

CREDIT OPINION

22 February 2017

Rate this Research >>

RATINGS

Transport for London

Domicile	United Kingdom
Long Term Rating	Aa2
Type	Senior Unsecured - Dom Curr
Outlook	Negative

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

Contacts

Jennifer A. Wong 4420-7772-5333
 VP-Senior Analyst
 jennifer.a.wong@moody's.com

David Rubinoff 44-20-7772-1398
 MD-Sub Sovereigns
 david.rubinoff@moody's.com

Transport for London

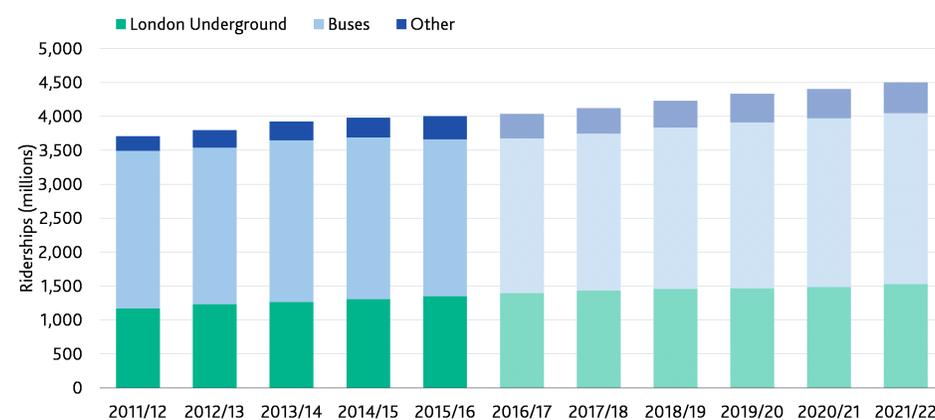
Update to Credit Rating Factors

Summary Rating Rationale

The Aa2 debt rating of Transport for London (TfL), with negative outlook reflects the essential nature of TfL's services as the dominant provider of urban transport in London and its strong practical links to the government via its institutional and long-term funding frameworks. The rating also reflects TfL's operating risk from the wide scale of its services, its large and expanding investment plans and growing debt. TfL functions in a highly politicised environment, which may affect the levels at which fares are set, the levels of service that it provides and the amount of investments it undertakes. Moody's also assigns a Prime-1 (P-1) rating to TfL's commercial paper programme.

Exhibit 1

TfL's ridership growth by type of transport



TfL's forecasted figures between 2016/17 to 2021/22

Source: Business Plan (December 2016) and 2015/16 Annual Report, Moody's calculations

Credit Strengths

- » Strategic importance for national transport plans
- » Strong demand for TfL's essential services expected to continue
- » Strong framework providing a high level of transparency
- » Record of meeting operational and investment goals but significant savings planned

Credit Challenges

- » Decreasing operating support from the government and limited revenue flexibility
- » Crossrail drives substantial capital plan but nearing completion
- » Debt levels will remain high but predictable given borrowing limits

Rating Outlook

The negative outlook on TfL's rating reflects our assessment of the possible impact of the vote to leave the European Union on the revenues of TfL, which would be affected by slowing growth in the economy and population in London as well as any loss of EU funding for capital programmes, though we expect that any EIB funding already agreed will remain in place. The negative outlook also mirrors the negative outlook on the UK sovereign rating, reflecting the close economic, fiscal and institutional ties between TfL and the sovereign.

Factors that Could Lead to an Upgrade

Whilst unlikely in the near term, there could be upward pressure on the rating in the following instances:

- » a significant and sustained improvement in TfL's financial position, including a substantial decrease in its debt burden and lower interest payments
- » materially improved revenue and spending flexibility or an upgrade of the UK sovereign rating could also put upward pressure on the rating

Factors that Could Lead to a Downgrade

Downward pressure could result from:

- » TfL's underperformance in meeting operational or financial goals, specifically if fare revenue growth is materially slower than projected levels, new revenue sources fail to contribute to the revenue gap or planned expenditure savings do not materialize
- » if the UK government were to signal a clear dilution of its support for TfL's capital plan or the UK sovereign rating were to be downgraded. This would also put downward pressure on the rating given the strong linkages in funding and support of the sovereign

