

**CREDIT OPINION**

5 July 2024

Update

Send Your Feedback

**RATINGS**

**Johannesburg, City of**

Domicile	Johannesburg, South Africa
Long Term Rating	Ba3
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

**Contacts**

**Kgothatso Moerane** +27.64.757.9313  
Associate Lead Analyst  
kgothatso.moerane@moodys.com

**Makasi Makasi** +27.82.823.2668  
Ratings Associate  
makasi.makasi@moodys.com

**Massimo Visconti, MBA** +39.02.9148.1124  
VP-Sr Credit Officer/Manager  
massimo.visconti@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 Johannesburg (South Africa)

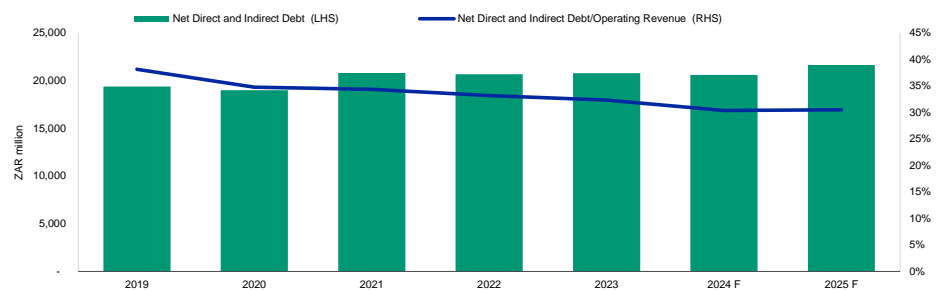
## Update to credit analysis

### Summary

The credit profile of the [City of Johannesburg](#) (Ba3 stable) reflects the city's robust financial performance supported by its large and diversified economic base. The city is [South Africa's](#) (Ba2 stable) business capital and main financial and economic center, which allows it to access a broad tax base. The city's credit profile is constrained by capital spending pressures, related to infrastructure backlogs. The city contends with climate and water management issues, as well as housing accessibility and labor market challenges.

Exhibit 1

### Johannesburg's debt expected to remain stable



F=Forecast; Fiscal year ending 30 June.

Source: *City of Johannesburg and Moody's Ratings*

### Credit strengths

- » Robust financial performance, albeit challenged by the rising inflation
- » Large and diversified economic base
- » Strong debt management practices and moderate liquidity

### Credit challenges

- » Growing pressure to increase capital spending to address social and environmental risks
- » Moderately high debt levels, albeit relatively stable

## Rating outlook

The outlook is stable. We expect the city's prudent financial management, in the context of recent shocks, such as load shedding and water shortages, to lead to continued resilience in financial performance, during the medium term.

## Factors that could lead to an upgrade

Moody's will consider changing the ratings should the city display consistently improving operating performance and liquidity, in the context of the operating environment structural challenges. A sovereign upgrade would exert positive pressure on the rating.

## Factors that could lead to a downgrade

Moody's will consider a downgrade of the ratings if the city experiences significant deterioration in operating performance and liquidity. A ratings downgrade will also be considered in case of a sovereign downgrade.

## Key indicators

Exhibit 2

### City of Johannesburg

City of Johannesburg	2019	2020	2021	2022	2023	2024 F	2025 F
Net Direct and Indirect Debt/Operating Revenues (%)	38.1	34.8	34.3	33.2	32.3	30.4	30.5
Debt Service/Total Revenues (%)	8.7	6.0	7.5	6.3	13.9	7.6	5.8
Interest Expenses/Operating Revenues (%)	4.9	4.6	4.3	4.2	4.2	4.1	4.1
Primary Operating Balance / Operating Revenue (%)	8.9	4.2	8.9	5.6	0.7	5.2	5.8
Cash and Cash Equivalents/Operating Revenue (%)	13.1	13.2	13.3	10.6	7.2	8.2	11.7
Capital Expenses/Total Expenses (%) - IS	13.0	8.8	10.5	10.7	8.5	8.2	8.5
Cash Financing Surplus / Requirement (Cf) As Of Total Revenues (%)	2.0	0.7	-0.3	-4.3	2.3	0.1	2.1

Moody's forecast; Fiscal year ending 30 June

Source: City of Johannesburg and Moody's Ratings

## Detailed credit considerations

### Baseline credit assessment

The credit profile of the City of Johannesburg, as expressed in its Ba3/A1.za rating with a stable outlook, combines (1) a Baseline Credit Assessment (BCA) of ba3; and (2) a low likelihood of extraordinary support from the national government in the event that the city faced acute liquidity stress.

