

CREDIT OPINION

21 December 2022

Update



RATINGS

Transport for London

Domicile	United Kingdom
Long Term Rating	Baa1
Туре	Senior Unsecured - Dom Curr
Outlook	Stable

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Jeanne Harrison +44.20.7772.1751 Vice President - Senior Credit Officer jeanne.harrison@moodys.com

Sam McDonald +44.20.7772.1401 Associate Analyst sam.mcdonald@moodys.com

Sebastien Hay +34.91.768.8222 Senior Vice President/Manager sebastien.hay@moodys.com

CLIENT SERVICES

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

Transport for London (UK)

Update following assignment of ESG scores

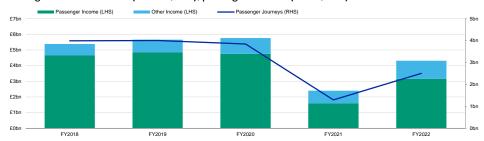
Summary

<u>Transport for London</u>'s (TfL, Baa1/Prime-2 Stable) credit profile reflects its rising passenger income, the new multi-year funding agreement from the <u>UK government</u> (UK, Aa3 negative), and its relatively inflexible cost and revenue base. It also reflects TfL's strategic importance as the main public transport provider in London and its strong management and governance. Its credit profile reflects the strong likelihood of extraordinary support expected to be provided by UK government in the event that the issuer faced extreme liquidity stress.

Exhibit 1

Passenger journeys continue to recover but remain below pre-pandemic levels

Passenger and other income (£ billion, LHS), passenger numbers (billion, RHS)



Source: TfL financial statements, Public Transport Journeys by Type of Transport, TfL and London Mayor Sadiq Kahn

Credit Strengths

- » Strategic importance for the local and national economy
- » Strong access to liquidity
- » Strong management and governance

Credit Challenges

- » Recent unpredictability in operating environment despite new multi-year funding agreements
- » Slowing recovery in passenger numbers
- » Large capital programme, albeit with new funding for major projects
- » High debt but limited additional borrowing will support stable debt metrics

Rating Outlook

The stable outlook reflects TfL's strengthening operating performance and protections under multi-year government funding agreements will partially mitigate risks posed by a weakening economic and fiscal outlook. Passenger income, TfL's main source of revenue, has improved substantially from pandemic lows and will continue to grow, topped up by government if ridership is lower than expected. The funding agreement includes additional income to compensate for high inflation, although staff costs may be higher than expected depending on negotiations over pay rises, conditions and pensions.

Factors that could lead to an upgrade

TfL's credit profile would improve with prospects of sustained outperformance on passenger and other income combined with effective cost control driving a return to sustainable operating surpluses. Delivery of key revenue-generating capital projects on time and within budget would also be supportive.

Factors that could lead to a downgrade

Downward pressure would arise from weaker than expected operating performance with multiyear deficits, higher than forecasted staff costs, or evidence that reduced quality of services was adversely impacting demand. A deterioration in government support would also be negative. Lastly, a material increase in debt or further reduction in liquidity would also exert negative pressure on the rating.

Key Indicators

Exhibit 2
Transport for London
Year-ended 31 March

	2016/17	2017/18	2018/19	2019/20	2020/2021	2021/22
Own Source Revenues / Total Revenues (%)	66.9	68.4	65.1	63.7	33.6	49.8
Grants / Total Revenues (%)	33.0	31.5	34.7	36.1	66.3	50.2
Operating Surplus (Deficit) / Operating Revenues (%)	6.8	14.8	15.8	18.4	12.0	22.8
Interest Payables / Total Revenues (%)	5.3	5.6	5.4	5.6	7.2	5.9
Net direct and indirect debt / Operating Revenues (%)	157.0	145.1	149.8	178.7	221.5	189.6
Short-term debt / Total Debt (%)	11.4	8.4	7.1	6.8	7.9	9.5
Current Assets / Current Liabilities (%)	110.1	73.2	83.6	80.5	63.9	0.6

Source: Transport for London, Moody's Investors Service

Detailed credit considerations

The credit profile of Transport for London, as expressed in a Baa1 rating, combines (1) a baseline credit assessment (BCA) for the entity of baa3 and (2) a strong likelihood of extraordinary support coming from the <u>UK</u> (Aa3 negative) in the event that the entity faced acute liquidity stress.

