

CREDIT OPINION

23 February 2024



Contacts

Kenneth R Surgenor +1.214.979.6848
Assistant Vice President - Analyst
 kenneth.surgenor@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

Unified Government of Wyandotte County/ Kansas City, KS

Update to credit analysis

Summary

The credit profile of the [Unified Government of Wyandotte County/Kansas City, KS](#) (A1 stable; UG) benefits from consistent operating performance and maintenance of adequate operating reserves and liquidity. The profile is also supported by the UG's large and growing economy favorably located near employment centers in [Johnson County, KS](#) (Aaa stable) and [Kansas City, MO](#) (Aa3 stable). Resident income and full value per capita remain below medians for the rating category, however, both metrics have improved in recent years and continued economic development is likely to maintain the positive trajectory. The UG's long-term liabilities and fixed costs present headwinds, and while manageable, remain outsized relative to peers in the A1 rating category. Both metrics are likely to remain outsized for the foreseeable future absent material revenue growth given capital needs associated with citywide deferred maintenance and a consent decree between the city's sewer enterprise and the US Environmental Protection Agency.

Credit strengths

- » Consistent operating performance and adherence to financial policies
- » Growing economy with improving resident income and full value per capita

Credit challenges

- » Long-term liabilities and fixed costs to remain outsized relative to the A1 rating category
- » Extensive ongoing capital needs associated with deferred maintenance and sewer EPA consent decree

Rating outlook

The stable outlook reflects the expectation that continued economic expansion, utility rate increases, and formal financial policies will enable the UG to balance operational concerns while addressing sizable capital needs and the associated debt issuance plans.

Factors that could lead to an upgrade

- » Trend of maintaining operating reserves and liquidity in excess of 30% of operating revenue
- » Long-term liabilities ratio that falls below 200% of operating revenue without increasing deferred maintenance

- » Continued economic expansion that results in materially improved resident wealth and income levels

Factors that could lead to a downgrade

- » Erosion of operating reserves below 20% of operating revenue
- » Increase of long-term liabilities ratio above 400% of revenue, driven by either debt or pension obligations
- » Trend of economic contraction resulting in reduced operating revenue and/or weakened resident wealth and income levels

Key indicators

Exhibit 1

Unified Govt. of Wyandotte Co./Kansas City,KS

	2019	2020	2021	2022	A Medians
Economy					
Resident income ratio (%)	76.5%	75.1%	78.5%	81.0%	85.8%
Full Value (\$000)	\$9,440,555	\$9,949,604	\$10,548,293	\$12,028,725	\$2,018,333
Population	152,522	153,014	155,745	155,438	31,738
Full value per capita (\$)	\$61,896	\$65,024	\$67,728	\$77,386	\$68,108
Annual Growth in Real GDP	2.4%	-1.8%	3.2%	3.0%	N/A
Financial Performance					
Revenue (\$000)	\$679,573	\$683,796	\$755,542	\$797,842	\$30,720
Available fund balance (\$000)	\$155,600	\$160,972	\$172,546	\$210,586	\$8,027
Net unrestricted cash (\$000)	\$222,364	\$209,003	\$237,983	\$212,127	\$14,305
Available fund balance ratio (%)	22.9%	23.5%	22.8%	26.4%	24.2%
Liquidity ratio (%)	32.7%	30.6%	31.5%	26.6%	42.3%
Leverage					
Debt (\$000)	\$1,297,681	\$1,344,151	\$1,325,724	\$1,336,273	\$17,434
Adjusted net pension liabilities (\$000)	\$917,669	\$1,086,713	\$991,248	\$620,096	\$27,523
Adjusted net OPEB liabilities (\$000)	\$146,894	\$168,481	\$143,414	\$113,354	\$997
Other long-term liabilities (\$000)	\$65,344	\$65,866	\$79,926	\$71,838	\$709
Long-term liabilities ratio (%)	357.2%	389.8%	336.2%	268.4%	181.1%
Fixed costs					
Implied debt service (\$000)	\$99,564	\$94,614	\$96,258	\$92,986	\$1,258
Pension tread water contribution (\$000)	\$19,589	\$24,499	\$24,733	\$21,870	\$758
OPEB contributions (\$000)	\$1,312	\$5,626	\$4,103	\$3,757	\$25
Implied cost of other long-term liabilities (\$000)	\$4,831	\$4,764	\$4,717	\$5,606	\$49
Fixed-costs ratio (%)	18.4%	18.9%	17.2%	15.6%	7.7%

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](#).