Key Indicators

Exhibit 2

TfL's key indicators

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Own Source Revenues / Total Revenues (%) [1]	45	46	45	47	52	60
Grants / Total Revenues (%)	54	53	55	52	47	40
Operating Surplus (Deficit) / Operating Revenues (%)	4.7	12.3	18.5	8.6	2.0	-2.6
Interest Payables / Total Revenues (%)	4.8	5.9	3.9	4.2	4.4	4.9
Direct and indirect debt / Total Revenues (%)	91	90	84	86	96	111
Short-term debt / Total Debt (%)	7.2	27.6	14.3	9.0	9.4	9.5
Current Assets / Current Liabilities (%)	98	74	125	172	179	139

[1] For all ratios, Total Revenues include grants, including those ring-fenced for Crossrail. Operating surplus refers to operating revenues minus operating expenses (not including capital grants or capital expenditures).

Source: TfL's financial statements, Moody's calculations

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody.com for the most updated credit rating action information and rating history.

Issuer Profile

TfL is the dominant provider of urban transport for London and is a statutory corporation established by the Greater London Authority (GLA) Act 1999. Operations include the tube, bus networks, above-ground rail within London (Overground and Dockland Light Railway) and strategic portions of the road system. TfL also manages the congestion-charging system and wholly owns Crossrail Limited and Crossrail 2 Limited.

Most trips to the central business district (CBD) of London are provided for by TfL's services, which will deliver approximately 4 billion passenger journeys in 2016-17. In practice, the segments not under TfL control are either very small or, like the large share of surface rail outside of TfL's control, are effectively at-or-close-to capacity and cannot strongly compete with TfL's services.

Detailed Rating Considerations

Transport for London's rating combines (1) a baseline credit assessment (BCA) for the entity of a1 and (2) a very high likelihood of extraordinary support coming from the UK government in the event that the entity faced acute liquidity stress.

Baseline Credit Assessment

STRATEGIC IMPORTANCE FOR NATIONAL TRANSPORT PLANS

Transport for London is a key component of the regional government of greater London (Greater London Authority) and reports to the Mayor of London. Future growth in London and the capacity of the public transport system are closely linked and are significant policy concerns to citizens, businesses and the local and national levels of government.

Transport for London is the largest transit system in the United Kingdom, and one of the largest in the world. It serves a large population (8.3 million in London) and benefits from very strong ridership. TfL's tube, buses and overground network provide just over 4 billion rides annually. TfL's very strong 478 utilization ratio (number of annual riderships relative to the service area population) is the highest of any system we rate under the Global Mass Transit Enterprises Methodology, reflecting the pervasiveness of transit and its importance to the London economy.

The scope of operations continues to grow. In May 2015, TfL became responsible for providing rail service on the West Anglia Inner lines. In August 2016, night tube (underground) services were initially launched for two lines then expanded to up to five lines; while the service entails costs such as higher policing, the 2.5 million journeys since the opening have been higher than anticipated so far. In January 2016, TfL and the Department for Transport (DfT) released a joint proposal contemplating TfL taking a larger role in the southeast, however, these discussions have stalled and are not incorporated into TfL's latest business plan.

STRONG DEMAND FOR TFL'S ESSENTIAL SERVICES

The demand for TfL's services has continued to strengthen, with passenger journeys in fiscal year 2015-16 increasing by 3.4% for the London Underground, slightly decreasing for London buses and increasing by 6.2% for the Docklands Light Railway, compared to the previous fiscal year. The latest financial projections for the first three quarters of 2016-17 show a slower increase in passenger journeys relative to budget (-2.4% variance). Ridership, however, has grown at an estimated compound annual growth rate (CAGR) of 2.4% since 2009-10.

The 2016 Business Plan anticipates the population will continue to grow to 10 billion inhabitants by 2030 from around 8.6 billion today. The Office for National Statistics projects a 13% population increase between 2015 and 2025, based on its 2014 population projections. Crossrail will add further capacity to absorb growing demand and will represent a 10% increase in London's rail capacity; it will increase the number of people within a 45 minute commuting distance of London's key business districts by 1.5 million. Continued growth in ridership is important to TfL's ability to effect balanced budgets; a stagnant population and/or slowdown in the economy could present a challenge to TfL's financial health.

