

# **MOODY'S CORPORATION THIRD QUARTER 2024 EARNINGS CONFERENCE CALL**

TUESDAY, OCTOBER 22, 2024

ROB FAUBER, NOÉMIE HEULAND, SHIVANI KAK

## **SHIVANI KAK**

Thank you. Good morning and thank you for joining us today. I'm Shivani Kak, Head of Investor Relations. This morning, Moody's released its results for the third quarter 2024 as well as our revised outlook for select metrics for full-year 2024. The earnings press release and the presentation to accompany this teleconference are both available on our website at [ir.moody's.com](http://ir.moody's.com).

During this call, we will also be presenting non-GAAP or adjusted figures. Please refer to the tables at the end of our earnings press release filed this morning for reconciliations between all adjusted measures referenced during this call and US GAAP. I call your attention to the Safe Harbor language, which can be found towards the end of our earnings release. Today's remarks may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In accordance with the act, I also direct your attention to the Management's Discussion and Analysis section and the risk factors discussed in our Annual Report on Form 10-K for the year ended December 31, 2023, and in other SEC filings made by the company, which are available on our website and on the SEC's website. These, together with the Safe Harbor statement, set forth important factors that could cause actual results to differ materially from those contained in any such forward-looking statements. I would also like to point out that members of the media may be on the call this morning in a listen-only mode.

I'll now turn the call over to Rob.

## **ROB FAUBER**

Thanks, Shivani. Good morning or good afternoon. Thanks, everybody, for joining today's call. I'm really looking forward to discussing our third quarter results with you. We again delivered some impressive results with a 23% increase in revenue and adjusted operating margin of approximately 48% and 32% growth in adjusted diluted EPS.

One of the key drivers of these great results was our rating business, with a remarkable 41% increase in revenue versus the prior-year period. September was a particularly strong month for issuance. It included a new record for weekly Investment Grade activity with over \$85 billion issued across 61 deals in the first week of September. Strength in first-time and infrequent issuers drove transactional revenue up 70% for the quarter, and that outpaced global rated issuance growth of 51%. And this growth, combined with ongoing cost discipline, delivered over 600 basis points in adjusted operating margin expansion compared to last year.

This year has obviously been a very strong issuance environment. In fact, it's likely to be the second strongest on record. And amidst that strength, we see both cyclical and secular tailwinds that are

going to drive future growth. And that includes refunding walls, M&A, and other market trends that give us confidence in the medium-term outlook for our ratings business.

In MA, we delivered 7% overall revenue growth and 9% growth for both ARR and recurring revenue, both of which exclude one-time revenue that we're intentionally deemphasizing. Year-to-date customer retention is at 93%, and our adjusted operating margin for the quarter was in line with our expectations at 30.3%.

Now, our Decision Solutions line of business, and that is Banking, Insurance, and KYC, that continues to lead MA with almost \$1.4 billion of ARR, and that's growing at 12%. Last month we marked the third anniversary of our RMS acquisition. So, I'm going to spend a few minutes on today's call recapping our progress and performance there.

When I finish, I'll turn it over to Noémie to provide more color on our numbers, including raises to several of our full-year guidance metrics, including our outlook for adjusted diluted EPS.

But, before I move to MIS, I do want to take a moment to acknowledge our third consecutive number one ranking in the Chartis RiskTech100. We're number one in 12 categories, and that's a testament to the breadth and depth of our solutions, to the strength of our competitive positioning, and to the trust that our customers place in us. So, a big shout out to all my colleagues who contributed to this fantastic recognition.

Now, moving to ratings, as I mentioned, we feel really good about the durable drivers of MIS growth as we look into the future, and those are both cyclical and structural.

