



Fannie and Freddie's Implicit Guarantee— Another Iceberg on the Path to Privatization

JANUARY 2025

Prepared by

Jim Parrot
Mark Zandi



Fannie and Freddie's Implicit Guarantee— Another Iceberg on the Path to Privatization

BY JIM PARROTT AND MARK ZANDI

The incoming Trump administration appears determined to make another run at bringing Fannie Mae and Freddie Mac out of conservatorship as private companies. In its first term, the Trump administration made an earnest attempt but ultimately fell short, and all signs suggest that the second Trump term will pick up where it left off. In this brief, we discuss an underappreciated challenge to this effort: how to define the extent of the government's support for Fannie and Freddie once they are released.

The new administration's interest in ending the 16-year conservatorship is understandable. After all, the nation's housing market and economy would be better served with a more stable mandate for the gatekeepers of the mortgage market (see Chart 1). In conservatorship, the Federal Housing Finance Agency has broad discretion as conservator and regulator to oversee them in almost any manner it likes, leaving the government-sponsored

enterprises subject to swings in their mandate from one administration to the next. This is inefficient at best. At worst, it leaves the housing finance system at risk of overly ideological moves by future lawmakers that undermine the health or stability of the mortgage market. This has not happened thus far, despite big swings in the political parties and ideologies, but as long as the GSEs remain in conservatorship it remains a risk.

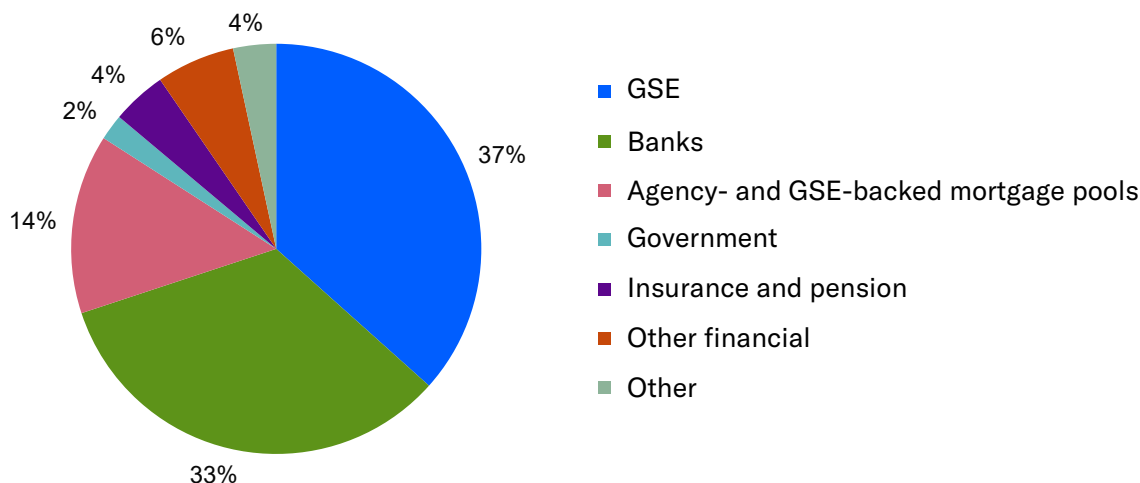
What is hard to fathom about the Trump administration's intentions is that it is prepared to end the GSEs' conservatorship on its own, administratively, leaving in place the flawed statutory framework that pushed the GSEs into the protection of conservatorship in the first place.

The implicit guarantee prior to conservatorship

The current framework has many flaws, but among the most problematic is the uncertainty it creates over the government's

Chart 1: The GSEs are the Primary Provider of Mortgage Credit

% of residential mortgage assets by holder in 2023



Sources: Federal Reserve, Z1. Financial Accounts of the United States, Moody's Analytics

support of the mortgage market. The GSEs' statutory charters provide each with a \$2.25 billion line of credit from the U.S. Treasury. While these lines were the only stated sources of government support for the enterprises prior to conservatorship, there was a widespread assumption that the government would bail out their shareholders and other creditors should the GSEs exhaust them. This assumption, which came to be called the GSEs' "implicit guarantee," afforded the GSEs many of the benefits of a government agency, which was critical to both their business model and their role in the nation's housing finance system.

It was critical to their business model because with it global investors took them to pose little to no risk as investments. Rating agencies gave them a credit rating consistent with the U.S. government's, allowing them to borrow at nearly a risk-free rate. And investors took the GSEs' mortgage-backed securities to be free of credit risk, attracting investments from a broad pool of risk-averse investors, which is essential for the housing finance system to provide affordable long-term fixed-rate pre-payable mortgages (see Chart 2).