### Robust financial performance, albeit challenged by the rising inflation

The City's service charges remained constant year-on-year with no increase from FY2022 to FY2023, this was attributable to a decrease in water and electricity consumption. This resulted in a moderate operating performance with a primary operating balance of 0.7% of operating revenue below the 5.6% posted in FY2022, this was further impacted by the increase in impairments from bad debts. The city has high revenue-generating capacity, with its own source revenue (primarily consisting of service charges and property taxes) contributing to 81% of its operating revenue, whilst government grants accounted for 13%, in fiscal 2023. Fixed cost items such as bulk purchases and employee related costs accounted for 60% of total expenditure in FY2023, which limits the city's expenditure flexibility. Though we expect inflation to increase operating expenditures, we do not anticipate changes in the city's rigid operating expenditure structure.

Despite these factors, we predict that the city will maintain moderate gross operating surpluses in the medium term. This is expected to result from the city's renewed revenue collection strategies, which have continued to show high collection rates. These strategies include increasing efficiency and accuracy in account billing, implementing disconnections and penalties for non-paying customers,

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's.com> for the most updated credit rating action information and rating history.

and rolling out smart meters to convert prepaid customers. The city should recover to 5.2% in 2024 due to renewed revenue collection methods that are expected to boost operating revenues.

### **Large and diversified economic base**

Johannesburg is South Africa's largest city and the country's business capital. The city is home to most of the corporate headquarters in the country. Gauteng province, where Johannesburg is located, contributes more than one third of the country's GDP. Johannesburg has the largest metropolitan economy in the country, contributing about 16% of South Africa's GDP. Diversified economic sectors support Johannesburg's large economic base; the economy is dominated by the services sector, which is responsible a substantial economic output. The finance sector is the largest, accounting for 28% of the city's economy, while community services contribute 24% and other sectors collectively account for the remaining 48% of economic activity. The city's infrastructure is also well developed, which allows it to continue to expand its economic base. However, maintaining the existing infrastructure may prove to be a challenge if Johannesburg does not realise its capital spending plans. A failure to execute capital infrastructure spending against a backdrop of high unemployment and rapid population growth will intensify the service delivery backlog and exert upward pressure on spending and social risks.

### **Strong debt management practices and moderate liquidity**

The city's administration regularly monitors its budget execution and cash flow, and is committed to reinforcing internal controls with continued improvement in its financial management. The city's status as the country's business capital and its very large revenue base has helped it achieve sound financial management and budget planning.

Despite a decrease of the liquidity ratio in 2023 to 7.2%, the city maintained a relatively consistent liquidity ratio across the years, with an upward projection for 2024 and recovering to 11.7% in 2025. The city has continued to demonstrate moderate liquidity, with its cash position covering its most immediate obligation at an estimated cash ratio (Cash And Cash Equivalents) / (Net Direct and Indirect Debt) at 22.4% in FY2023. Though resilience in its liquidity position is expected in the medium term, growing capital spending needs will keep it at a moderate level.

### **Growing capital spending pressure to address social and environmental risks**

The infrastructure backlog and rapid population growth continue to exert pressure on the city to increase capital investments. Water infrastructure backlog inclusive of required water, sewer and wastewater treatment infrastructure replacement, amounts to ZAR24.2 billion, approximately 37% of total revenue in FY2023. Electricity infrastructure backlog inclusive of ageing networks and new network requirements, amounts to ZAR40 billion or approximately 61% of total revenue.

