

CREDIT OPINION

11 April 2025



Contacts

Sunny Zhu +1.415.274.1721

AVP-Analyst
sunny.zhu@moodys.com

Jillian Goveas +1.212.553.4162
Ratings Associate

jillian.goveas@moodys.com

Hetty Chang +1.212.553.9376

Associate Managing Director
henrietta.chang@moodys.com

CLIENT SERVICES

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

Washington (State of)

Update to credit analysis

Summary

The <u>State of Washington</u>'s (Aaa stable) credit profile is supported by its strong economic fundamentals, above-average demographic profile and robust liquidity position. The state's budgetary reserve is retreating from record positions (Exhibit 1) given slowed revenue growth and some deficit spending in fiscal 2025. We expect that the state will restore general fund operations to structural balance and keep adequate reserves in-line with the Treasurer's recommended 10% level to maintain financial flexibility.

Broad and rapid federal policy changes since January 2025 have far-reaching credit negative implications for all states. Washington's largest exposure to federal policy shifts/proposals include a material <u>cut to federal Medicaid spending</u>, stricter immigration policies and <u>escalating trade tension</u>. However, the state's fundamentally strong, diverse and resilient economy will likely allow it to withstand economic headwinds ahead, albeit with slower growth. The state's budget balancing powers, including revenue-raising and expenditure-cutting ability, will be crucial to maintaining its financial health, a key component of its credit quality.

Washington's total leverage (debt, pension, OPEB, other long-term liabilities) is slightly higher than the <u>50-state median</u> but has declined in recent years (Exhibit 2) and is much lower than that of the <u>United States</u> (Aaa negative).

Exhibit 1
Washington's budgetary reserve position will retreat from record positions
Cash basis; fiscal year



The Washington Rescue Plan Transition Account was established during the pandemic for related expenditures and serves as a secondary rainy day fund, but with less restrictions.

(F) reflects the state's March 2025 quarterly revenue forecast and incorporates the 2024 supplemental budget to the 2023-2025 biennium budget. Near General Fund – State includes General Fund – State and certain funds that are statutorily designated as "related funds": the Opportunity Pathways Account ("OPA"), the Education Legacy Trust Account ("ELTA"), and the Workforce Education Investment Account ("WEIA")

Source: State of Washington; Moody's calculations

Credit strengths

» Strong economic and demographic fundamentals

- » Sound financial reserves and liquidity
- » Pension funding levels are strong and retiree health insurance liability is manageable
- » Institutionalized governance practices are strong

Credit challenges

- » Surge in costs of living, outpacing all other states over the last decade, could drive continued spending pressure for social related services
- » Above average exposure to several federal policy shifts, including trade tension and immigration restrictions and Medicaid cost shift
- » Exposure to cyclical commercial aerospace industry and commodity export markets, although reduced in recent years
- » Debt burden is above average, but has been declining

Rating outlook

Washington's outlook is stable, reflecting the positive underlying fundamentals of its economy and the state's strong governance practices which will continue to support sound reserves. Long-term liabilities are expected to remain manageable.

Factors that could lead to an upgrade

» Not applicable

Factors that could lead to a downgrade

- » A significant deterioration of the state's GAAP-basis available fund balance and cash balance to below 20% of own-source revenue
- » Protracted structural budget imbalance and/or a shift to reliance on one-time budget solutions
- » A sustained or structural weakening of the state's economy and demographic trends
- » A material increase in leverage and fixed costs to levels well above sector medians