Baseline Credit Assessment

Strategic importance for the local and national economy

TfL's credit profile benefits from its scale and very strong market position. It is the largest urban transit system in the UK, and one of the largest in the world. It serves a large population of more than nine million in London with little competition. London accounts for around 25% of national GDP and its future economic growth and the capacity of its public transportation system are closely linked and are significant policy concerns to citizens, businesses and the local and national levels of government.

Prior to the pandemic, TfL's underground, bus and rail network provided around 4 billion passenger journeys per year. TfL's very strong utilization ratio of 426 (annual ridership relative to the service area population) in 2020 was the highest of any system we rate under the Mass Transit Enterprises Methodology, reflecting the pervasiveness of public transport. Passenger numbers fell significantly during the pandemic, from approximately 4 billion passenger journeys to 1.3 billion in 2021. These numbers have begun to recover, with annual ridership increasing to 2.5 billion in FY2022. Likewise, the utilisation ratio also increased to 276 in 2022 from 142 in 2021. We

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.

expect passenger journeys to continue to rise over the next couple of years, but are likely to remain below pre-pandemic levels over the medium term.

Transport for London is a key functional body of the Greater London Authority (GLA). Its Board is chaired by the Mayor of London, who is also in control of Board appointments.

Strong access to liquidity

TfL benefits from a diverse investor base and may borrow from the Public Works Loan Board (PWLB, statutory body operating within the UK Debt Management Office, an executive agency of the UK Government's Treasury Department), which could also act as a lender of last resort for the entity and hence mitigate the threat of liquidity shocks. For short-term liquidity needs, its European Commercial Paper programme of £2 billion allows for rapid and flexible access to liquidity.

TfL has a policy of maintaining a minimum level of cash of 60 days of operating costs on average (representing approximately £1.2 billion on average for fiscal 2022). Its funding agreements with the Department for Transport (DfT) include provisions for maintaining this level of liquidity. Under the new multi-year agreement in August 2022 with the DfT, TfL should maintain cash balances of no more than on average £1.2 billion in each quarter, which will result in TfL holding less liquidity than it has in the past couple years, although still within its liquiddity policy. As of FYE 2022, TfL had £1.4 billion of cash and short term investments.

Strong management and governance

TfL's governance and management is strong, evidenced by delivery of significant cost savings, the accuracy of its budgeting, quality of data analysis and transparency of information. TfL implemented a major transformation programme over the past six years to reduce recurring costs, adapt to its lower grant environment and improve its long-term financial sustainability. It has made around £1 billion of recurring cost savings sourced from numerous initiatives included reducing layers in the organisation, merging functions and contract negotiations.

As part of the longer-term funding agreement with the DfT, TfL is required to make further real-terms recurrent cost savings, including on staff costs. However, we expect that further savings on staff costs will be challenging given the high level of unionisation in the sector. The government expects staff pay to rise in line with public sector pay, which is around 3%, and much lower than the latest pay award for London Underground workers of an 8.4% increase in April 2022 (based on February 2022 Retail Prices Index + 0.2%) which was the final year of a previously agreed four-year pay deal. Recent negotiations around changes to pay, pensions or conditions have been challenging, and further negotiations are likely to remain contentious. The government also expects TfL to consider driverless trains, but this change will be challenging with staff unions if the introduction of the technology leads to redundancies.

Despite these challenges, TfL has a strong track record of cost reduction and management display a high degree of transparency. Material documentation including its budget, financial statements, business plans and board meeting notes are publicly available. Detail on rationale and quantification of key policy changes which impact TfL such as new road user charges are also available from the GLA. In addition, TfL does extensive data analysis such as its annual Travel in London report, which details passenger trends and key developments.