Johannesburg's capital expenses as a percentage of total expenses have remained consistent, ranging from 8.8% to 13%. The slight decrease projected for 2024 and 2025 suggests a stable capital expenditure strategy, inching close to the 10% norm recommendation. The city had a cash financing surplus of 2.3% in fiscal 2023, a recovery from the requirement of 4.3% in fiscal 2022. Financing came through increased borrowing, own funds, and capital grants. This infrastructure backlog will continue to challenge the city to cope with environmental risks such as droughts, as well as the rising social risks driven by limited access to basic services for some residents.

In the medium term, the city will fund up to 33% of its total infrastructure investment from borrowing, while its own funds and government grants will contribute 26% and 41%, respectively. Significant reliance on borrowing could be challenging in the event of a further deterioration in the operating environment. The projected capital investments will focus on key infrastructure requirements such as electricity, water-related services, and economic development infrastructure, including social housing, roads and the public transportation system. Although its capital investments have increased substantially over the past five years, the city still faces significant challenges from its historical infrastructure backlog and rapid population growth over the past two decades.

### **Moderately high debt levels, albeit relatively stable**

City of Johannesburg's debt accounted for 31% of the total municipal debt in South Africa while the city's net direct and indirect debt (NDID)-to-operating revenue ratio declined to estimated 32.3 % in fiscal 2023 compared with 33.2% in fiscal 2022. Johannesburg's debt stock comprises of domestic bonds (13%) and bank loans (87%) - all denominated in the domestic currency and at fixed rates. The bonds are secured via sinking fund investments, estimated at ZAR1.4 billion in fiscal 2023 (this amount is netted off our debt

ratios). With the forthcoming debt redemptions, we expect the city's debt to decrease to an average 30.4% of projected operating revenue in the medium term.

#### **Extraordinary support considerations**

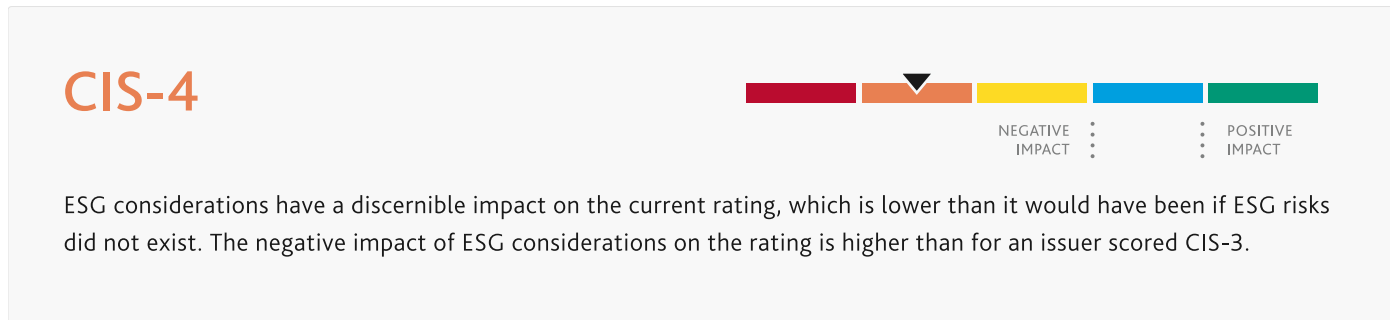
The City of Johannesburg has a low likelihood of receiving extraordinary support from the national government, reflecting, at the jurisdictional level, the national government's policy stance of promoting greater accountability for South African municipalities. This assessment is in line with the national government's stance to encourage municipalities to be self-sustaining. Although the legal framework regulates the recovery of municipalities experiencing financial difficulties, it does not suggest timely extraordinary bailout actions to avoid defaults on debt obligations.

## ESG considerations

### Johannesburg, City of's ESG credit impact score is CIS-4

Exhibit 3

#### ESG credit impact score



Source: Moody's Ratings

City of Johannesburg's **CIS-4** reflects its exposure to environmental and social risks that are largely driven by water stress and weak labor and income, as well as governance risks.

Exhibit 4

#### ESG issuer profile scores



Source: Moody's Ratings

### Environmental

The **E-4** score assigned to City of Johannesburg reflects its exposure to environmental risks mainly related to physical climate risk and water management. Drought is the most pertinent and frequent physical climate exposure resulting in shortages and water restrictions in certain areas. The city is currently reviewing its disaster management plans and is planning to mitigate potential risk disaster occurrences that could cause structural damage. The city measures itself according to the adherence to various acts, legislation and by-laws that are enforced (i.e. the monitoring of biohazards in landfill spaces, flood management etc.). With their Environmental Sustainability Action Plan, the city is able to work in parallel to various acts and legislation concerned with environment and social sustainability in the City.

