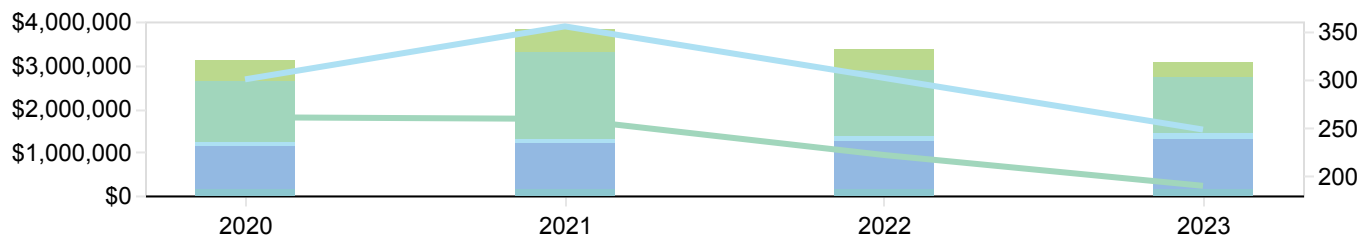
**Leverage: elevated but manageable leverage profile**

The long-term liabilities ratio will remain elevated for the rating category given future debt plans, though the debt will remain manageable given the descending debt service schedule, growing tax base, and ability to access additional property tax receipts to service bond holders. The long-term liabilities ratio was 248% in fiscal 2023, which is slightly below the national Aaa median. The Moody's adjusted fixed costs ratio was 11%. The leverage ratios include debt and the Moody's adjusted net pension and OPEB liabilities; most of the city's leverage is coming from pension and debt. The city has \$226.6 million in remaining voter authorization to issue general obligation debt pursuant to a 2017 bond election. City officials anticipate issuing debt annually (between \$90 and \$150 million) until the authorization is exhausted. In addition, the city will issue debt within the next few years for a new arena for the Oklahoma City Thunder professional basketball team. Voters recently approved a one cent sales tax effective from April 1, 2028 to March 31, 2034. The city is evaluating various debt options so details are not available at this time.

Exhibit 5

**Total Primary Government - Long Term Liabilities**

■ Governmental Debt   
■ Business-Type Activity Debt   
■ Adjusted net pension liabilities  
■ Adjusted net other post-employment liabilities   
■ Other long-term liabilities   
— Long-term liabilities ratio (%)  
— Aaa median long-term liabilities ratio (%)



Source: Moody's Investors Service

**Legal security**

The city issues general obligation debt secured by an unlimited ad valorem tax, limited ad valorem tax debt, as well as various appropriation backed obligations supported by nonessential revenue streams. The general obligation unlimited tax bonds are payable from an ad valorem tax levied, without limitation as to rate or amount, on all taxable property within the city. The lack of distinction between the city's Aaa GOULT and GOLT ratings reflect sizeable headroom under the tax rate limitation allowing sufficient capacity to service bond holders. The current tax rate for the GOLT bonds is \$1.21 per \$1,000 of assessed value (as defined under Oklahoma law), well under the \$5 state limitation.

**Debt structure**

Principal payment is fast with about 67% repaid in 10 years and final maturity is in 2043. The city is a frequent issuer of debt, however, and will continue to layer in additional debt as amortization occurs.

**Debt-related derivatives**

The city is not party to any interest rate swaps or other derivative agreements.

**Pensions and OPEB**

The city participates in four retirement systems. There are two single employee plans including The Central Oklahoma Transportation and Parking System (COTPA) Employee Retirement Trust, and Oklahoma City Employee Retirement System. There are also two multiemployer cost sharing plans including the Oklahoma Firefighters Pension and Retirement System, and Oklahoma Police Pension and Retirement System. The city has a strong history of meeting its annually required contribution in both the municipal and parking employee plans. Contributions in the public safety plan are based on statutory requirements. Combined, the city's retirement plans account for a Moody's adjusted net pension liability (ANPL) of \$1.3 billion. This represents 104% of revenue, which is a moderate liability.

The city provides other post-employment benefits (OPEB) in the form of medical benefits to employees. The city has made some changes to the benefit including increasing the eligibility age, and or service retirement. Additionally, all employees hired on or after January 1, 2017 are not eligible for subsidies from the city for retiree health care coverage. Contributions into the plan are currently made on a pay as you go basis. The Moody's adjusted liability is equal to 27% of revenue.

**ESG considerations**

Oklahoma City's CIS-2 indicates that ESG considerations are not material to the current rating. The city has exposure to carbon transition risk, low exposure to social risks and a very strong governance profile

**Environmental**

The city's environmental issuer profile score is E-3. The city has exposure to carbon transition with an economy centered on oil and gas. Exposure to all other environmental risks including physical climate risks, water management, natural capital and waste and pollution is low.

**Social**

The city's social issuer profile score is S-2. The city has low exposure across all categories including demographics, labor and income, education, housing, health and safety, and access to basic services.

**Governance**

The city's governance issuer profile score is G-1. Positive policy credibility and effectiveness is demonstrated by solid budget management evidenced in budget outcomes that are significantly favorable compared to expectations. The city's commitment to transparency and disclosure is also evident in periodic reporting of key financial and capital updates. The city also produces long range financial forecasts and capital planning that encompass population projections to guide a forward planning view for its resources.

## Rating methodology and scorecard factors

The US Cities and Counties Rating 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 assigned rating of Aaa also takes into consideration the institutional presence of Tinker Air Force Base, which is the largest single employer in the city. Further, the city has fund balance classified as restricted in the audit (and therefore not included in the available fund balance ratio) but is spendable for essential purposes such as capital outlay and debt service.

Exhibit 6

### Oklahoma City (City of) OK

	Measure	Weight	Score
<b>Economy</b>			
Resident income ratio	93.2%	10.0%	A
Full value per capita	95,848	10.0%	A
Economic growth metric	-1.9%	10.0%	A
<b>Financial Performance</b>			
Available fund balance ratio	57.8%	20.0%	Aaa
Liquidity ratio	141.9%	10.0%	Aaa
<b>Institutional Framework</b>			
Institutional Framework	A	10.0%	A
<b>Leverage</b>			
Long-term liabilities ratio	248.2%	20.0%	A
Fixed-costs ratio	11.0%	10.0%	Aa
<b>Notching factors</b>			
No notchings applied			
Scorecard-Indicated Outcome			Aa3
<b>Assigned Rating</b>			<b>Aaa</b>

The Economic Growth metric cited above compares the five-year CAGR of real GDP for Oklahoma City, OK Metropolitan Statistical Area [issuer specific] Metropolitan Statistical Area to the five-year CAGR of real GDP for the US

Sources: US Census Bureau, Oklahoma City (City of) OK's financial statements and Moody's Investors Service



## Appendix

Exhibit 7

### Key Indicators Glossary

	Definition	Typical Source*
<b>Economy</b>		
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 Analysis
<b>Financial performance</b>		
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 or 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	Audited financial statements
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	
<b>Leverage</b>		
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	Audited financial statements; official 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	Audited financial statements; Moody's Investors Service
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 Investors Service
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	
<b>Fixed costs</b>		
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 Investors Service
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 Investors Service
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 Investors Service
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 City and Counties Methodology](#).

Source: Moody's Investors Service

© 2024 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 to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service 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 [www.moody.com](http://www.moody.com) under the heading "Investor Relations — Corporate Governance — Charter 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 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 (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs 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.

## CLIENT SERVICES

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