Looking at the market drivers, as you all know very well, the refunding walls are a key source of built-in growth and, last week, our analytical teams published their analytical report on the non-financial corporate refi walls in both the U.S. and EMEA. And that data shows an 11% growth in the upcoming 4-year maturity walls, which amount to almost \$5 trillion, and that represents a record high. Now, the majority of this growth is actually coming from spec-grade issuers, where for the first time, forward maturity walls exceeded \$2 trillion, and that's up 19% from our last study. That's particularly true for the U.S. market, where forward maturities are up 17% and spec-grade refi walls are up approximately 27% for the upcoming 4 years. And that bodes very well for future issuance and, as I think many of you know, spec-grade is obviously a positive to our revenue mix.

For any of you that want to dive deeper, and I'm sure there are many on this call, just check out the full reports that we made available on our website at [moody's.com](https://www.moody's.com) or contact our IR team.

Another significant historical driver of ratings revenue growth is M&A. And activity in recent years has been well below historical levels, as you can see on this chart. But we don't see that subdued level as sustainable, given the needs for private equity sponsors to both exit as well as deploy huge amounts of capital, along with a more benign rate environment and improved macroeconomic conditions.

Now, along with these market factors, there are also some structural trends that we believe will drive both credit supply and the need for independent third-party ratings and assessments.

The first is private credit. That's been a consistent theme on our recent calls. And this sector is experiencing some significant growth. We expect that to continue. Last week we published estimates that private credit assets under management will reach up to \$3 trillion by 2028. As this market grows, the need for transparency, data and rigorous independent credit assessment is likely to become more important than ever. As Apollo highlighted in their recent investor day, rating

agencies have an important role to play in this ecosystem. I completely agree with that, and we're gearing up to ensure that we meet the needs of this market.

The second is sustainable and transition finance and, to put this opportunity into context, currently countries and companies that have net-zero commitments that cover something like 93% of global GDP, and our analysts estimate that in order to meet these targets, global clean energy investment needs are going to rise by 2.5 times by 2030 to around \$4.5 trillion annually. So that means huge amounts of debt capital are going to be raised and there's going to be increasing demand to understand how these investments are translating to organizations' progress on their decarbonization efforts. So we're investing to provide the insights, the analysis and the products to meet this demand.

The third growth driver is emerging and domestic debt markets. And many of you've heard me say before that domestic debt market issuers are the cross-border issuers of tomorrow. And while smaller than developed economies, emerging market countries typically average higher economic growth rates than more developed markets. So we've been investing to build out our footprint and market leadership across Asia, Africa and Latin America, so that we are poised to capitalize on this growth.

Finally, we're positioning our ratings business for a world of digital finance, and that includes blockchain and tokenization. While the issuance volumes are relatively modest at present, there are a number of public and private sector initiatives and pilots in this space, and we want our ratings to play just as important a role in a digital issuance world as they do in today's analog world.

So, as I said, a number of factors that give us confidence about our growth, both in the near-term and over the medium-term for MIS.

As I mentioned earlier, we've just hit the third anniversary of our RMS acquisition. So I thought it made sense to take stock of our progress on today's call.

Some of you may remember the financial profile of RMS before we acquired it, low-single digit revenue growth, EBITDA margins in the high-teens. And it was also early in its second cloud platform launch. And our investment thesis at the time was two-fold. First, we thought there was much more that we could do for the insurance industry as we expanded our TAM to the property and casualty sector. And second, we believed that RMS' really rich climate and cat modeling capabilities would be increasingly important to a wide range of finance and risk applications and also for a broader range of customers. We also thought that Moody's represented a natural home for RMS after years of ownership by DMGT.

So three years later, how have we done?

Well, first, RMS is now fully integrated into our insurance solutions business. Its growth has improved significantly over the last three years and now is growing in line with the mid-teens ARR growth of our broader insurance business. It's also now operating at MA-like margins.

Since we acquired RMS, we've also grown the number of customers on the cloud-based Intelligent Risk Platform fivefold to over 250. And these customers are using our next generation of high-definition models, enabling them to get more granular insights, leveraging the power of cloud computing and also offering a great upsell pathway and competitive differentiator.