Even the Federal Reserve relied on the GSEs' implicit guarantee. The Fed is permitted under [Section 14 of the Federal Reserve Act to purchase a limited number of assets, including the debt and securities of a "government agency."](#) The Fed justified purchasing the GSEs' debt and MBS on the grounds that the GSEs' implicit guarantee meant they were each a "government agency" under the act.

Critical to the rating agencies and the Fed is not that the GSEs posed little risk, but that they enjoyed the unlimited backing of the U.S. government, which allowed the Fed and

rating agencies to treat them as if they were part of the government. This is a vital distinction, as the Trump administration will not be able to replace the government's implicit guarantee with, say, more GSE capital or an even larger credit line and expect the same treatment from the Fed and each of the rating agencies.

While essential to the well-functioning of the GSEs, the implicit guarantee ultimately came at considerable cost to the taxpayer. The GSEs leveraged the economic advantages it afforded them to take on so much risk that it ultimately proved [unsustainable](#). As they suffered massive losses and fast-dwindling capital, their imminent collapse threatened to undermine the entire housing finance system and with it the nation's economy. Policymakers had no choice but to put them into conservatorship, finally making the implicit government guarantee explicit.

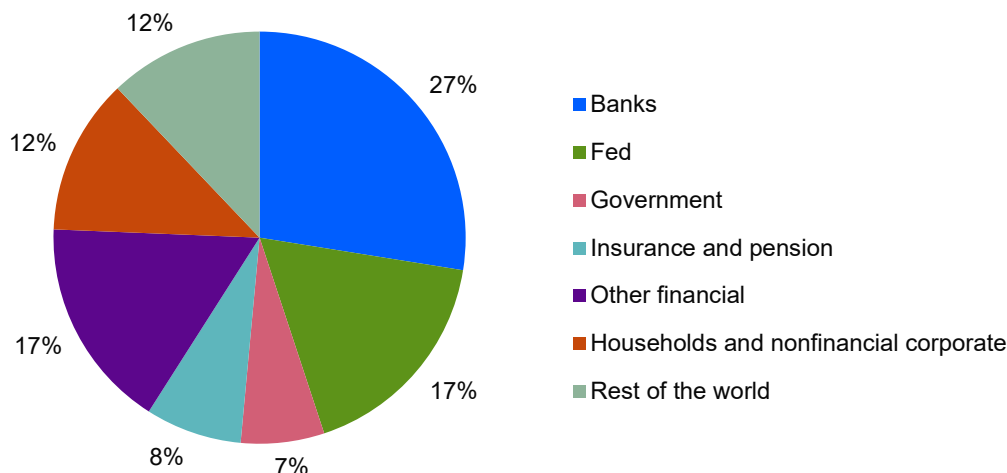
Trump's plans put the implicit guarantee back in play

It would take legislation to provide the GSEs with an explicit, unlimited government guarantee upon their release from conservatorship. Releasing them without Congress, as the Trump administration is apparently prepared to do, raises the question of where the government's support of the enterprises would end once they are released.

In addition to the \$2.25 billion credit line to the Treasury provided to each in their charter, Fannie and Freddie have contractual rights under the Preferred Stock Purchase Agreements with the Treasury to an additional [\\$114 billion](#) and [\\$140 billion](#) in support, respectively. Assuming the GSEs are released with these lines intact, the question for rating

Chart 2: GSE Securities Are Held by a Diverse Set of Global Investors

% of GSE and agency-backed securities by holder in 2023



Sources: Federal Reserve, Z.1 Financial Accounts of the United States, Moody's Analytics

agencies, the Fed and investors is whether the government's support stops there or continues with an implicit, limitless backstop as it did prior to conservatorship. Put simply, would the government bail out the GSEs if they exhausted their explicit commitments from the Treasury?

Conservatives have long been the most vocal of a long list of critics of the implicit guarantee, arguing that giving shareholders the upside and leaving taxpayers with the downside led the enterprises to assume too much risk heading into the Great Financial Crisis and would do so again if they were given the chance. The Trump administration will thus presumably go to some pains to argue that once it releases the GSEs there will be no such taxpayer support beyond the PSPAs. Rather, shareholders and creditors, not taxpayers, would bear the cost of the GSEs' failures the next time around.

