MOODY'S PUBLIC SECTOR EUROPE

CREDIT OPINION

8 March 2018

Rate this Research

RATINGS

Transport for London

Domicile	United Kingdom
Long Term Rating	Aa3
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

Zoe Jankel VP-Senior Analyst zoe.jankel@moodys.com	+44.20.7772.1031
Nadejda Seu	+44.20.7772.8738

Associate Analyst nadejda.seu@moodys.com

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

Transport for London (United Kingdom)

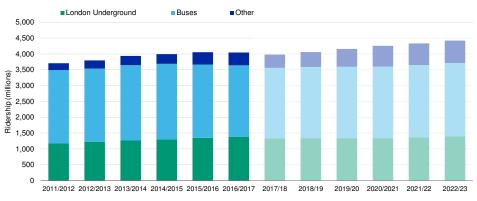
Update to credit analysis

Summary

Transport for London's (TfL) credit profile reflects its strategic importance as the main public transport provider in London, strong demand and institutional framework, in addition to budgetary pressures from removal of its operating grant, the key project risk of the Elizabeth Line and high, but predictable, debt levels.

Exhibit 1

TfL's total ridership is expected to fall in 2017/18, before rising again in 2018/19 onwards, although this masks a stagnation in London Underground ridership to 2020/21



TfL projected figures, 2017/18 to 2022/23 Source: Business Plan (December 2017) and 2016/17 Annual Report, Moody's calculations

Credit Strengths

- » Strategic importance for national transport plans
- » Ridership growth expected to continue in long term, but decline in the short term
- » Strong institutional framework providing a high level of transparency

Credit Challenges

- » Increased budgetary pressures including the removal of government operating grant
- » Successful opening of the Elizabeth Line, crucial to capital and operating plan
- » Debt levels will remain high but predictable given borrowing limits

Rating Outlook

The stable outlook on TfL's rating reflects our assessment that TfL will be able to absorb the negative effects of the UK's departure from the EU, including the impact of slowing growth in the economy and population in London as well as any loss of EU funding for capital programmes. The stable outlook also mirrors the stable 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

Upward pressure on the rating could result from:

- 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 »

Factors that could lead to a downgrade

Downward pressure on the rating 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 support of the sovereign

Key Indicators

Exhibit 2

TfL's key indicators

	2012/13	2013/14	2014/15	2015/16	2016/2017
Own Source Revenues / Total Revenues (%) [1]	45	47	52	60	67
Grants / Total Revenues (%)	55	52	47	40	33
Operating Surplus (Deficit) / Total Revenues (%)[2]	18.5	8.6	2.0	-2.6	6.8
Interest Payables / Total Revenues (%)	3.9	4.2	4.4	4.9	5.3
Direct and indirect debt / Total Revenues (%)	84.4	85.8	96.2	110.8	128
Short-term debt / Total Debt (%)	14.3	9.0	9.4	9.5	11.4
Current Assets / Current Liabilities (%)	125	172	179	139	110

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

Issuer Profile

TfL is the dominant provider of public transportation in London and is a statutory corporation established by the Greater London Authority (GLA) Act 1999. Operations include the London Underground (LU), London Buses, London Overground (LO), Docklands Light Railway (DLR), TfL Rail and strategic roads. TfL also manages the congestion-charging system and wholly owns Crossrail Limited and Crossrail 2 Limited.

The majority of the trips to London's central activities zone (CAZ) are provided for by TfL's services, which delivered approximately 4 billion passenger journeys in 2016-17. In practice, the segments of the public transportation network 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.

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.moodys.com for the most updated credit rating action information and rating history.

Detailed credit considerations

The credit profile of Transport for London, as expressed in an Aa3 stable rating, combines (1) a baseline credit assessment (BCA) for the entity of a2 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 functional body of the government of Greater London (Greater London Authority). Its Board is chaired by the Mayor of London, who is also in control of Board appointments. Future economic growth in London 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.

Transport for London is the largest urban transit system in the United Kingdom, and one of the largest in the world. It serves a large population (8.8 million in London) and benefits from very strong ridership. TfL's underground, bus and rail network provide 4 billion rides annually. TfL's very strong 460 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 its operations continues to grow. In May 2015, TfL became responsible for providing rail services on the West Anglia Inner lines, of which the Liverpool Street to Shenfield service will become part of the Elizabeth Line service when it opens in December 2018, with other services forming part of the London Overground network. In 2016, weekend night tube services were launched, now covering 5 undergound and 1 overground lines. While the service entails costs such as higher policing, the service has been more successful than anticipated. In January 2016, TfL and the Department for Transport (DfT) released a joint proposal contemplating TfL taking a larger role in the provision of south-east rail services, however, these discussions have stalled and are not incorporated into TfL's latest business plan.

Ridership growth expected to continue in long term, but decline in short term

2016/17 represents zero growth in aggregate on 2015/16's ridership figures, with an increase in ridership on LU and commencement of TfL Rail services (the previous West Anglia Inner Lines) masking a decrease in ridership on the bus network. However, this trend is set to change in 2017/18 with total ridership falling by 2% and ridership on LU falling by 3%. Although the decline in total ridership is expected to be short-lived, growing again by 2018/19 due to the opening of the Elizabeth Line, LU ridership levels are not expected to reach 2016/17 levels (1.38 billion rides/annum) until 2022/23. This stagnation in LU ridership also reflects the expected shift in demand away from LU and onto the Elizabeth Line once the central section of the latter is opened in December 2018.