Now, as part of Moody's, RMS has also expanded the ways that it partners with the insurance industry. That includes last year's partnership with NASDAQ, where we're hosting third-party and in-house models on the IRP, our creation of a Cyber Industry Steering Group with the largest

players in the cyber insurance market, to develop tools to help this market grow, and our recent collaboration with Lloyd's to build a greenhouse gas emission platform for the Lloyd's insurance market.

And three years later, together with Moody's, RMS has solidified its blue-chip customer base with all 10 of the top 10 global reinsurance brokers, 9 of the top 10 commercial lines insurers, and 28 of the top 30 global reinsurers. That really is market validation of RMS as the gold standard in the industry.

We continue to invest to extend the solutions that we deliver for the insurance sector and beyond; and, in early September, we announced the acquisition of Praedicat to expand into casualty analytics, and that's an area of growing interest for insurers. As I've talked about in past calls, we've leveraged RMS' platform, technology and engineering teams across all of Moody's Analytics, and we've integrated their climate capabilities into solutions for banks and corporates.

So, we feel really good about the progress with RMS. And earlier this year, we merged RMS and our legacy life business into a broader Moody's insurance solutions unit. So I feel even more confident about how this positions us for the future, both across the insurance industry, but also with respect to our ability to serve the needs of organizations to better understand physical risks from extreme weather and a changing climate.

With that, I'm going to hand it over to Noémie to provide more details on our numbers.

## **NOÉMIE HEULAND**

Thank you, Rob, and good morning everyone.

Q3 was a record quarter, the highest third quarter revenue performance in Moody's history, with strong growth across revenue and profitability metrics, driving 32% adjusted diluted EPS growth and a free cash flow conversion rate of over 100% of net income. We delivered \$1.8 billion of revenue, a 23% increase compared to last year, with Moody's Ratings growing transactional revenue by 70%, well above the 51% growth in global issuance. And that truly demonstrates the impressive strength of our ratings franchise. We executed very well across all sectors, with the most notable contribution from Corporate Finance. Investment Grade transaction revenue growth of 137%, exceeded 84% growth in issuance, and that was driven by sustained levels of infrequent issuer activity, as well as large jumbo deals over the summer. In addition, Leveraged Finance transaction revenue grew 67%, that's approximately \$80 million, supported by the favorable spread environment. Collectively, this drove the largest third quarter for Corporate Finance revenue on record. The level of infrequent issuers activity, which was the strongest in over a decade, also drove a favorable revenue mix in FIG, where transaction revenue grew 77%, well above issuance growth of 18%.

Turning to Moody's Analytics, revenue grew 7%, including 1 point of growth from FX. Recurring revenue, which is now 95% of the segment revenue, grew 9%, which was in line with our ARR growth. As Rob mentioned earlier, our year-to-date retention rate is 93%, illustrating the stickiness of our solution.

Consistent with recent quarters, revenue growth was driven by recurring revenue in Decision Solutions, which is over 40% of our total revenue, which as Rob said, delivered 12% year-on-year ARR growth. Let me provide some color on each of the main businesses in this segment.

Banking revenue grew 3%. What's happening here is we have the effect of two opposite dynamics. On the one hand, we had double-digit decline in low-margin transactional revenue and flat growth in on-prem sales year-over-year. On the other hand, we continue to invest in our banking platform and focus our sales efforts to drive recurring revenue growth, which was 10% in Q3, aligned with ARR growth and aligned with the first half of 2024.

We observed similar trends in our Insurance business, where revenue grew 7%, driven by recurring revenue growth of 11% and our insurance ARR grew 13%.

KYC delivered 19% recurring revenue growth. We've continued to deliver higher levels of growth from the non-financial corporate and government sectors. And we're actively investing to scale and sustain this level of growth as we expand our capabilities to deliver integrated solutions for a number of key customer workflows, including compliance, supply chain and trade credit.

Outside of Decision Solutions, our Research & Insights, and Data & Information businesses grew reported revenue by 6% and 7% respectively, which is broadly in line with ARR growth. Data & Information ARR growth was a bit lower this quarter at 8%, as a couple of large federal government contracts which contributed to higher growth in 2023 were renewed at a lower value this quarter.