To that end, the Trump administration will likely take steps intended to allow the GSEs to be resolved in an orderly fashion without government support should they fail again. The GSEs will be asked to finalize the [resolution plans](#) that the last Trump administration's FHFA director, Mark Calabria, required the GSEs to develop—plans that are to assume no government support in their liquidation. And the Trump administration will presumably designate the enterprises as systemically important financial institutions, or SIFIs, which would also [require the GSEs to formulate resolution plans](#) that assume no government intervention.

Combined with the significant improvement of the GSEs' capital positions, their much leaner risk profiles, and the considerable line of credit they now have to the Treasury, the Trump administration will likely contend that these resolution plans will remove the taxpayer altogether from the risk posed by the enterprises—that there is no implicit guarantee.

It is unlikely that the GSE model works without it, however.

What if the GSEs are released without an implicit guarantee?

In their [ratings of the GSEs'](#) debt prior to conservatorship, the rating agencies provided two distinct ratings. One assumed the government's backstop, and a second, so-called stand-alone rating, assumed no backstop. Once the GSEs were put into conservatorship and the ambiguity over the government's backstop was removed, [the agencies dropped the stand-alone rating](#).

When assuming the government's backstop, the agencies rate the GSEs' debt on par with their ratings of U.S. Treasury debt, on the grounds that it is the government's financial strength that ultimately matters if it stands behind the GSEs. When assuming no backstop, however, the agencies dropped the GSEs' ratings to below that of some of the largest SIFI banks, likely on the grounds that these larger banks posed less risk given their diversified lending activities, higher

capital levels, access to insured deposits, and the liquidity provided by the Federal Home Loan Banks and the Federal Reserve's discount window.

Moody's Ratings, for instance, gives the GSEs' debt an Aaa rating when assuming the government's backstop—the same rating that Moody's Ratings gives U.S. Treasury debt. And in its stand-alone rating just prior to withdrawing it a decade ago, Moody's Ratings effectively gave the GSEs a rating well below investment grade, compared with strong investment grade ratings for SIFI banks such as JP Morgan Chase.

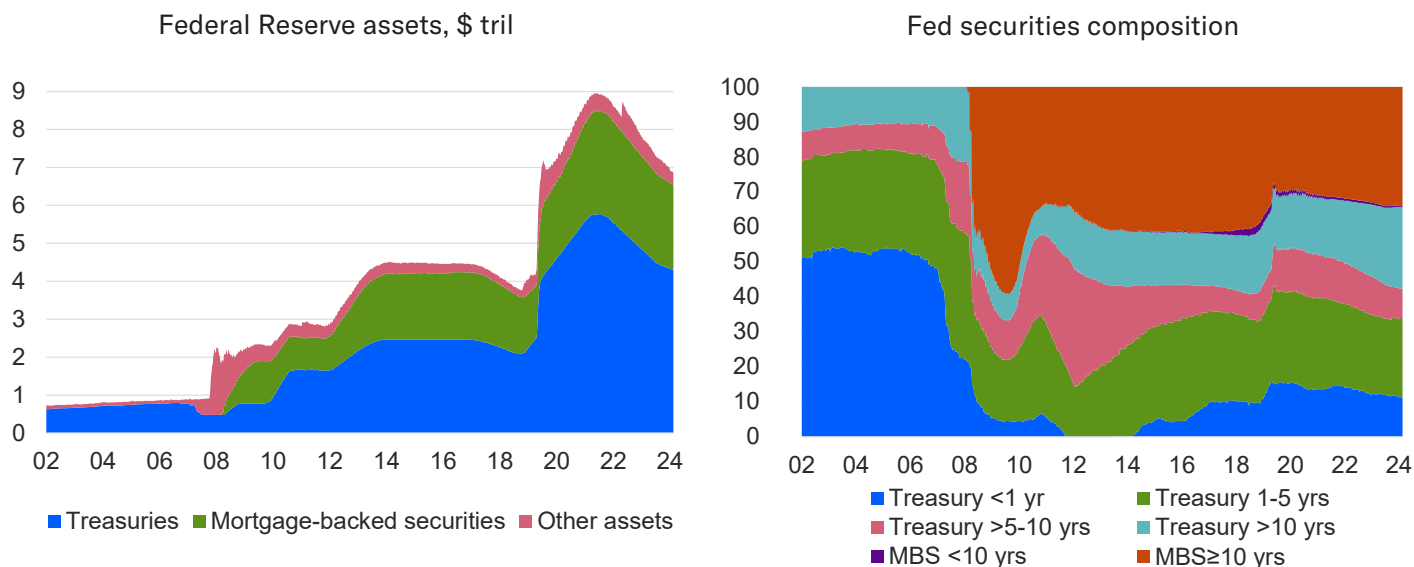
Once the GSEs are released from conservatorship, the rating agencies would reintroduce the dual ratings, and if they assume the GSEs have no implicit government backstop, some would downgrade them to the lower stand-alone rating. Given their much-improved capital position, their expanded line to Treasury, their more conservative underwriting standards, and stricter regulatory oversight, their stand-alone ratings this time around would be much higher than their stand-alone ratings of a decade ago, but at best they would likely be consistent with large SIFI banks.