The real GDP annual growth metric cited above is for the Kansas City, MO-KS Metropolitan Statistical Area [issuer specific] Metropolitan Statistical Area.

Sources: US Census Bureau, Unified Govt. of Wyandotte Co./Kansas City,KS's financial statements and Moody's Investors Service, US Bureau of Economic Analysis

Profile

The Unified Government of Wyandotte County/Kansas City is the state's third largest metro area with an estimated population of 166,000. The UG provides public safety, parks and recreation, operation of a court system and jail, economic development, infrastructure, election administration, and sewer and stormwater services. The [Unified Government's Board of Public Utilities \(BPU\)](#) (A2 stable), an administrative agency of the UG, provides water and electric power to residents.

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.

Detailed credit considerations

Economy: large, growing economy with improving resident income and wealth levels

The UG's economy is likely to remain in expansion mode for the next few years given several large projects that are currently underway including single and multifamily housing, hotels, mixed use developments, and industrial complexes that collectively total over \$1 billion in investment. Notably, the UG multi-family development is occurring at an accelerated pace and includes a number of market rate and luxury apartment projects. Kansas City, MO was recently selected as a host city for six FIFA World Cup matches in 2026, including a quarterfinal match. The Unified Government is a partner in the consortium that sought to bring the World Cup to the region. A \$150 million Margaritaville Hotel is set to open in May 2025 and will serve as a host hotel and the city's Children's Mercy Park stadium, home to Sporting Kansas City, will serve as a training site.

The UG's resident income is below peers in the A rating category (median household income based on the Kansas City, MO-KS MSA and adjusted for regional price parity), which could limit the UG's practical revenue raising flexibility. The UG has lowered property tax rates in recent years to partially offset increasing valuations. Positively, the median household income has increased nearly 45% since 2015. Additionally, the UG's percentage of residents below the poverty level continues to tick downward, from a peak of 25.4% in 2014 to 17.4% in 2022. Also, as the economy expands, the UG's full value per capita continues to improve, increasing 48% since 2015. The UG's 2.5% December 2023 unemployment rate compares well to that of both the state (2.0%) and nation (3.5%).

Financial operations: consistent financial performance and adherence to strengthened financial policies

The Unified Government's financial operations are likely to remain stable, supported by increasing property and sales tax revenue, utility rate increases, and a history of adhering to fund balance policies. The UG adheres to a formal general fund reserve policy to maintain reserves of at least 17% of general fund expenditures and transfers; further, it has a target to maintain an additional one-month in reserve for emergencies or catastrophic events, which collectively totals 25%. The UG has maintained general fund reserves in excess of 20% since 2019 and surpassed 25% in fiscal 2021.

The UG closed fiscal 2022 (Dec 31 fiscal year end) with roughly \$76.2 million in governmental fund balance and \$134.4 million in business-type activity unrestricted current assets (\$210.6 million combined), representing about 26.4% of total revenue. The UG also had about \$67 million in restricted fund balance that supports core governmental services, and, when including these funds, reserves improve to nearly 35% of revenue.

Preliminary estimates indicate the UG close fiscal 2023 with a minimal \$1.3 million general fund deficit, significantly better than the originally budgeted \$7.8 million, and expects the final close out will look slightly better. Increased operating costs including personnel and transfers for vehicle and equipment replacement drove the deficit. The UG is still in the process of closing out fiscal 2023, but management does not expect any material reductions of any governmental or enterprise funds in fiscal 2023. The fiscal 2024 budget was adopted with a general fund deficit of about \$3 million, but includes \$1.1 million in contingency management does not anticipate using.

Liquidity

The UG closed fiscal 2022 with roughly \$132.6 million in governmental fund liquidity and \$79.5 million in unrestricted business-type activity cash and investments (\$212.1 million combined), representing 26.6% of operating revenue.