STRONG OPERATING FRAMEWORK PROVIDES A HIGH LEVEL OF TRANSPARENCY

Since 2003, TfL, the Mayor of London and the Department for Transport have agreed long-term funding and planning frameworks. These frameworks take into account a combination of TfL's own resources - mostly fare revenues - and grants from the government, which are balanced against spending in the TfL Business Plan. Overall funding stability has allowed for investment stability, which has been matched by good service delivery and, generally, both local and national political support. Following the 2015 Spending Review,

the Secretary of State and TfL agreed medium term grant levels as set out in a funding agreement. The agreement moved TfL further down a path towards self-sufficiency in that it ends operating grants starting in 2018-19.

In the same agreement, the government provided clarity on capital funding commitments indicating that capital grants will be flat through 2020-21. The government's Budget in March 2016 announced further devolution of business rates to local government and a pilot to replace the capital grant paid to TfL by central government with business rates from April 2017 (though there is an agreement in principle with the GLA, DfT and TfL that TfL will receive at least the level of capital funding set out in the spending review funding letter). While we view the loss of operating grant as a credit challenge, we do view positively the government's continued commitment to ensure that TfL has sufficient resources for its tube lines upgrade and Crossrail project, whilst maintaining London's extensive bus network.

Historically, the links between the Mayor and TfL have been very strong and well co-ordinated on key matters of operations and funding. The Mayor develops London's Transport Strategy, which is the guiding document for TfL's specific programmes of operation and investment, appoints TfL's Board and sets fare levels. In September 2016, a new board was appointed reducing the total members by two to 14, which also includes the Mayor and Deputy Mayor for Transport and two returning members. The London Assembly, in turn, holds the Mayor democratically accountable and oversees the Mayor's budget. TfL's Board approves the Commissioner for Transport, the executive head of TfL. It also oversees the creation and delivery of the multi-year business plan and annual budgets through various committees, including the Remuneration Committee, the Finance Committee, the Programmes and Investment Committee and the Audit and Assurance committee. TfL also has an external benchmarking body, the Independent Investment Programme Advisory Group.

In June 2016, following London mayoral elections, the Mayor of London and TfL's Commissioner announced a plan to freeze fares for the next four years at an estimated cost of £640 million, exerting additional pressure on TfL's operating results and prompting a step up in TfL's savings plans. The 2016-17 budget was published in March 2016 followed by an updated five-year medium term Business Plan in December 2016 which details TfL's planned savings.

Under the Prudential Code, TfL may borrow for capital purposes up to a level agreed with the Mayor, subject to reserve powers retained by the government. Borrowing limits are also agreed within the multi-year funding agreements with the national government. Local government finance law imposes statutory obligations upon officers and permits government intervention in cases of mismanagement or financial failure. Accounting standards are high. Audited financials are produced under IFRS accrual formats, but, as with UK local authorities also using this system, can be difficult to reconcile to the more cash-based systems used for budgets and long-term planning.

A RECORD OF MEETING OPERATIONAL AND INVESTMENT GOALS BUT SIGNIFICANT SAVINGS PLANNED

In fiscal year 2015-16, gross fare income, which constitutes the bulk of TfL's own-sourced revenue, increased by 6.7% reflecting both rising demand (3.2% higher across the whole network) and fare increases linked to the retail price index (increases averaged 1%). In its finance report for the first three quarters of 2016-17, TfL reported a slight underperformance on fares income, which were 2% lower than budgeted, primarily reflecting weaker than anticipated passenger volumes. Nevertheless, we believe that TfL has managed its finances very efficiently in the last few years, meeting targeted spending and fare levels. This success is particularly significant when taking into account civil disturbances in the Summer of 2011, the 2012 Olympic Games and more generally the substantial construction work having occurred over the years, and which continues to gain pace. Crossrail is now 80% complete and on schedule and on budget. Going forward, we believe that TfL's future revenue growth will depend largely on continued population growth as well as the successful delivery of capacity improvements from large capital projects, particularly Crossrail.

