

ISSUER PROFILE

23 September 2024



TABLE OF CONTENTS

Company overview	1
Financial highlights	2
Business description	2
Distribution channels	4
Ownership structure	5
Subsidiaries, joint ventures and associates	7
Company management	7
Company history	8
Peer group	9
Related websites and information sources	9

CLIENT SERVICES

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

DekaBank Deutsche Girozentrale

Key facts and statistics - H1 June 2024

Company overview

DekaBank Deutsche Girozentrale (DekaBank) is the securities service provider (Wertpapierhaus) for the German Savings Banks Finance Group (Sparkassen-Finanzgruppe). As of 30 June 2024, DekaBank reported consolidated balance-sheet assets of €95.1 billion. Additionally, the total of asset management volume (off-balance assets under management) and the volume of Deka-certificates amounted to €402.2 billion (€223.1 billion from private customers and €179.1 billion from institutional customers).

DekaBank provides its private and institutional clients with a range of fund-based products, covering all major asset classes. It also offers real estate funds and financing, lending, capital markets-related trading and sales services, and treasury facilities, including liquidity, asset and liability management, and funding.

DekaBank was established in January 1999 following the merger of DekaBank GmbH and Deutsche Girozentrale — Deutsche Kommunalbank. Since June 2011, the bank has been fully owned by the German Sparkasse (savings banks) through two joint shareholders — the Deutscher Sparkassen- und Giroverband – DSGV ö.K. (DSGV ö.K., the German Savings Bank and Giro Association) and Deka Erwerbsgesellschaft mbH & Co. KG.

Sources: Company reports (annual report December 2023 and interim report June 2024) and company data

Financial highlights

The financials presented below are those reported by the entity and are not adjusted for Moody's analytic purposes. For Moody's generated ratios on DekaBank Deutsche Girozentrale, please see [DekaBank Deutsche Girozentrale page on moodys.com](https://www.moodys.com).

Exhibit 1

Latest full-year results

DekaBank Deutsche Girozentrale

(in € million)	31-Dec-23	31-Dec-22	31-Dec-21	% change 23/22	% change 22/21
Total Assets	84,800	97,396	88,865	(12.93)	9.60
Total Shareholders' Equity	7,253	6,737	6,346	7.66	6.15
Total Regulatory Capital	7,230	6,751	6,075	7.10	11.13
Common Equity Tier 1 Capital	5,848	5,462	4,716	7.07	15.82
Common Equity Tier 1 Capital Ratio (%)	19.2	17.4	15.2	180 bps	220 bps
Tier 1 Capital Ratio (%)	21.1	19.3	17.2	180 bps	210 bps
Non-performing Exposure Ratio (%)	0.9	0.4	0.4	51 bps	(3) bps
Net Income	753	533	537	41.23	(0.60)

Based on consolidated financial data.

The NPE ratio refers to the ratio of nonperforming exposures to maximum credit risk.

Source: Company reports (annual reports December 2023 and December 2022)

Exhibit 2

Latest half-yearly results

DekaBank Deutsche Girozentrale

(in € million)	30-Jun-24	30-Jun-23	% change 24/23
Total Assets	95,111	104,544	(9.02)
Total Shareholders' Equity	7,304	6,981	4.63
Total Regulatory Capital	7,113	6,787	4.80
Common Equity Tier 1 Capital	5,710	5,436	5.04
Common Equity Tier 1 Capital Ratio (%)	18.3	18.8	(50) bps
Tier 1 Capital Ratio (%)	20.2	20.8	(60) bps
Non-performing Exposure Ratio (%)	0.9	0.4	51 bps
Net Income	358	475	(24.70)

Based on consolidated financial data.

The NPE ratio refers to the ratio of nonperforming exposures to maximum credit risk.

Source: Company reports (interim reports June 2024 and June 2023)

Business description

DekaBank operates primarily as the securities service provider for the Sparkassen-Finanzgruppe and reported its core activities through the following five business divisions: Asset Management Securities, Asset Management Real Estate, Asset Management Services, Capital Markets and Financing. In 2023, the largest contributor to the bank's total income¹ was the Asset Management Securities segment.

In addition to publishing its results under International Financial Reporting Standards (IFRS), DekaBank reports an economic result to better represent its true economic position. This non-GAAP pretax measure incorporates several items not shown in the IFRS income statement, such as valuation gains and losses from hedged lending, actuarial gains and losses, potential charges, and interest expense related to AT1 bonds. This report's segment-related sections are based on DekaBank's economic result disclosures.