Leverage: outsized long-term liabilities driven by deferred maintenance, sewer consent decree weigh on the credit profile

The UG's leverage will remain outsized for the rating category. While economic development and utility increases will provide some support, the pace of issuance is likely to surpass revenue growth. Additionally, much of the leverage improvement from fiscal 2021 to 2022 is reduced adjusted pension liabilities due to an improved interest rate environment. At the close of fiscal 2022, the UG's long-term liabilities ratio was 268.4%, which is about 50% higher than peers in the A rating category.

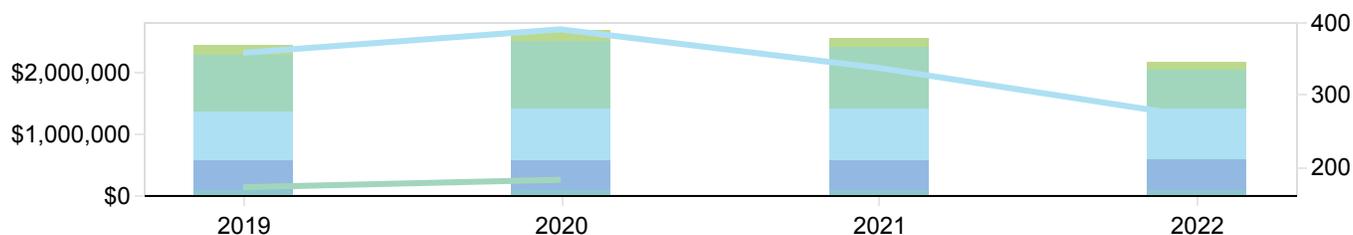
About 62% of the UG's outstanding liabilities are attributable to debt. The UG's 5-year CIP calls for \$381 million in infrastructure projects through fiscal 2028, with about 36% being cash funded and 64% debt funded. A large portion of the plan includes sewer projects related to the consent decree. However, about half of the funding will come from low interest WIFIA loans and the other half will be funded by low interest state revolving fund loans. Of the remaining leverage, about 29% constitutes adjusted net pension liabilities, 5% is for OPEB, 3% is for other liabilities.

The UG's adjusted fixed costs ratio is nearly double the A median at 15.6%. The UG will continue to issue new money debt to finance a portion of its capital improvement plan as well as the EPA consent decree. The consent decree will cost about a \$1 billion and it will be paid for with debt over the next 25 years. Rates will increase about 3-5% annually, though the EPA settlement agreement ties rate increases to median household income to ensure affordability. The leverage metrics are likely to remain outsized for the category and will continue to weigh on the credit profile. Material leverage increases, driven by either debt or pension liabilities, could lead to downward pressure on the profile.

Exhibit 2

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 (%)
— A median long-term liabilities ratio (%)



Source: Moody's Investors Service

Legal security

The UG's GOULT bonds (the "City Bonds") are general obligations backed by a pledge of the UG's full faith, credit and resources and payable from ad valorem property taxes which may be levied without limitation as to rate or amount upon all taxable tangible property, real and personal, within the territorial limits of the UG, excluding the incorporated areas of Bonner Springs, Edwardsville and Lake Quivira, and excluding the unincorporated areas of the UG.

The UG's GOULT bonds (the "County Bonds") are general obligations backed by a pledge of the UG's full faith, credit and resources and payable from ad valorem property taxes which may be levied without limitation as to rate or amount upon all taxable tangible property, real and personal, within the territorial limits of the UG.

The UG's short-term temporary GO notes are general obligations backed by a pledge of the UG's full faith, credit and resources and payable from ad valorem property taxes which may be levied without limitation as to rate or amount upon all taxable tangible property, real and personal, within the territorial limits of the UG, excluding the incorporated areas of Bonner Springs, Edwardsville and Lake Quivira, and excluding the unincorporated areas of the UG.

Debt structure

All debt is fixed rate and matures over the long term (exclusive of the temporary notes that mature in April 2025); final maturity on long-term debt occurs in 2044.

Debt-related derivatives

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

Pensions and OPEB

The Unified Government participates in two statewide cost-sharing defined benefit pension plans, the Kansas Public Employees Retirement System (KPERs) and Kansas Police and Fireman's Retirement System (KP&F).