TfL will implement an ambitious savings plan that is looking to deliver £4 billion savings in five years. A portion of such savings, that will come from both operating and capital expenditure, is already planned for the 2017-18 financial year. The transformation programme follows a comprehensive TfL-wide cost review in order to maximise value for money and improve efficiency of operations. The different internal workstreams have already lead to more than 600 individual initiatives and projects that, combined with reduced layers in the organisation, merged functions and eliminated duplications as well as procurement contracts renegotiations, should help reach the savings target. Nevertheless, this savings target is substantial, and the ability of TfL to meet these savings will be crucial in offsetting the fare freeze and any potential slowing in passenger growth.

DECREASING OPERATING SUPPORT FROM THE GOVERNMENT AND LIMITED REVENUE FLEXIBILITY

The majority of operating costs are financed by fares. The farebox recovery ratio (fare revenues/operating expenditures) is high at 63% in fiscal year 2015-16. Following population growth and fare increases, fare revenue has increased at an estimated compound annual growth rate (CAGR) of 10% over the last five years.

Total revenues (on an accounting basis) were £8.8 billion in 2015-16 and were comprised of the following major sources: 48% fares, 30% grants allocated for capital, 9.6% revenue grants and 11.7% other own source revenues. Total revenues exceeded operating expenditure by £0.9 million, which was allocated to the capital programme.

TfL has started to diversify its revenues in recent years. Part of the previous general grant provided by the GLA has been replaced by Business Rates Retention which could mean greater variability in these revenues. TfL also plans to increase revenues from commercial activities through advertising activities, property development and the leveraging of its considerable property portfolio. With the establishment of a new business unit focusing on developing commercial opportunities, it projects raising about £3.4 billion from commercial strategies by 2023, including commercial media and residential property development. The commercial development programme has delivered £457 million so far. The first major endeavour is a joint venture property development at Earl's Court. While these projects have considerable upside potential and are a promising source for replacing lost government revenues, they also introduce increased volatility and potential downside risk, particularly in terms of residential property development. TfL, however, has not incorporated very large increases in revenues from commercial activities.

CROSSRAIL DRIVES SUBSTANTIAL CAPITAL PLAN BUT NEARING COMPLETION

Transport for London, along with the Department for Transport, is a sponsor of the Crossrail project, a £14.8 billion expansion of London's rail system. It is funded from a mix of government grants, new borrowing and other contributions. TfL's direct funding for Crossrail represents £2.4 billion, and its total funding contribution for the project is capped at £7.1 billion. While TfL has conservatively budgeted cost commitments for Crossrail and costs have so far remained within budget, should costs for Crossrail exceed £14.8 billion during the construction period, TfL has the option to transfer the project ownership to the DfT, thereby mitigating risks for TfL.

The first stage of Crossrail was put into place when the Greater Anglia franchise between Liverpool Street and Shenfield transferred to TfL. The project is currently 80% complete and the first trains are expected to run in early 2019. While the recent funding letter includes no commitment for the development of Crossrail 2, which would transverse London north to south, it advises any contribution would come from the £300 million Transport Development Fund. In its 2016 Budget, the UK government committed to provide £80 million to the Crossrail 2 project, to be matched by TfL, in order to develop the project. TfL has already created a new subsidiary, Crossrail 2 Limited.

In the December 2016 business plan, capital spending was projected to amount to nearly £16 billion from 2016-17 to 2021-22 (including capital renewals). Capital support from the government is set to continue at approximately £1 billion a year, as set out in TfL's March 2016 funding letter, essentially the same levels as agreed in the 2013 funding agreement and a reduction from the £1.7 billion average over the last five years, but would be funded directly from business rates from April 2017. Borrowing limits over the next five years set out in the March 2016 funding letter with DfT were essentially the same level as in the previous agreement, averaging £640 million.