Continued growth in total ridership and, subsequently, fare income, is critical to TfL's ability to produce balanced budgets - a legal requirement. A material slowdown caused by stagnant growth or structural changes in the economy could present a significant challenge to TfL's financial health. See Section "Increased budgetary pressures including the removal of its operating grant." However, we do not consider that the decline in ridership expected in 2017/18 poses a material financial challenge to TfL's budget.

Strong institutional framework provides a high level of transparency

Since 2003, TfL, the Mayor of London and the DfT 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. In March 2017, the Secretary of State for Transport set out a new multi-year funding agreement for TfL for the years 2017/18 to 2020/21 which sets out DfT grant and TfL's annual borrowing limit. The funding agreement confirms the removal of the general operating grant from 2018/2019 and the passporting of the investment grant through the GLA's 100% business rates retention pilot from 2017/2018. See Section "Increased budgetary pressures including the removal of its operating grant," for detailed consideration of the financial impacts of this change. Although TfL's day-to-day funding arrangements for operating and capital expenditure purposes will now be the responsibility of the Mayor via the GLA, we expect that any nationally significant infrastructure projects such as Crossrail 2 will continue to be part-funded by central government.

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 the Transport Strategy, which is the guiding document for TfL's specific programmes of operation and

investment, appoints TfL's Board and sets fare levels. 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.

Increased budgetary pressures including the removal of its operating grant

TfL faces a number of budgetary pressures: the removal of the majority of its operating grant from 2018/19, an increased reliance on business rates income, the ongoing fare revenue freeze, a short-term reduction in fare revenue coupled with the need to grow fare revenue significantly over the next 5 years, and successful implementation of a major transformation programme.

In the March 2017 funding agreement the Secretary of State for Transport confirmed the removal of the general grant - the general operating grant that TfL has used historically to subsidise its operations. In 2016/17 TfL's general grant level was £447 million, reducing to £228 million in 2017/18 and to zero thereafter. It will continue to receive the London Overground operating grant of £27 million until 2019/20 before it too is phased out. However, although it will lose the general operating grant, it will continue to benefit from Mayoral Business Rates - which provided £854 million in 2016/17 and is expected to continue to contribute around 10-15% of TfL's total operating income between 2017/18 and 2022/23. The actual level of Mayoral Business Rates that TfL receives is a Mayoral decision, and is partly predicated on the success of London's economy. However, due to the importance of TfL's public transport mandate it is unlikely to differ materially from that set out in its business plan. The investment grant, now passported through the GLA's 100% Business Rates Retention pilot from 1 April 2017 will be paid by the GLA to TfL at the levels agreed in the funding agreement between the Secretary of State for Transport and the Mayor. The Government has confirmed that the pilot should not be at detriment to the GLA's current resources available for TfL and therefore we do not expect any significant shortfall in funds for capital investment. It is also important to note that both the Mayoral Business Rates and the passported Investment Grant are now considered as resource grants, which means they can be used for revenue and capital purposes, and provide more flexibility in TfL's budgeting process.

The fare freeze on passenger fares set by TfL commenced in January 2017 and is expected to last until December 2020. This does not affect all of TfL's passenger income, about half of it is linked to national rail fares which are not directly controlled by TfL. These fares are set by the DfT and do not fall within TfL's fare freeze. The true impact of the fare freeze is difficult to estimate - it is likely that they will have depressed and continue to depress some fare revenue, however it is equally likely that they are helping to mitigate some of the decrease in demand caused by the economic slowdown in London.

TfL's fare income projections in its 2017 5 year Business Plan are ambitious. The removal of operating grant means that they also increase in importance in TfL's operating budget: they are expected to increase from 69% (£4.7 billion) of total operating income in 2016/17 to 75% (£6.3 billion) in 2022/23. Some £800 million of the £1.7 billion projected increase in fare income is expected to be delivered by the Elizabeth line, and the remainder relates to increases in bus passengers driven by population growth, and increased capacity and services on LU lines, London Overground and the DLR. Achievement of fare income projections is critical to the financial performance of the organisation and is reliant on elements within TfL's control including successful realisation of upgrades on a number of LU lines, in addition to the Elizabeth Line, as well as elements outside TfL's control such as population and economic growth in London and the wider South East.

In order to improve the long-term financial sustainability of the organisation, TfL is implementing a major transformation programme that is aimed at removing £1.2bn of annual operating costs from the organisation by 2022/23. This will help to limit the rise in operating costs (before capital renewals and financing costs) to £7.0 billion by 2022/23 from £6.2 billion in 2016/17 - with the increase being predominantly due to the costs of operating the Elizabeth Line and inflation. 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, including reduced layers in the organisation, merged functions and eliminated duplications as well as procurement contracts renegotiations, that 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.