Overall, it was an exceptionally strong quarter. MIS revenue performance translated into a 320 basis point improvement in the total company adjusted operating margin, a 32% growth in adjusted diluted EPS and over 100% of free cash flow to net income<sup>1</sup> conversion year-to-date. MIS achieved 59.6% adjusted operating margin, and that includes the adjustments to reflect the impact of increased incentive compensation accruals, while MA delivered 30.3% adjusted operating margin, a sequential improvement of 180 bps from Q2.

With a record third quarter and continued strength in the market, we are updating guidance to our full-year ratings revenue, underpinned by revised global issuance growth assumptions for the full year across all asset classes, as you can see on this slide. We expect issuance will continue to be supported by opportunistic activity in the fourth quarter, as issuers take advantage of lower rates, high spreads and strong investor demand. We also expect sustained levels of activity within first-time mandates, which we forecast will revert close to pre-pandemic levels. Our revised guidance of mid-30s percentage range issuance growth for the full year now implies a mid-single digit decline in global issuance for the fourth quarter, which is an improvement from an expected decline in the mid-teens back in July

Now, with that backdrop, we are raising our guidance for MIS revenue growth to high-20s percentage range, which at the higher end of the range would translate into an increase in Q4 ratings revenue expectation versus prior guidance. We are raising MIS' adjusted operating margin to a range of 59% to 60%, up 100 basis points from prior guidance. The upward revision to our guidance range account for the adjustment to our incentive compensation, as well what's included in the full-year range is approximately 50 basis points of headwind from the settlement of a regulatory matter, which we recorded and disclosed in Q2.

For MA, we're maintaining our guidance across all metrics.

Taking all this into consideration, we are now expecting Moody's revenue to grow in the high-teens percentage range, expenses to increase by approximately 10%, and adjusted operating margin in the range of 47% to 48%. Consistent with last year, the revised expense outlook primarily reflects

---

<sup>1</sup> Revised from spoken language.

increases to incentive compensation, the majority of which will be in MIS, as a result of the upward revisions to the full-year ratings revenue outlook.

We are also updating our free cash flow guidance to approximately \$2.3 billion and, in addition, we are increasing and narrowing our adjusted diluted EPS guidance range to \$11.90 to \$12.10, an \$0.80 increase at the midpoint, and a growth of approximately 21% versus the prior year.

Before we go into Q&A, I want to say I'm very proud of our team's performance this quarter, and Rob and I cannot thank our colleagues enough for their hard work and dedication. That concludes our prepared remarks.