Asset Management Securities: This business division provides private and institutional clients with capital market-based asset management products, services and advisory mandates in all major asset classes. It offers actively managed mutual funds and special funds, and passively managed index funds. It also provides asset servicing, which enables savings banks and institutional investors to combine various asset classes in master funds. Furthermore, it provides pension products such as fund-based private and company

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.

pension products. As of 31 December 2023, this business division reported an asset management volume of €302.2 billion and accounted for 49.2% of the bank's total income² in 2023.

Asset Management Real Estate: This business division includes the group's property-related activities. Its products and services comprise property investment facilities for private and institutional investors, such as open-ended mutual and special property funds and credit funds, which invest in property, infrastructure and vehicle finance. Other services include the purchase and sale of property, management of such assets (real estate management), real estate lending and product development of group-wide property-based activities. As of 31 December 2023, this business division reported an asset management volume of €55.5 billion and accounted for 18.4% of the bank's total income in 2023.

Asset Management Services: This business division offers banking services related to asset management, which complements other asset management service offerings. It provides custody accounts with management services and offers custodial services to investment funds. In addition, it provides digital support for the securities business of the savings banks through its multichannel solutions. In 2023, this business division accounted for 12.3% of the bank's total income.

Capital Markets: This division offers support to stimulate trade between the savings banks, DekaBank and capital investment companies, while enabling clients to access capital markets. In addition to its function as a commission agent for all relevant asset classes and as a centre of competence for trading and structuring capital market products, this segment also includes DekaBank's certificate issuance business. This division also services non-Sparkassen-Finanzgruppe customers, primarily banks, insurance companies and pension funds. As of 31 December 2023, this business division reported a Deka certificates volume of €23.2 billion and accounted for 18.4% of the bank's total income in 2023.

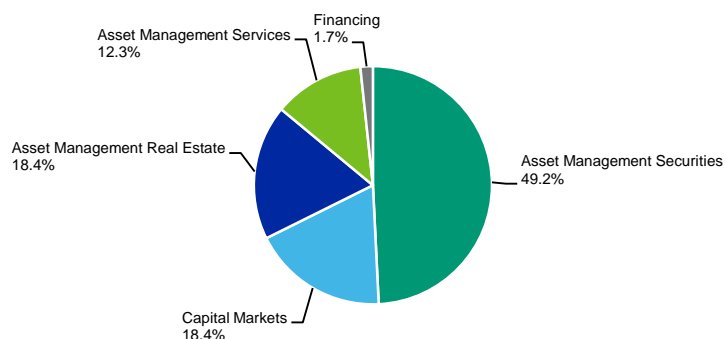
Financing: This business division offers loans on a standalone basis or through syndications and club deals. Focal financing segments include trade and export financing, aircraft financing, infrastructure financing and real estate financing. Furthermore, it offers refinancing services to savings banks. In 2023, this segment contributed 1.7% of the bank's total income.

Other: Through this division, DekaBank books overhead costs, pension obligations and income that is not directly attributable to the reportable segments. This excludes the income and expenses of treasury functions, which have been allocated to the operating segments on a source-specific basis.

Sources: Company report (annual report December 2023)

Exhibit 3

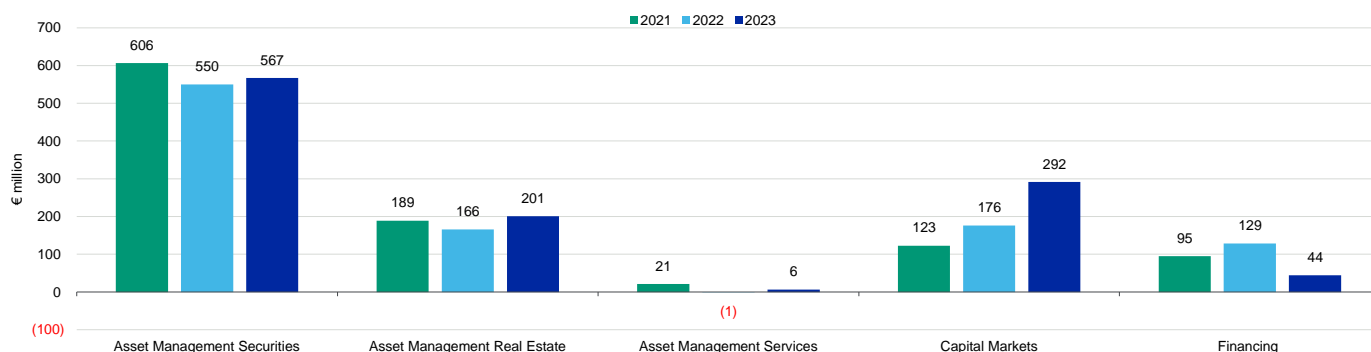
**Total income by business segment
In percentage, consolidated, for 2023**



Other segment is excluded from our calculations because of its negligible contribution.