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

	2020	2021	2022	2023	2024	State Medians
Economy						
Nominal GDP (\$billions)	620.1	687.7	742.9	807.9	854.7	329.4
Real GDP, annual growth	0.1%	6.9%	2.2%	5.1%	3.7%	2.4%
RPP-adjusted per capita income as % of US	106.1%	105.1%	103.9%	105.4%	106.8%	97.6%
Nonfarm employment, annual growth	-5.4%	2.7%	4.6%	2.0%	1.2%	1.1%
Financial performance						
Available balance as % of own-source revenue	26.9%	22.8%	40.5%	42.1%	40.0%	44.4%
Net unrestricted cash as % of own-source revenue	30.8%	35.4%	48.2%	46.1%	42.1%	72.4%
Leverage						
Total long-term liabilities as % of own-source revenue	187.1%	188.3%	150.7%	115.4%	108.9%	99.4%
Adjusted fixed costs as % of own-source revenue	7.3%	6.6%	4.9%	5.9%	5.9%	5.2%

Medians reflect 2024 economic data and FY2023 financial and leverage data (because several states have not yet published FY2024 ACFRs) Source: State of Washington ACFRs with Moody's adjustments; US Bureau of Economic Analysis; US Bureau of Labor Statistics

Profile

Washington is the thirteenth largest state by population, at 8 million. Its nominal gross domestic product (GDP) is the ninth largest, at \$854.7 billion as of 2024. Resident income measures are above average, although Washington's cost of living has surged in recent years. Washington's per capita personal income is equal to around 106.8% of the US after adjusting for regional cost of living.

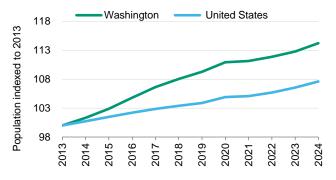
Detailed credit considerations

Economy

Washington's economy is demonstrating remarkable resilience amid higher interest rates, albeit slowing along with the nation's. Over the longer-term, we expect Washington's economy will continue to outperform the nation's, supported by its favorable demographic profile and diverse industrial base.

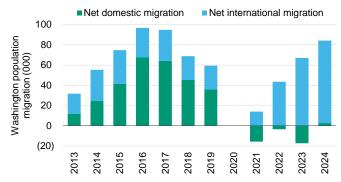
However, similar to many states, Washington is facing significant macroeconomic headwinds in the near to medium term. Broad and rapid federal policy changes/proposals since January – particularly tariffs, immigration and federal funding cuts – will weigh on Washington's economic prospects ahead. Washington has above average exposure to rising trade tension, as the state's 2024 exports represented 6.8% of GDP, higher than the 50-state median (5.2% of GDP) but markedly down from 13.6% in 2018. The state's economic growth could also slip closer to the national average if its strong population and labor force growth moderates. Washington's labor force has a higher share of unauthorized immigrants than the 50-state median, with the agriculture industry being the most exposed to a crackdown of unauthorized immigrants. Washington's pivotal professional and business services sector is also vulnerable to tighter international immigration policies because it has a high concentration of foreign-born workers. Further, given Washington's steep growth in costs of living, competition from lower-cost hubs could also gradually chip away the state's tech dominance and working-age population growth.

Exhibit 3
Washington benefits from above-average population growth....



Source: U.S. Census Bureau; Moody's Ratings

Exhibit 4 ...in part driven by strong in-migration



Note: migration data not available during census year (i.e. 2020) Source: U.S. Census Bureau; Moody's Ratings

Washington has a much greater reliance on the information industry than the nation overall, and the state currently boasts the highest share of tech employment among all states. The technology sector centered in and around <u>City of Seattle</u> (Aaa stable) has expanded rapidly over the last decade, bolstering Washington's economic growth (Exhibit 5) and lessened the state's traditional dependence on aircraft manufacturing and exports.

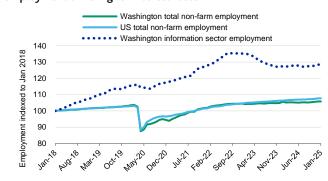
Despite some recent turbulence from the tech sector, Washington's real GDP growth continued to outpace that of the nation's in 2024 given continued recovery in other industries, including health services and manufacturing.

Exhibit 5
Washington's real GDP growth continues to outpace the US....