### Social

The **S-4** score assigned to City of Johannesburg reflects its exposure to social risk mirroring high labor & income risks as well as limited access to basic services, housing and health and safety. Labor and income risks are reflected in the city's high unemployment rate- which directly affects the ability of the city's residents to pay for services and increases the number of households that are entirely dependent on the city for basic services. Years of underinvestment have left South African municipalities with ageing and inadequate infrastructure for key services like water and electricity - limiting access to basic services. In addition, access to adequate housing and health and safety, for some of the city's population, are limited by the lack of infrastructure and adequately skilled labor to address these issues.

### Governance

The **G-2** score assigned to City of Johannesburg reflects its limited exposure to governance risk as the administration regularly monitors its budget execution and cash flow, and is committed to reinforcing internal controls. As in previous fiscal years, the city received an unqualified audit report for fiscal 2021. Data transparency is high, with all financial statements, along with medium-term budgets, published publicly on the city's and National Treasury's websites.

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 assigned BCA of ba3 is in line with the BCA scorecard-indicated outcome.

The principal methodology used is the [Regional and Local Governments](#) rating methodology, published on 28 May 2024.

Exhibit 5

### City of Johannesburg

Baseline Credit Assessment – Scorecard	Score	Value	Sub-factor Weighting	Sub-factor Score	Factor Weighting	Total
<b>Factor 1: Economy</b>					<b>25%</b>	<b>2.33</b>
Regional Income [1]	10.54	21882.13	15%	1.58		
Economic Growth	12.00	ba	5%	0.60		
Economic Diversification	3.00	aa	5%	0.15		
<b>Factor 2: Institutional Framework and Governance</b>					<b>30%</b>	<b>3.60</b>
Institutional Framework	15.00	b	15%	2.25		
Governance	9.00	baa	15%	1.35		
<b>Factor 3: Financial Performance</b>					<b>20%</b>	<b>2.12</b>
Operating Margin [2]	12.10	0.73%	10%	1.21		
Liquidity Ratio [3]	12.16	7.24%	5%	0.61		
Ease of Access to Funding	6.00	a	5%	0.30		
<b>Factor 4: Leverage</b>					<b>25%</b>	<b>1.30</b>
Debt Burden [4]	2.42	32.33%	15%	0.36		
Interest Burden [5]	9.36	4.24%	10%	0.94		
<b>Preliminary BCA Scorecard-Indicated</b>						<b>(9.35) baa2</b>
<b>Idiosyncratic Notching</b>						<b>0.0</b>
<b>Preliminary BCA SIO After Idiosyncratic</b>						<b>(9.35) baa2</b>
<b>Sovereign Rating Threshold</b>						<b>Ba2</b>
<b>Operating Environment Notching</b>						<b>-1.0</b>
<b>BCA Scorecard-Indicated Outcome</b>						<b>(13.00) ba3</b>
<b>Assigned BCA</b>						<b>ba3</b>

[1] Regional GDP per capita in terms of purchasing power parity (PPP) terms, in international dollars

[2] Primary Operating Balance / Operating Revenue

[3] Cash and Cash Equivalents / Operating Revenue

[4] Net Direct and Indirect Debt / Operating Revenue

[5] Interest Payments / Operating Revenue

Source: Moody's Ratings; Fiscal 2023

## Ratings

Exhibit 6

Category	Moody's Rating
<b>JOHANNESBURG, CITY OF</b>	
Outlook	Stable
Baseline Credit Assessment	ba3
Issuer Rating -Dom Curr	Ba3
NSR Issuer Rating	A1.za
Senior Unsecured -Dom Curr	Ba3
NSR Senior Unsecured	A1.za
ST Issuer Rating -Dom Curr	NP
NSR ST Issuer Rating	P-1.za

Source: Moody's Ratings

© 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's.com](http://www.moody's.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