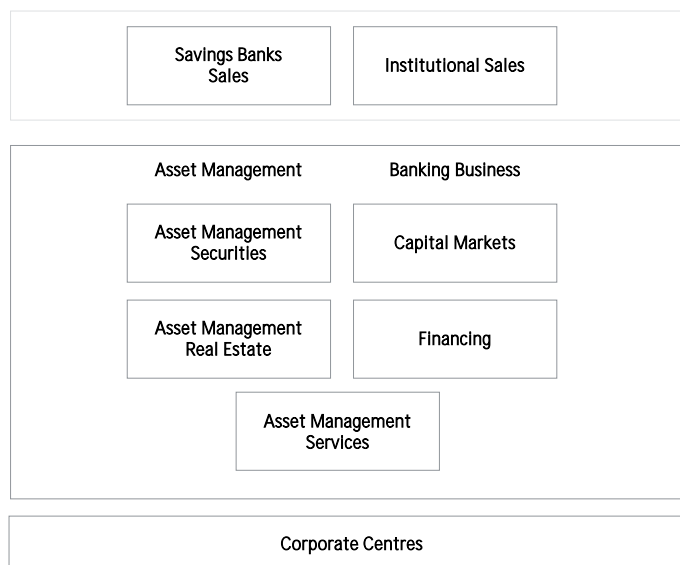
Source: Company report (annual report December 2023)

Exhibit 4
Economic results before tax per segment
 Consolidated



Source: Company reports (annual reports December 2023 and December 2022)

Exhibit 5
DekaBank's organisational structure
 As of 31 December 2023



Source: Company report (annual report December 2023)

Distribution channels

DekaBank has its head office in Frankfurt, Germany. As part of its domestic operations, it operates through investment management companies such as Deka Investment GmbH, Deka Immobilien Investment GmbH, Deka Vermögensmanagement GmbH and the robo-advisor company bevestor GmbH. Furthermore, it has an investment management company, WestInvest GmbH, which is based in Düsseldorf. Additionally, S Broker AG & Co. KG, with its registered office in Wiesbaden, and S-PensionsManagement GmbH, in which DekaBank has a 50% shareholding, is headquartered in Cologne.

Internationally, the Deka Group is represented in Luxembourg by DekaBank Deutsche Girozentrale Niederlassung Luxemburg and the investment management companies Deka International S.A. and Deka Vermögensmanagement GmbH (Luxembourg branch). As of 31 December 2023, DekaBank had branches in Luxembourg, London and Paris. The Deka Group also has representative offices and other companies based in New York, Salzburg, Singapore and Vienna. In addition to the DekaBank locations, Deka Immobilien Investment GmbH, as a service company for the capital management companies of the real estate management business, operates permanent

establishments in Amsterdam, Brussels, Madrid, Salzburg, Milan, Paris, Warsaw and Auckland. The Austrian fund manufacturer IQAM Invest GmbH, is based in Salzburg.

Source: Company report (annual report December 2023)

The geographical distribution of DekaBank's consolidated income was as follows:

Exhibit 6

**DekaBank's consolidated income per geographical segment
In percentage**

Geographical segments	2023	2022
Germany	92.0	90.6
Luxembourg	7.4	8.6
Other	0.6	0.8
Total	100.0	100.0

Source: Company report (annual report December 2023)

Ownership structure

DekaBank is a German institution incorporated under public law. The bank is wholly owned by the German savings banks through two joint shareholders — DSGV ö.K. and Deka Erwerbsgesellschaft mbH & Co. KG.

As of 31 December 2023, the ownership structure of the bank was as follows:

- » 50% owned by Germany's savings banks through DSGV ö.K.
- » 50% owned by Germany's savings banks through Deka Erwerbsgesellschaft mbH & Co. KG

Source: Company report (annual report December 2023)

As of 1 March 2024, the detailed ownership structure of DekaBank was as follows:

Exhibit 7

DekaBank Deutsche Girozentrale

Shareholder*	% held
DSGV ö.K.	50.00
of which	
Sparkassenverband Baden-Württemberg	7.70
Rheinischer Sparkassen- und Giroverband	6.56
Sparkassenverband Niedersachsen	6.46
Sparkassenverband Bayern	6.31
Sparkassenverband Westfalen-Lippe	6.17
Sparkassen- und Giroverband Hessen-Thüringen	5.81
Sparkassenverband Rheinland-Pfalz	3.21
Sparkassenverband Berlin / Landesbank Berlin	1.90
Ostdeutscher Sparkassenverband	1.83
Sparkassen- und Giroverband für Schleswig-Holstein	1.78
Sparkassenverband Saar	1.37
Hanseatischer Sparkassen- und Giroverband	0.90
Shareholder	% held
Deka Erwerbsgesellschaft mbH & Co. KG	50.00
of which	
Sparkassenverband Bayern	8.40
Sparkassenverband Baden-Württemberg	8.14
Ostdeutscher Sparkassenverband	8.00
Rheinischer Sparkassen- und Giroverband	7.66
Sparkassen- und Giroverband Hessen-Thüringen	5.47
Sparkassenverband Westfalen-Lippe	3.68
Sparkassenverband Niedersachsen	2.04
Sparkassenverband Rheinland-Pfalz	1.87
Sparkassenverband Berlin / Landesbank Berlin	1.56
Sparkassen- und Giroverband für Schleswig-Holstein	1.48
Hanseatischer Sparkassen- und Giroverband	1.26
Sparkassenverband Saar	0.43

*Values represent voting stake (subject to rounding differences).

Source: Company report (annual report December 2023)

Subsidiaries, joint ventures and associates

As of 30 June 2024, DekaBank's consolidated subsidiaries, joint ventures and associates were as follows:

Exhibit 8

DekaBank Deutsche Girozentrale

Company	Registered office	% held
Subsidiaries		
bevestor GmbH	Frankfurt	100.00
Deka Beteiligungs GmbH	Frankfurt	100.00
Deka Far East Pte. Ltd.	Singapore	100.00
Deka Immobilien Investment GmbH	Frankfurt	100.00
Deka International S.A.	Luxembourg	100.00
Deka Investment GmbH	Frankfurt	100.00
Deka Real Estate International GmbH	Frankfurt	100.00
Deka Real Estate Services USA Inc.	New York	100.00
Deka Vermögensmanagement GmbH	Frankfurt	100.00
Deka Vermögensverwaltungs GmbH	Frankfurt	100.00
Deka Verwaltungsgesellschaft Luxembourg S.A.	Luxembourg	100.00
IQAM Invest GmbH*	Salzburg	100.00
IQAM Partner GmbH	Vienna	100.00
S Broker Management AG	Wiesbaden	100.00
S Broker AG & Co. KG	Wiesbaden	100.00
WestInvest Gesellschaft für Investmentfonds mbH**	Düsseldorf	99.74
WIV GmbH & Co. Beteiligungs KG	Frankfurt	94.90
Joint ventures		
S-PensionsManagement GmbH	Cologne	50.00
Dealis Fund Operations GmbH i.L.	Frankfurt	50.00
SWIAT GmbH	Frankfurt	30.00
Associates		
DPG Deutsche Performancemessungs-Gesellschaft für Wertpapierportfolios mbH	Frankfurt	22.20
Merry Hill NewCo Limited	Jersey	21.37

* 25.5% is held by IQAM Partner GmbH.

** 5.1% is held by WIV GmbH & Co. Beteiligungs KG.

Source: Company report (interim report June 2024)

Company management

Exhibit 9

DekaBank Deutsche Girozentrale

Board of management	Affiliation
Georg Stocker	Chairman of the Board of Management
Matthias Danne	Deputy Chairman of the Board of Management
Birgit Dietl-Benzin	Chief Risk Officer and Member of Board of Management
Daniel Kapffer	Chief Financial Officer, Chief Operating Officer and Member of Board of Management
Torsten Knapmeyer	Chief Sales Officer and Member of Board of Management
Martin K. Müller	Head of Banking Business and Member of Board of Management

As of 1 August 2024.

Source: Company report (interim report June 2024)

Exhibit 10

DekaBank Deutsche Girozentrale

Board of Directors	Affiliation
Ulrich Reuter	Chairman of the Board of Directors
Walter Strohmaier	First Deputy Chairman of the Board of Directors
Michael Breuer	Second Deputy Chairman of the Board of Directors
Cord Bockhop*	Member of the Board of Directors
Ingo Buchholz *	Member of the Board of Directors
Liane Buchholz*	Member of the Board of Directors
Matthias Dießl*	Member of the Board of Directors
Johannes Hartig*	Member of the Board of Directors
Christoph Helmschrott*	Member of the Board of Directors
Thomas Hirsch*	Member of the Board of Directors
Melanie Kehr*	Member of the Board of Directors
Stefan Kram*	Member of the Board of Directors
Ulrich Lepsch*	Member of the Board of Directors
Katrin Rohmann*	Member of the Board of Directors
Matthias Neth*	Member of the Board of Directors
Nancy Plaßmann*	Member of the Board of Directors
Stefan G. Reuß*	Member of the Board of Directors
Klaus Richter*	Member of the Board of Directors
Frank Saar*	Member of the Board of Directors
Harald Vogelsang*	Member of the Board of Directors
Ludger Weskamp*	Member of the Board of Directors
Burkhard Wittmacher*	Member of the Board of Directors
Alexander Wüerst*	Member of the Board of Directors
Marion Blume**	Member of the Board of Directors
Barbara Wörfel **	Member of the Board of Directors
Helmut Dedy***	Member of the Board of Directors
Hans-Günter Henneke***	Member of the Board of Directors
Ralph Spiegler***	Member of the Board of Directors