Source: U.S. Bureau of Economic Analysis; Moody's Ratings

...despite slowing job growth overall, including contracting tech employment amid higher interest rates



Source: U.S. Bureau of Economic Analysis; Moody's Ratings

The state's total employment growth has slowed amid cooler economic conditions; notably, employment in its information industry has contracted the first time since the 2007-08 financial crisis, but leveling off (Exhibit 6). As of January 2025, Washington's unemployment rate remains low at 4.3% and its labor force participation rate (63.1%) remains slightly above the US (62.6%).

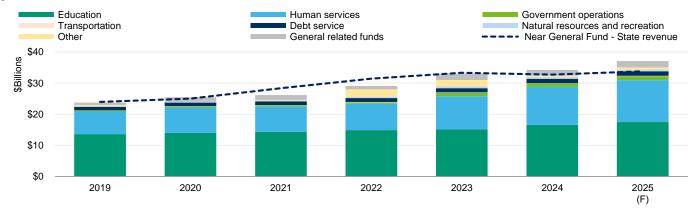
Finances and Liquidity

We expect Washington will maintain a sound financial position given its history of fiscal prudence.

After several years of record revenue increases followed by large expenditure growth, particularly for health and social services, budget writing in 2025 is proving more difficult for Washington. This is because costs to maintain current services continue to rise, while revenue growth softens. Washington's current 2023-2025 general fund biennium budget includes a manageable structural deficit bridged by record reserves, but this budget gap is set to widen over the next biennium because of caseload increases for social and health care services. At the same time, economic headwinds risk downward pressure on its revenues, testing Washington's fiscal management. The state's fiscal 2025 year to date General Fund-State revenue through Feb 2025 grew by 2.7% year-over-year, and its latest March 2025 revenue forecast

revised down General Fund-Near revenue growth in fiscal 2026 and 2027 to 2.8% and 4.3%, respectively, amid decreasing consumer confidence, trade policy changes and reduced spending by the federal government.

Exhibit 7
Washington's health care and social services related spending saw large increase in recent years, creating a structural budget gap as revenue growth moderates



(F) reflects the state's March 2025 quarterly revenue forecast and incorporates the 2024 supplemental budget to 2023-2025 biennium budget. Source: State of Washington; Moody's Ratings

Budget negotiation for the upcoming 2025-2027 (July 1, 2025 - June 30, 2027) biennium is underway and the budget will likely be finalized in May 2025. We expect Washington will restore to balanced operations and maintain adequate reserves. Former Governor Jay Inslee and current Governor Bob Ferguson have each recommended a number of budget tightening actions, including delaying the implementation of new programs, streamlining efficiencies, reducing spending across most agencies and furloughing state workers. A freeze on non-essential spending and hiring has also been in place since December 2024. Lawmakers have also proposed a number of tax increases, including tapping into the state's wealthy individuals and largest corporations, to balance the operating budget. A gas tax hike is also being considered for the state's transportation budget. Positively, voters rejected two citizen-initiated measures in November 2024 – to repeal the state's capital gains tax and climate cap-and-invest program – that would have constrained some revenue flexibility.

We expect the state's budgetary reserve (general fund plus budget stabilization fund) will retreat from a record position to a level more consistent with the <u>Treasurer's recommended 10% level</u>. The state's ability to maintain adequate reserves will be crucial amid shifts in federal policies and economic headwinds ahead. Washington's largest exposure to federal policy changes / proposals is a material cut in the federal share of Medicaid. Our <u>Medicaid stress test</u> shows that Washington would suffer the largest budget impact among all 50 states, if the federal government reduces Medicaid expansion costs from the current 90% to each state's core Federal Medical Assistance Percentage (FMAP). This is because Washington's high per capita income results in a lower core FMAP than many peers, and the state's budget size is relatively small in relation to the size of its economy among peers.

Liquidity

We expect the state's liquidity position will remain sound with conservative fiscal management.

Available operating reserves, which for the purpose of our analysis includes unassigned, committed and assigned general fund and non-major governmental fund balances and internal services fund balance, totaled \$16.9 billion as of fiscal end 2024, representing a robust 40.0% of own-source revenue.