DEBT LEVELS WILL REMAIN HIGH BUT PREDICTABLE GIVEN BORROWING LIMITS

TfL's debt level is high, but stable and predictable. TfL's debt rose to £9.7 billion at the end of fiscal year 2015-16, or 159% of operating revenue, from £9.2 billion the previous year. Increases in debt are agreed in the multi-year funding settlements with the Department for Transport (DfT). DfT approves and establishes limits for TfL's debt projections, subject to requirements of prudence and affordability required under the Prudential Code. Between 2016-17 and 2020-21, TfL can borrow £3.2 billion. Favourably, the most recent funding settlement gives TfL flexibility to roll borrowing capacity into future years, meaning debt will grow only when funds are required. In the past each year's borrowing cap was 'use it or lose it', meaning that TfL would borrow regardless of current cash need, incurring unnecessary interest costs.

TfL has guaranteed a number of loans linked to Public-Private Partnership (PPP) contracts. In the last few years some of these PPP contracts were brought back "in-house." TfL's project management exposure has substantially decreased as a result. TfL's total retirement benefit obligations, which currently are not included in TfL's debt stock, were at £3.3 billion in 2015-16, or approximately 37 % of total revenue. The latest full actuarial valuation of the TfL Pension Fund was carried out as at 31 March 2015, which showed a deficit for funding purposes of £396 million.

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 and 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. TfL has a £5 billion European Medium Term Note (EMTN) programme, updated in July 2015, of which £3.6 billion was outstanding as of August 2016. In April 2015, TfL issued its first green bond (£400 million) under the EMTN programme. For short-term liquidity needs, its European Commercial Paper programme of £2 billion allows for rapid and flexible access to liquidity at rates under LIBOR. TfL signed in 2015 a £500 million corporate loan facility with Export Development Canada for financing rolling stock; £250 million was drawn down in January 2017 and a further £150 million will be received in FY2017-18. TfL has further facilities with the European Investment Bank totaling £1.5 billion, £1.4 billion of which is planned to be drawn between 2016-17 and 2018-19.

TfL had approximately £3.3 billion of cash and cash equivalents at FYE2016, which are primarily held as funding for capital expenditures in the business plan. This cash includes £1.8 billion set aside for Crossrail funding that will be spent over the next couple of years. The reserves are not ring-fenced and may be used for debt service payments or other costs of TfL and its operating subsidiaries. In addition, internal liquidity has historically been strong, particularly as funds are generally secured in advance of major project expenditures. Furthermore, TfL has a policy of maintaining a minimum of £250 million in cash available on any business day, though these cash balances and policies are being reviewed.

Extraordinary Support Considerations

The very high support assessment for TfL reflects the importance of the transport system and infrastructure improvement in London by the UK government (Aa1 negative), as reflected in the multi-year funding settlement and the agreement to proceed with Crossrail and the tube upgrades. The very high support also reflects the reputational risk for the central government, should TfL face acute liquidity tensions, given the overall funding of the system and close oversight from the sovereign. Such event would also call into question government support for other sectors (such as local authorities) that the national government tightly controls and funds.

Moody's also assigns a very high default dependence between TfL and the UK government, reflecting the high portion of central government funding to TfL and its historical co-ordination with national investment policies.

Rating Methodology

Global Mass Transit Rating Methodology, dated February 2015.

Please see the Credit Policy page on www.moody's.com for a copy of this methodology.

Ratings

Exhibit 3

Category	Moody's Rating
TRANSPORT FOR LONDON	
Outlook	Negative
Senior Unsecured -Dom Curr	Aa2
Commercial Paper -Dom Curr	P-1

Source: Moody's Investors Service

Moody's Public Sector Europe is the trading name of Moody's Investors Service EMEA Limited, a company incorporated in England with registered number 8922701 that operates as part of the Moody's Investors Service division of the Moody's group of companies.

© 2017 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 INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. 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. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S 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. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S 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 AND MOODY'S 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 OR MOODY'S 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.

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 the Moody's 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 SUCH RATING OR 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 rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody.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 61 003 399 657 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. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

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 rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

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

Contacts

Jennifer A. Wong
VP-Senior Analyst
jennifera.wong@moodys.com

4420-7772-5333

Lluis Sanchis I Herrero
Associate Analyst
lluis.sanchis@moodys.com

44-20-7772-1764

CLIENT SERVICES

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