Recent unpredictability in operating environment despite new multi-year funding agreements

We consider that the stability and predictability of TfL's funding subsidies and policy support from the UK government has weakened fundamentally since the onset of the pandemic. This is evidenced by the challenges involved in agreeing funding support over the past two years which has been delivered through multiple funding agreements or extensions, many agreed at or after the date of expiry of the previous agreement. Agreements have been relatively short-term; the previous agreement only covered four months.

In August 2022, the DfT and TfL reached a longer-term funding agreement, providing medium term certainty. The agreement stipulates that DfT will top up any shortfall on passenger income below £4.5 billion in fiscal 2023 and £5.2 billion in fiscal 2024. Additionally, the government would also provide £15 million in additional funding in fiscal 2023 in the event that inflation exceeds budget assumptions. Furthermore, the government would also provide funding for incremental inflationary costs of £132 million in fiscal 2024, in addition to the ability to increase the grant if inflation is above expected levels. These measures will partially mitigate against pressures from the weakening fiscal and economic outlook. TfL is also protected from energy price swings over the short term, thanks to its hedging strategy providing 100% fixed energy costs in fiscal 2023 and 50% fixed in fiscal 2024.

In September 2022, it was announced that a further £500m funding deal had been agreed with the Greater London Authority (GLA) to cover any funding gap over the next two years. This additional funding agreement enables TfL to balance its budget in fiscals 2023 and 2024, as well as providing more certainty for budgeting and planning. The new funding deal will exist alongside the DfT longer-term funding agreement and the existing GLA funding framework which provides TfL with approximately £2 billion in Business Rates Retention funding annually.

We expect TfL's fare increases to continue to be volatile reflecting their political sensitivity. Under the previous funding agreement, TfL was required to increase fares by the Retail Prices Index (RPI) + 1% which it implemented in March 2022. The longer-term settlement currently assumes a 4% annual increase for fares in March 2023 and 2024 but the decision ultimately remains with the Mayor and no additional funding will be provided by the government if fares do not increase at least in line with national rail fares.

Conditions requiring TfL to generate new sources of income which will boost and diversify its revenue base remain as part of the new longer-term settlement. Designated council tax, income from the expanded Ultra Low Emission Zone (ULEZ) road user charge and fare increases will provide between £500 - £750 million of new income for TfL by fiscal 2025.

Slowing recovery in passenger numbers

TfL's passenger numbers continue to recover but we expect growth to slow. As of September 2022, total passenger journeys were 80% of pre-pandemic levels and passenger income was £3.2 billion, which was £122 million below full year budget.

We forecast a permanent reduction of 10%-20% in passenger numbers compared to pre-pandemic numbers. However, there are downside risks to the forecast including higher price sensitivity which may affect commuters and leisure passengers. Given the weakening economic outlook, higher inflation and lower discretionary spending may lead to fewer leisure trips and tourists. Similarly, higher inflation lead commuters to elect to work from home more often to save on costs.

Lastly, we note due to the existing funding framework, TfL is more reliant on farebox income than international peers. Pre-pandemic, TfL's farebox recovery ratio was 61% compared to between 40% - 55% for its closest peers.

Large capital programme, albeit with new funding for major projects

Significant capital expenditure is required to maintain and improve TfL's services. The level of capital expenditure over the past two years has been impacted by the uncertainty over funding amid the reduction in passenger revenue, leading to less visibility over capital requirement prioritisation. At FYE 2022, capital expenditures amounted to over £1.4 billion, approximately £400 million lower than budget as a result of project slippage, deferrals and increased spending controls amid ongoing funding uncertainty.

Following the new funding agreements with the DfT and the GLA, TfL has significantly greater capital and revenue visibility which will enable it to execute key capital projects. Prior to the longer-term funding agreements TfL had an estimated funding gap of £500m to £1 billion; this gap has now been closed. Under the new settlement, funding is available for major projects including the Northern Line extension, rail enhancements for the Jubilee and Northern lines, replacement of the Piccadilly Line rolling stock and the completion of the Elizabeth Line. TfL will continue to benefit from Business Rates Retention (BRR) income with the new agreements.