Moody's adjusted net pension liability (ANPL) for the UG was \$620 million in fiscal 2022, equal to 0.8 times operating revenue. The UG's contributions tend to exceed Moody's tread water calculation. In fiscal 2022, contributions exceeded tread water by \$8.4 million, or about 1% of operating revenue. The pension plans' high discount rate is likely to require increasing contributions. We expect that the

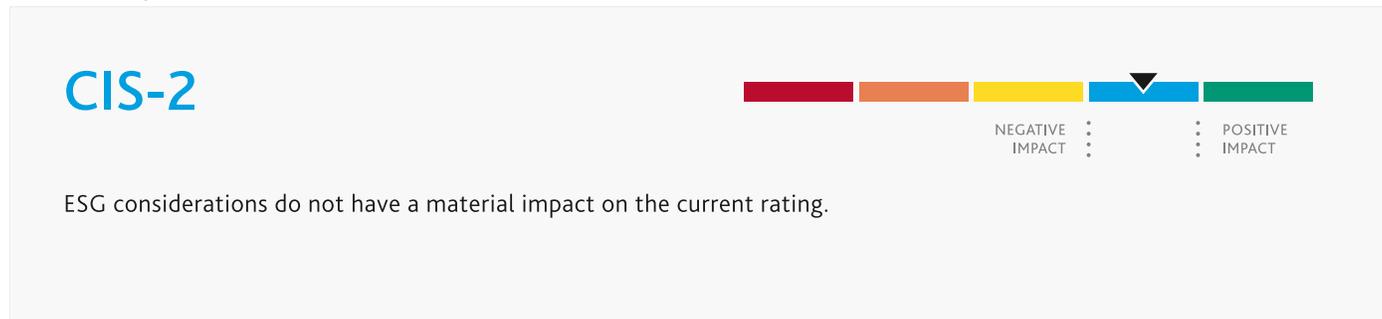
UG will adequately incorporate rising pension costs into its budget while maintaining operational balance. The UG offers other post-employment retirement benefits and the Moody's adjusted liability is equal to a modest 14% of operating revenue.

ESG considerations

Unified Govt. of Wyandotte Co./Kansas City,KS' ESG credit impact score is CIS-2

Exhibit 3

ESG credit impact score



Source: Moody's Investors Service

The Unified Government of Wyandotte County/Kansas City, KS' ESG Credit Impact Score is **CIS-2**, reflecting low exposure to environmental and social risks, and good governance.

Exhibit 4

ESG issuer profile scores



Source: Moody's Investors Service

Environmental

The Unified Government's environmental issuer profile score is **E-2**, reflecting relatively low exposure to environmental risks across all categories, including physical climate risks, carbon transition, water management, natural capital and waste and pollution risks.

Social

The Unified Government's social issuer profile score is **S-2**, reflecting relatively low exposure to social risks across most categories, including demographics, labor and income, housing, and access to basic services. Population and the labor force have been growing modestly, though income levels are well below the US median, like other large urban centers. The percentage of the population with a bachelor's degree is lower than most counties. Housing is affordable and residents have easy access to basic services. The violent crime rate is higher than most local governments.

Governance

The Unified Government's governance issuer profile score is **G-2**, reflecting strong institutional structure as well as established policies and timely disclosure of budgets and audited financial statements which provide a good level of transparency. The unified government also maintains long-term financial forecasting, has prudent budget management, and has demonstrated policy credibility and effectiveness.

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.

Exhibit 5

Unified Govt. of Wyandotte Co./Kansas City,KS

	Measure	Weight	Score
Economy			
Resident income ratio	81.0%	10.0%	A
Full value per capita	77,386	10.0%	A
Economic growth metric	-0.4%	10.0%	Aa
Financial Performance			
Available fund balance ratio	26.4%	20.0%	Aa
Liquidity ratio	26.6%	10.0%	A
Institutional Framework			
Institutional Framework	Aa	10.0%	Aa
Leverage			
Long-term liabilities ratio	268.4%	20.0%	A
Fixed-costs ratio	15.6%	10.0%	A
Notching factors			
No notchings applied			
Scorecard-Indicated Outcome			A1
Assigned Rating			A1

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

Sources: US Census Bureau, Unified Govt. of Wyandotte Co./Kansas City,KS's financial statements and Moody's Investors Service

Appendix

Exhibit 6

Key Indicators Glossary

	Definition	Typical Source*
Economy		
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
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 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	
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	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	
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 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 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