Fares Operating grants Capital grant and other capital income Other operating income 12 £ billions 10 14%. £1.3bn 14%, £1.3bn 8%, £0.7bn 11%, £1.0bn 8 11%, £0.9br 12%, £1.1 br 9%, £0.7bn 10%, £0.8br 9%, £0.7bn 12%, £1.1 br 13%, £1.2 br 23%, £2.0 br 16%, £1.3 br 15%, £1.3 br 9%, £0.9bn 18%. £1.5 br 17%, £1,4 br 9%, £0.9bn 10%, £0.9bn 6 11%, £0.9bn 17%, £1.4bn 16%, £1.4bn 15%, £1.2bn 12%, £1.0bn 66%, £6.3br 65%, £6.0br 65%, £5,7br 63%. £5.2br 59%, £4.8bn 58%. £4.7br 59%, £4.6br 53% £4 6br 2 0 2015/2016 2016/2017 2017/2018 2018/2019 2019/2020 2020/2021 2021/2022 2022/2023

TfL's changing funding environment

Exhibit 3

TfL projected figures, 2017/18 to 2022/23 from 2017 Business Plan Source: Business Plans (December 2017 and December 2016), Moody's calculations

Successful opening of the Elizabeth Line, crucial to capital and operating plan

TfL is the joint sponsor of the Crossrail project (operational name: Elizabeth Line) with the DfT. The Elizabeth Line is a new 118 kilometre railway line for London and the South East with a £14.8 billion capital budget. TfL's direct funding of the budget is £2.4 billion, funded through a mix of corporate borrowing and proceeds from the sale of assets, and it is responsible for a further £4.7 billion which will be funded by a variety of sources including developer contributions and the Business Rate Supplement. TfL's total funding is capped at £7.1 billion and any additional funding in excess of this would be the responsibility of the DfT. At present, the Crossrail programme is scheduled to be delivered on time and within budget, however there is still some risk of delays in the operational testing period. The main risk to TfL are delays to passenger revenue receipts, rather than capital cost however as its liability is capped as described above. The Elizabeth Line is expected to open in December 2018, with three separate services, and will be fully open in one integrated service from December 2019.

Other major ongoing capital projects include signalling, modernisation and rolling stock upgrades to the 11 LU lines aiming to improve service and capacity across the existing LU network, and the Northern Line Extension to Nine Elms and Battersea. The latter project is being funded by the GLA, through a hypothecation of future business rate revenues, up to £1 billion. However, any cost increases above this level would be the responsibility of TfL. The tunneling work is now complete, however there are still some risks to construction cost related to station works which remain unresolved.

TfL also has a number of other large planned and proposed capital projects including the Overground extension to Barking Riverside which will enter construction in 2018/2019, Bakerloo Line Extension, a number of river crossings and Crossrail 2.

Total capital expenditure is expected to be £14.3 billion between 2017/18 and 2022/23, including capital renewals. This is expected to be funded by £6.0 billion investment grant (passported through the GLA's 100% business rates pilot), £1.4 billion from property and asset receipts (a significant proportion of this will be funded by the sale of Elizabeth Line rolling stock to a Rolling Stock Operating Company through a sale and leaseback transaction), £3.5 billion of new borrowing, £800 million related to Crossrail funding sources and £700m of other capital grants.

Debt levels will remain high but predictable given borrowing limits

TfL's debt level is high, but relatively stable and predictable. TfL's debt rose to £10.4 billion at the end of fiscal year 2016-17, or 128% of total revenue, from £9.8 billion and 111% of total revenue in 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 2017/18 and 2020/21, TfL can borrow £2.55 billion. Favourably, the 2016 funding settlement gave 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.

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.

TfL has guaranteed a number of loans linked to Public-Private Partnership (PPP) contracts. In the last few years most 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 £5.4 billion in 2016/17, or approximately 66% 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 £3.3 billion was outstanding as of January 2018. 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 has £750 million corporate loan facilities with Export Development Canada; £250 million was drawn down in January 2017 and a further £150 million was received in FY2017/2018. TfL has further facilities with the European Investment Bank totaling £1.5 billion, £500 million of which was drawn down in 2016/2017 and a further £800 million in 2017/2018.

TfL had approximately £2.0 billion of cash and cash equivalents as of January 2018, which are primarily held as funding for capital expenditures in the business plan. This cash includes £0.7 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 £540 million in cash available on any business day (approximately 30 days of operating costs), although 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 (Aa2 stable), as reflected in the multi-year funding settlement and the agreement to proceed with Crossrail and the London Underground 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 ongoing assurance over funding of its capital programme and its historical co-ordination with national investment policies.

Rating Methodology

For details about our rating approach, please refer to Rating Methodology: Mass Transit Enterprises Methodology, December 2017.

Ratings

Exhibit 4	
Category	Moody's Rating
TRANSPORT FOR LONDON	
Outlook	Stable
Senior Unsecured -Dom Curr	Aa3
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.

© 2018 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.

CREDIT RATINGS AND MOODY'S 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 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.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. 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.

REPORT NUMBER 1112966

CLIENT SERVICES

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

MOODY'S PUBLIC SECTOR EUROPE