In its [recent note on how it would rate the GSEs if released from conservatorship](#), Fitch discusses the impact of the level of government support assumed. It states that it would likely continue to align the GSEs' rating with that of the government, but partly because Fitch assumes the GSEs would retain a "dominant market presence." We take this to mean that Fitch is assuming that the government would remain committed to bailing out the GSEs if they failed—that they have an implicit guarantee. We believe that other ratings agencies would also continue to align the ratings of the GSEs with that of the government if they assumed an implicit guarantee. But we believe that they would downgrade the GSEs meaningfully if convinced that they were being released without the implicit guarantee.

The effect of a downgrade from any of the agencies would be considerable given how much the GSEs and the broader market rely on the assumption that the GSEs are effectively risk-free counterparties. The cost of the GSEs' funding would increase, likely dramatically in times of financial stress. This would force them to raise their guarantee fees and potentially reduce the amount of risk they are willing to take on, all of which would increase the cost of, and reduce access to, mortgage credit.

The effects would be felt throughout the financial system. Regulators would be forced to reassess how they handle bank exposure to the GSEs. [Under current rules](#), they impose a 20% risk-weight on a bank's holdings of agency MBS, compared with a much greater risk-weight for private label mortgage securities of comparable risk. And they impose no limit on a bank's total counterparty exposure to either of the GSEs, compared with a limit of 15% of Tier 1 capital exposure to any other counterparty. With a downgrade of the GSEs, regulators would likely align their treatment of exposure to

Chart 3: The Federal Reserve Has Become a Major MBS Investor



Sources: Federal Reserve, Moody's Analytics

the GSEs with a bank's exposure to other privately owned institutions without a backstop. This would reduce the demand for agency MBS and further increase the GSEs' funding costs, adding still more to the cost of a mortgage.

Investors in agency MBS would also reassess the fungibility of Fannie and Freddie securities as their counterparty risk became material to assessing the risk of the securities they guarantee, weakening the single security and perhaps eventually the to-be-announced market, both of which depend on that fungibility. Investors in the GSEs' [credit risk transfers](#) would require more compensation to cover the increased counterparty risk, leading the GSEs to hold more of the risk they take on.

In short, all the primary and secondary markets that depend on the GSEs' role as a risk-free intermediary would struggle to one degree or another, particularly in times of stress, when some investors and lenders will simply pull out of the market to avoid the uncertainty. The increased volatility would lead to a less liquid, less stable, and much more cyclical housing finance system.

The loss of the Federal Reserve's trust in the implicit guarantee would compound the problem. No longer able to buy the GSEs' debt or mortgage-backed securities, the Fed would lose a critical policy tool in supporting the market in times of stress. The Fed's purchase of agency MBS as part of its quantitative easing allowed policymakers to dampen volatility and stabilize the market during the Great Financial Crisis and again in the financial crisis that accompanied the COVID-19 pandemic (see Chart 3). Without that tool the next time the financial system seizes up, it would be much more difficult for policymakers to

control the volatility, leading to higher mortgage costs and less financial stability.

All of this will eventually put the Trump administration in an untenable position. It will be under intense pressure to say and do everything it can to disabuse everyone of the assumption that, in releasing the GSEs, the administration is re-creating the very implicit guarantee that conservatives and others believe pushed the GSEs into conservatorship in the first place. Indeed, given their centrality to the housing finance system, it would take some effort to convince the market that the GSEs would not be bailed out if their explicit support was exhausted. If the administration were to succeed, however, it is difficult to see how the GSE model would work, or work in any way that anyone should take comfort in.

Why do this?

There are, of course, other hurdles to clear in privatizing the GSEs. It would eventually involve the largest initial public offering in history, resolving a taxpayer investment of \$330 billion that [cannot easily be written down](#), and setting a fee for Treasury's \$250 billion line of credit that reflects its value but does not bankrupt the GSEs, all while transitioning much of the nation's mortgage infrastructure into private hands during the worst housing affordability crisis in a generation.