Minimum capital requirements to maintain safety and address critical renewals cost approximately £750 million per year. Additional funding need is driven by major projects and TfL's role in delivering on both mayoral and national policy objectives.

The Crossrail project (operational name: Elizabeth line) - a new 118 kilometre railway line for London and the South East - opened in May 2022. The new line will boost passenger income. In November 2022, services from the east and west were integrated into the line, allowing passengers to travel from Reading and Heathrow to Abbey Wood and from Shenfield through to Paddington, improving journeys for passengers.

Other major ongoing capital projects include signalling, modernisation and rolling stock upgrades to London Underground lines aiming to improve service and capacity across the existing network, station upgrades and its "Healthy Streets" projects which include investment in walking and cycling infrastructure.

High debt but limited additional borrowing will support stable debt metrics

TfL's debt will remain high, however, limited forecasted borrowing combined with growing revenue will support stable debt metrics. At year end fiscal 2022, TfL's debt (inclusive of finance leases) stood at £15.2 billion. Debt to revenues was 1.9x for fiscal 2022, down from 2.2x the year prior following increased passenger income and stable debt levels.

TfL's three-year average debt service coverage ratio was 11.4% in fiscal 2022, up from 10.5% in fiscal 2021 but materially higher than pre-pandemic levels of 5.5% in fiscal 2019. We expect the ratio to remain broadly stable over the next two years.

Under the Prudential Code, TfL may borrow for capital purposes up to a level approved by the Mayor, subject to reserve powers retained by the government. TfL will remain below the limit; forecasted borrowing over the next three years is limited to c£150 million in TTL Properties Limited, its subsidiary for commercial property activity, and will be non-recourse to TfL. Given that the multi-year funding agreements have balanced TfL's budget for the new two years, we do not expect further increases in debt to fund its capital plan over this period.

TfL's total deficit of all funded and unfunded pension agreements, which currently are not included in TfL's debt, stood at £3.2 billion at fiscal 2022, down from £5.6 billion in fiscal 2021. The latest valuation of the TfL Pension Fund technical provisions was carried out as at 31 March 2021, and showed an improved position from three years earlier. The 2021 valuation has a surplus of £179 million (101% funded) compared with a deficit of £603 million (95% funded) at the time of the 2018 valuation. As part of the longer-term settlement with DfT, TfL must also provide viable options by January 2023 for reducing future pension liabilities by around £100 million per year, a move unions will likely strongly oppose. If TfL fails to deliver on the condition to provide viable options, the government has the power to reduce grant funding.

Extraordinary Support Considerations

The strong support assessment for TfL reflects the importance of the transport system and infrastructure improvement in London for the UK (Aa3 negative) as reflected in the funding agreements since the onset of the pandemic, despite their short-term focus.

ESG considerations

Transport for London's ESG Credit Impact Score is Moderately Negative CIS-3

Exhibit 3 ESG Credit Impact Score

CIS-3
Moderately Negative

NEGATIVE IMPACT

POSITIVE IMPACT

For an issuer scored CIS-3 (Moderately Negative), its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-2.

Source: Moody's Investors Service

TfL has a moderately negative credit impact score. It has a moderately negative exposure to environmental risks given its pivotal role in the Mayor's strategy to make London a net zero carbon city by 2030. TfL has moderately negative exposure to social risks. While it retains its monopolistic position in London, ridership will remain permanently lower than pre-pandemic numbers due to the shift to hybrid working. TfL's unionised workforce will make changes to staff pay, conditions and pensions challenging and will likely lead to more strike action. Governance risks are also moderately negative. Tfl's management is strong with clear strategy and a high degree of transparency. However, government control and oversight has increased significantly post-pandemic as part of extraordinary funding agreements. TfL must adhere to numerous, strict conditions as part of government funding agreements including identifying cost savings, new revenue sources, options for changes to pensions, and working with the government to assess the case for driverless trains. The conditions will require resource and drive some strategic decisions over the next couple years.

Exhibit 4
ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

TfL has a moderately negative exposure to environmental risks driven by its pivotal role in the Mayor's strategy to make London a net zero carbon city by 2030. TfL must expand road user charging to reduce pollution, fully upgrade the bus fleet, and move to fully renewable energy to power all rail services by 2030.