Year to date in fiscal 2025, the <u>average daily balance of the Treasury / Treasurer's Trust Fund</u> remains above \$16 billion, well above its pre-pandemic level. The projected balance for the Treasury/Treasurer's Trust Fund as of June 30, 2025 will remain strong at \$14.5 billion. Washington's statute allows for the commingling of all balances in the State Treasury and in the custody of the State Treasurer for banking, cash management, and investment purposes. This allows the state to use non-general fund money to provide liquidity to the general fund, if needed.

Leverage and fixed costs

The state's overall leverage (total debt, pension, OPEB and other long-term liabilities) is moderately higher than the sector median, but has declined. Consistent with sector-wide trends, Washington's ability to service long-term liabilities improved in recent years as it saw strong revenue growth; also, its pension and OPEB burden declined in part because of higher interest rates we use to discount these liabilities.

As of fiscal year end 2024, the state's total leverage represented 108.9% of own source revenue, slightly above the sector's 2023 median.

Washington's fixed costs, based on Moody's pension tread water metric, are moderate and represented 5.9% of own-source revenue in fiscal 2024, also slightly above the 50-state median.

Debt and debt structure

Debt currently represents the largest component (61%) of Washington's long-term liabilities. As of fiscal 2023, Washington's net tax-supported debt burden in relation to its own source revenue ranks the fifth highest among all 50 states.

Washington's net tax-supported debt (NTSD) consists primarily of general obligation bonds, including those secured by and expected to be paid from transportation revenue. The state's bonds are long-term fixed rate bonds, mainly issued with a 25-year maturity and level debt service structure; on an aggregate basis, the state's debt has a declining debt service structure.

Debt legal security

The state has four classes of general obligation bonds: General Obligation Bonds or Various Purpose General Obligation Bonds, Motor Vehicle Fuel Tax and Vehicle Related Fees (MVFT/VRF) General Obligation Bonds and Triple Pledge Bonds – all of which are general obligations of the state, to which the state has pledged its full faith, credit and taxing power. The MVFT bonds are additionally secured by and expected to be paid from motor vehicle fuel taxes. The MVFT/VRF bonds are additionally secured by and expected to be paid from tolle-related fees. The Triple Pledge Bonds are additionally secured by motor vehicle fuel taxes and toll revenues and expected to be paid from toll revenues.

The state also issues certificates of participation, rated Aa1, to finance capital projects and equipment on behalf of state and local agencies. The COPs are secured by and expected to be paid from payments made by participating state and local agencies including: (1) lease payments for real property projects, and (2) installment purchase payments for personal property. Payments made by the state agencies are subject to appropriation by the legislature and executive order reduction by the governor. The state has never failed to make needed appropriations to meet the payment obligations for state agencies related to its COPs. Payments made by the local agencies are secured by the full faith and credit of the local agencies, effectively general obligation, limited tax obligations. In the event any local agency fails to make its scheduled payment, the state will make payments on behalf of the local agencies, subject to appropriation. No local agency has ever failed to make a payment obligation related to state-issued COPs.

Debt-related derivatives

The state has no variable rate debt and no debt-related derivatives.

Pensions and OPEB

Washington's pension liability is expected to remain moderate, supported by proactive management. Based on the state's fiscal 2024 reporting, Moody's has calculated that the state's adjusted net pension liability (ANPL) to be \$9.0 billion or 21.4% of own-source governmental revenues, well below the latest 50-state median (52.6% of own source revenue). Moody's adjustments are not intended to replace the state's reported liability information, but to improve comparability with other rated entities.

The state is committed to fully funding actuarially determined pension contributions. Notably, the state's pension contributions have consistently exceeded Moody's calculated tread water level, or the level of contribution that would prevent reported unfunded liabilities from growing under reported assumptions. Contributing at above the treadwater level signals that the state's reported pension burden will continue to decline if investment targets are achieved.