* Representatives elected by the General Assembly.

** Employee representatives appointed by the staff council.

*** Representatives of the Federal Association of Municipal Associations.

As of 1 August 2024.

Source: Company report (interim report June 2024)

Company history

DekaBank was founded in 1999 following the merger of Deutsche Girozentrale – Deutsche Kommunalbank and DekaBank GmbH. The former was a wholesale bank established in 1918 and specialised in public sector and commercial financing. The latter was founded in 1956 and was the central fund manager for the German savings bank sector.

In January 2004, the bank increased its interest in WestInvest Gesellschaft für Investmentfonds mbH to 94.9% from 40.0% and assumed responsibility for its real estate funds.

In June 2011, the German savings banks increased their stake in DekaBank to 100% from 50%. As part of the transaction, the German Landesbanks divested their 50% ownership, DekaBank acquired a part of its own capital (€1 billion), and the savings banks acquired the remainder.

In January 2013, the bank's subsidiary ETFlab Investment GmbH merged with Deka Investment GmbH (another DekaBank subsidiary).

In December 2013, DekaBank acquired Landesbank Berlin AG's (LBB) capital markets business, LBB-Invest, and in January 2014, the whole of it was acquired by DekaBank.

In June 2016, DekaBank purchased the remaining 69.4% stake in the securities brokerage company S Broker for €16.0 million, and now holds a 100% stake in the company.

In September 2019, Deka Immobilien GmbH was merged with Deka Immobilien Investment GmbH to further streamline divisional structures. All activities performed by Deka Immobilien GmbH were moved to Deka Immobilien Investment GmbH.

In 2020, as part of DekaBank's realignment strategy in Luxembourg, all banking activities of DekaBank Deutsche Girozentrale Luxembourg S.A. were transferred to DekaBank Deutsche Girozentrale Niederlassung Luxemburg, and DekaBank Deutsche Girozentrale Luxembourg S.A. was renamed as Deka Verwaltungsgesellschaft Luxembourg S.A.

In January 2021, DekaBank acquired IQAM Invest GmbH, an Austrian fund management company, to bolster its quantitative asset management business in Europe.

In February 2022, Dekabank incorporated a wholly owned subsidiary, SWIAT GmbH, which is a blockchain-based financial infrastructure platform.

In March 2022, DekaBank liquidated its Luxembourg-based subsidiary, Deka Immobilien Luxembourg S.A.

Sources: Company reports (annual reports December 2011, December 2013, December 2014, December 2016, December 2020 and December 2021; and interim report June 2023) and company data

Peer group

- » [Landesbank Baden-Wuerttemberg](#)
- » [Landesbank Hessen-Thueringen Girozentrale](#)
- » [Bayerische Landesbank AoR](#)
- » [DZ BANK AG](#)

Related websites and information sources

For additional information, please see:

The company's website

- » [DekaBank Deutsche Girozentrale](#)

MOODY'S has provided links or references to third party World Wide Websites or URLs ("Links or References") solely for your convenience in locating related information and services. The websites reached through these Links or References have not necessarily been reviewed by MOODY'S, and are maintained by a third party over which MOODY'S exercises no control. Accordingly, MOODY'S expressly disclaims any responsibility or liability for the content, the accuracy of the information, and/or quality of products or services provided by or advertised on any third party website accessed via a Link or Reference. Moreover, a Link or Reference does not imply an endorsement of any third party, any website, or the products or services provided by any third party.

Endnotes

- 1 This has been calculated, throughout, without income distribution from the Other segment because of its negative contribution. The calculations are based on economic results before tax from DekaBank's segment-related disclosure.
- 2 SBE; Summe Erträge vor Ertragsverteilung TSY , ohne Segment Sonstiges.

© 2024 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

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

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

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

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

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

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

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

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

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA 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 (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

CLIENT SERVICES

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