Social

TfL has moderately negative exposure to social risks. While it retains its monopolistic position in London, ridership will remain permanently lower than pre-pandemic numbers due to the shift to hybrid working. The worsening economic outlook for the UK will also negatively impact ridership as high inflation hits discretionary spending. Fare increases are political and unpredictable. Finally, TfL's unionised workforce will make changes to staff pay, conditions and pensions challenging and will likely lead to more strike action.

Governance

TfL's management is strong with a clear strategy, supported by detailed budgets and business plans, and high degree of transparency. However, government control and oversight has increased significantly post-pandemic as part of extraordinary funding agreements. TfL must adhere to numerous, strict conditions as part of government funding agreements including identifying cost savings, new revenue sources, options for changes to pensions, and working with the government to assess the case for driverless trains. The conditions will require resource and drive some strategic decisions over the next couple years. The relationship with government is strained and can be contentious, weakening TfL's credit profile.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Rating methodology and scorecard factors

The assigned BCA of baa3 is close to the scorecard-indicated BCA of baa2.

TfL's rating reflects our assessment of the company's business profile and financial performance in line with our <u>Mass Transit Enterprises</u> <u>Methodology</u>, published on December 2017 and our <u>Government-Related Issuers Methodology</u>, published in February 2020.

Exhibit 5
Transport for London's 2022 scorecard

Global Mass Transit Enterprises Methodology	FYE 31 March 2022	
Factor 1: Size (15%)	Measure	Score
a) Issuer Size - Annual Ridership (Million)	2506	Aaa
b) Market Size - Service Area Population (Million)	9	Aaa
Factor 2: Market Position (35%)		
a) Operating Environment	Baa	Ваа
b) Service Area Characteristics	Aaa	Aaa
c) Market Share - Utilization (%)	276	Aaa
Factor 3: Financial Flexibility (20%)		
a) Level of Self-Support - Farebox Recovery Ratio (%)	42%	Aa
b) Budget Flexibility (3 Year Avg Fixed Costs as % of Oper. Exp.)	19.2%	А
Factor 4: Debt & Financial Metrics (30%)		
a) Leverage - Debt/Revenues	1.9x	Baa
b) Budget Balance -Interest as a % of Operating Revenues (3 Year Avg)	11.4%	Baa
c) Budget Balance - Net Margin (3 Year Avg)	17.8%	Aaa
d) Liquidity - Days Cash on Hand	68	А
Adjustments / Notching Factors		
Factor 1: Size		
Particularly strong or weak ridership/population trends that are not currently reflected in data set	-0.5	
Factor 2: Market Position		
Challenges adopting adequate fare increases	-0.5	
Factor 3: Budget Flexibility		
Collective bargaining or high labor costs that decrease financial or operational flexibility	-1	
5) Other analyst adjustment to Budget Flexibility	-0.5	
Factor 4: Debt and Financial Metrics		
2) Large capital program and/or future borrowing plans	-0.5	
5) Other analyst adjustment to Debt & Financial Metrics (Specify)	-0.5	
Rating:		
a) Indicated Rating from Grid After Notching Adjustment	baa2	
b) BCA assigned	baa3	
c) Actual Rating Assigned	Baa1	

 ${\it Source: Moody's Investors Service, Transport for London}$

Ratings

Exhibit 6

Category	Moody's Rating		
TRANSPORT FOR LONDON			
Outlook	Stable		
Baseline Credit Assessment	baa3		
Senior Unsecured -Dom Curr	Baa1		
Commercial Paper -Dom Curr	P-2		
Source: Moody's Investors Service			

Endnotes

1 See: Local government funding will enable a balanced budget

© 2022 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 BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") 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 PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS 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 PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS 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 ITS PUBLICATIONS 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 PUBLICATIONS 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 PUBLICATIONS 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.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS 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 rating process or in preparing its Publications.

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 fees ranging from \$1,000 to approximately \$5,000,000. 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 and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

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 Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER

1345468

CLIENT SERVICES

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454



10