The state's other post-employment benefit (OPEB) liability is moderate. As of fiscal 2024 reporting, Moody's has calculated the state's adjusted net OPEB liability (ANOL) to be \$3.0 billion, representing 7.2% of own source revenue, roughly in-line with the 50-state median.

ESG considerations

Washington (State of)'s ESG credit impact score is CIS-2

Exhibit 8

ESG credit impact score



Source: Moody's Ratings

Washington's ESG Credit Impact Score is **CIS-2** reflecting its neutral-to-low exposure to environmental risks and social risks and positive governance profile.

Exhibit 9
ESG issuer profile scores



Source: Moody's Ratings

Environmental

Washington's E issuer profile score is **E-2**. According to data from Moody's ESG Solutions, Washington counties average projected rate of change in five climate risk factors, when weighted by county GDP, is below average in the nation. King County, which accounts for nearly 50% of the state's GDP, is not projected to have high risk in any of the five climate factors according to Four Twenty Seven's assessment scale. The most significant impact of climate change for Washington may be an increase in the frequency and severity of wildfires. The state budgets a contingent amount for fires each year, but it will continue to depend upon the availability of federal aid through FEMA to mitigate the cost of the largest fires.

Social

Washington's S issuer profile is **S-2**. Demographic trends and income levels are generally positive and have contributed to its strong economic growth, particularly in the Seattle area, where there has been growth in the working-age population supporting growth in high-wage industries. Housing affordability, however, is a significant challenge. Residents have above average educational attainment and the state's labor force participation rate is above average. All of these factors contribute to the state's strong economic fundamentals.

However, Washington's <u>housing affordability has eroded</u> and it is now one of the least affordable among 50 states. Weakened affordability will likely slow down migration, a main driver of the state's population growth. Washington also has one of the highest per capita homeless rates. The state has prioritized historic new investments in housing and homelessness in recent years.

Governance

Washington's G issuer profile score is **G-1**. Washington has strong governance practices including a quarterly consensus revenue forecasting process, multi-year revenue and expenditure projections, timely budget adoption and a demonstrated willingness to address budget shortfalls.

Since 2007, the State Constitution has required maintenance of a mandatory rainy day fund (Budget Stabilization Account), which requires the transfer, by the June 30 close of each fiscal year, of at least 1% of General State Revenues for that fiscal year. In addition, by June 30 of the second year of each Biennium, three-quarters of any "extraordinary revenue growth" must be transferred to the Budget Stabilization Account, unless the average state employment growth for the preceding biennium averaged less than 1% per fiscal year. "Extraordinary revenue growth" is defined as the amount by which the growth in General State Revenues exceeds the average biennial percentage growth in General State Revenues over the prior five biennia by more than one third. The state's constitutionally restricted Budget Stabilization Account may be spent only after appropriation and under specific circumstances: by legislation approved by a simple majority if the governor declares a state of emergency, or if employment growth is forecasted to be less than 1% for that fiscal year; or by legislation approved by at least 3/5 of the members of each house.

Although frequent voter initiative activity can create budget challenges, the state legislature has broad powers to amend or suspend voter-approved initiatives and a track record of doing so as needed to maintain budgetary balance.

Rating methodology and scorecard factors

The <u>US States and Territories Rating Methodology</u> includes a scorecard, which summarizes the rating factors generally most important to state and territory 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 10
US states and territories rating methodology scorecard Washington (State of)

Measure	Weight	Score
106.8%	15%	Aaa
1.2%	15%	Aaa
Aaa	20%	Aaa
Aaa	20%	Aaa
108.9%	20%	Aa
5.9%	10%	Aaa
		Aaa
		Aaa
	106.8% 1.2% Aaa Aaa	106.8% 15% 1.2% 15% Aaa 20% Aaa 20% 108.9% 20%

Source: US Bureau of Economic Analysis, State of Washington, 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 ir.moodys.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

1434065

11

CLIENT SERVICES

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454