The incoming administration may be able to pull it off, threading the needle between ideological and market dictates on the implicit guarantee and clearing the innumerable logistical, legal and economic hurdles that stand in the way. But to what end? Despite all the hand-wringing among

policymakers, the GSEs are working remarkably well in conservatorship. The [credit quality of the loans](#) they are purchasing has never been better, and they have been distributing the lion's share of the risk they assume into the private market through credit-risk transfers. We have a system in which private capital dominates within a remote government footprint whose breadth allows policymakers to provide critical market stability as needed, all while most Americans who can afford a mortgage can get one.

The GSEs' conservatorship must ultimately come to an end, if only to bring long-term stability to the well-functioning

housing finance system we have today. But it should only be done in a way that actually improves the system, ideally with legislation that locks in what works and makes explicit the full breadth of government support the GSEs depend on to play the role we need of them. After all, ending the conservatorship is in itself of no value and would come at considerable cost if it leaves the system less liquid and stable. It will be critical to keep that in mind as the incoming administration attempts to chart another course through the challenging waters of recap and release, with the implicit guarantee only one among many looming icebergs.

About the Authors

Jim Parrott is a nonresident fellow at the Urban Institute and co-owner of Parrott Ryan Advisors, which provides strategic advice on housing finance issues to financial institutions active in the primary and secondary mortgage market. Parrott served in the Obama White House as a senior advisor at the National Economic Council, where he led the team charged with counseling the cabinet and president on housing issues. Earlier in the Obama administration, he was counsel to Secretary Shaun Donovan at the U.S. Department of Housing and Urban Development. Prior to his time in public policy, Parrott was a litigator, first in New York with Sullivan & Cromwell, and later in North Carolina with Smith Anderson. He served in Sri Lanka with the Peace Corps, has a BA in philosophy from the University of North Carolina, an MA in philosophy from the University of Washington, and a JD from Columbia Law School.

Mark Zandi is chief economist of Moody's Analytics, where he directs economic research. Moody's Analytics, a subsidiary of Moody's Corp., is a leading provider of economic research, data and analytical tools. Dr. Zandi is a cofounder of Economy.com, which Moody's purchased in 2005. Dr. Zandi is on the board of directors of MGIC, the largest private mortgage insurance company in the U.S., and is the lead director of PolicyMap, a data visualisation and analytics company, which is used by policymakers and commercial businesses.

He is a trusted adviser to policymakers and an influential source of economic analysis for businesses, journalists and the public. Dr. Zandi frequently testifies before Congress and conducts regular briefings on the economy for corporate boards, trade associations, and policymakers at all levels.

Dr. Zandi is the author of *Paying the Price: Ending the Great Recession and Beginning a New American Century*, which provides an assessment of the monetary and fiscal policy response to the Great Recession.

His other book, *Financial Shock: A 360° Look at the Subprime Mortgage Implosion, and How to Avoid the Next Financial Crisis*, is described by *The New York Times* as the "clearest guide" to the financial crisis.

Dr. Zandi is host of the *Inside Economics* podcast. Dr. Zandi earned his BS from the Wharton School at the University of Pennsylvania.

About Moody's Analytics

In an increasingly interconnected and complex operating environment, organizations face challenges decoding the intricacies of the global economy. Moody's Analytics Economics team delivers timely and in-depth data, forecasts and analysis of the global economy's latest developments and trends—empowering organizations and policymakers to identify and manage risks, seize new growth opportunities, respond to geopolitical threats, and thrive in an ever-evolving landscape.

The Economics team has more than 35 years of dedicated experience in economic forecasting and research. Leveraging our team's global coverage and local expertise, our economists provide unrivalled insight on pivotal economic topics, including labor markets, housing and consumer spending, among others, across the Americas, Europe, the Middle East, and APAC. We also provide real-time monitoring of economic indicators, scenario analysis, and thought leadership on critical themes such as monetary and fiscal policy and sovereign risk—all of which support decision makers and policymakers in strategic planning, product and sales forecasting, stress testing, credit risk management, and investment decisions.

By combining economic modeling, expansive data resources, and innovative technology solutions, we equip business leaders with critical insights to navigate the complexities of an ever-changing economic landscape. Recognized for our industry-leading solutions and commitment to quality, client service, and integrity, more than 1,000 organizations worldwide—including multinational corporations, governments, financial institutions, real estate firms, and professional investors—trust us to help them turn today's risks into tomorrow's opportunities.

Learn how Moody's Analytics can help drive your success at www.economy.com

DISCLAIMER:

Please attribute information in this document to Moody's Analytics, which is a division within Moody's that is separate from Moody's Ratings. Accordingly, the viewpoints expressed herein do not reflect those of Moody's Ratings.

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 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 ir.moody.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 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 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.