**"SAFE HARBOR" STATEMENT UNDER THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995**

Certain statements contained in this document are forward-looking statements and are based on future expectations, plans and prospects for Moody's business and operations that involve a number of risks and uncertainties. Such statements involve estimates, projections, goals, forecasts, assumptions and uncertainties that could cause actual results or outcomes to differ materially from those contemplated, expressed, projected, anticipated or implied in the forward-looking statements. Stockholders and investors are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements and other information in this document are made as of the date hereof, and Moody's undertakes no obligation (nor does it intend) to publicly supplement, update or revise such statements on a going-forward basis, whether as a result of subsequent developments, changed expectations or otherwise, except as required by applicable law or regulation. In connection with the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, Moody's is identifying certain factors that could cause actual results to differ, perhaps materially, from those indicated by these forward-looking statements. These factors, risks and uncertainties include, but are not limited to: the impact of general economic conditions (including significant government debt and deficit levels, and inflation and related monetary policy actions by governments in response to inflation) on worldwide credit markets and on economic activity, including on the volume of mergers and acquisitions, and their effects on the volume of debt and other securities issued in domestic and/or global capital markets; the uncertain effectiveness and possible collateral consequences of U.S. and foreign government initiatives and monetary policy to respond to the current economic climate, including instability of financial institutions, credit quality concerns, and other potential impacts of volatility in financial and credit markets; the global impacts of the Russia - Ukraine military conflict and the military conflict in Israel and the surrounding areas on volatility in world financial markets, on general economic conditions and GDP in the U.S. and worldwide, on global relations and on the Company's own operations and personnel; other matters that could affect the volume of debt and other securities issued in domestic and/or global capital markets, including regulation, increased utilization of technologies that have the potential to intensify competition and accelerate disruption and disintermediation in the financial services industry, as well as the number of issuances of securities without ratings or securities which are rated or evaluated by non-traditional parties; the level of merger and acquisition activity in the U.S. and abroad; the uncertain effectiveness and possible collateral consequences of U.S. and foreign government actions affecting credit markets, international trade and economic policy, including those related to tariffs, tax agreements and trade barriers; the impact of MIS's withdrawal of its credit ratings on countries or entities within countries and of Moody's no longer conducting commercial operations in countries where political instability warrants such actions; concerns in the marketplace affecting our credibility or otherwise affecting market perceptions of the integrity or utility of independent credit agency ratings; the introduction or development of competing and/or emerging technologies and products; pricing pressure from competitors and/or customers; the level of success of new product development and global expansion; the impact of regulation as an NRSRO, the potential for new U.S., state and local legislation and regulations; the potential for increased competition and regulation in the jurisdictions in which we operate, including the EU; exposure to litigation related to our rating opinions, as well as any other litigation, government and regulatory proceedings, investigations and inquiries to which Moody's may be subject from time to time; provisions in U.S. legislation modifying the pleading standards and EU regulations modifying the liability standards applicable to credit rating agencies in a manner adverse to credit rating

agencies; provisions of EU regulations imposing additional procedural and substantive requirements on the pricing of services and the expansion of supervisory remit to include non-EU ratings used for regulatory purposes; uncertainty regarding the future relationship between the U.S. and China; the possible loss of key employees and the impact of the global labor environment; failures or malfunctions of our operations and infrastructure; any vulnerabilities to cyber threats or other cybersecurity concerns; the timing and effectiveness of our restructuring programs, such as the 2022 - 2023 Geolocation Restructuring Program; currency and foreign exchange volatility; the outcome of any review by tax authorities of Moody's global tax planning initiatives; exposure to potential criminal sanctions or civil remedies if Moody's fails to comply with foreign and U.S. laws and regulations that are applicable in the jurisdictions in which Moody's operates, including data protection and privacy laws, sanctions laws, anti-corruption laws, and local laws prohibiting corrupt payments to government officials; the impact of mergers, acquisitions, such as our acquisition of RMS, or other business combinations and the ability of Moody's to successfully integrate acquired businesses; the level of future cash flows; the levels of capital investments; and a decline in the demand for credit risk management tools by financial institutions. These factors, risks and uncertainties as well as other risks and uncertainties that could cause Moody's actual results to differ materially from those contemplated, expressed, projected, anticipated or implied in the forward-looking statements are described in greater detail under "Risk Factors" in Part I, Item 1A of Moody's annual report on Form 10-K for the year ended December 31, 2023, and in other filings made by the Company from time to time with the SEC or in materials incorporated herein or therein. Stockholders and investors are cautioned that the occurrence of any of these factors, risks and uncertainties may cause the Company's actual results to differ materially from those contemplated, expressed, projected, anticipated or implied in the forward-looking statements, which could have a material and adverse effect on the Company's business, results of operations and financial condition. New factors may emerge from time to time, and it is not possible for the Company to predict new factors, nor can the Company assess the potential effect of any new factors on it. Forward-looking and other statements in this document may also address our corporate responsibility progress, plans, and goals (including sustainability and environmental matters), and the inclusion of such statements is not an indication that these contents are necessarily material to investors or required to be disclosed in the Company's filings with the Securities and Exchange Commission. In addition, historical, current, and forward-looking sustainability-related statements may be based on standards for measuring progress that are still developing, internal controls and processes that continue to evolve, and assumptions that are subject to change in the future.



© 2024 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody.com](http://www.moody.com) under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Clasificación 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 61 003 399 657 AFSL 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.