Memorandum



DATE November 8, 2019

TO Honorable Mayor and Members of the City Council

Moody's Investors Service Credit Analysis Update Affirms City's A1 Stable Rating - INFORMATION

On November 5, Moody's Investors Service (Moody's) released a credit opinion for the City which affirms the City's A1 stable rating. Moody's credit analysis underlines the Dallas Police and Fire Pension System's unfunded liability, noting challenges with pension reform and state law property tax amendments effective fiscal year 2021. Moody's reports, "based on our expectations of continued strong revenue growth from new construction and sales taxes, and the city's long range financial planning, these operational pressures in combination with the trajectory of the pension funds, and the need to maintain core services, will be manageable over the near term."

According to Moody's, the stable outlooks reflects, "the significantly reduced unfunded pension liability following reform of the Dallas Police and Fire Pension," "continued strong economic growth which affords ample financial flexibility," "strong new construction activity which will aid in driving revenue growth," and "the city's adequate level of operating reserves, and its enhanced fiscal management as evidenced by its implementation in the past few years of forward-planning tools, including the biennial budget and longer range financial projections."

This update from Moody's is a positive reflection on Dallas highlighted by a rapidly growing and diverse tax base anchoring the Dallas/Fort Worth metroplex, population and employment growth surpassing national averages, eight consecutive years of surpluses leading to increased reserves, the legal flexibility to adjust future pension benefits for current employees, and the continuous efforts of City leadership.

Please let me know if you need additional information.

M. Clyabeth Reich
M. Elizabeth Reich
Chief Financial Officer

Attachment

T.C. Broadnax, City Manager
 Chris Caso, City Attorney (Interim)
 Mark Swann, City Auditor
 Bilierae Johnson, City Secretary
 Preston Robinson, Administrative Judge
 Kimberly Bizor Tolbert, Chief of Staff to the City Manager
 Majed A. Al-Ghafry, Assistant City Manager

Jon Fortune, Assistant City Manager
Joey Zapata, Assistant City Manager
Nadia Chandler Hardy, Assistant City Manager and Chief of Resilience
Michael Mendoza, Chief of Economic Development & Neighborhood Services
Laila Alequresh, Chief Innovation Officer
M. Elizabeth (Liz) Cedillo-Pereira, Chief of Equity and Inclusion
Directors and Assistant Directors

MOODY'S

CREDIT OPINION

5 November 2019



Contacts

Denise Rappmund +1.214.979.6865

VP-Senior Analyst

denise.rappmund@moodys.com

Heather Guss +1.214.979.6881

Analyst

heather.guss@moodys.com

Gera M. McGuire +1.214.979.6850

VP-Sr Credit Officer/Manager gera.mcguire@moodys.com

Alexandra S. Parker +1.212.553.4889

MD-Public Finance

alexandra.parker@moodys.com

CLIENT SERVICES

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

Dallas (City of) TX

Update to credit analysis

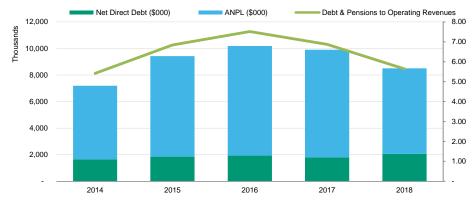
Summary

The city of Dallas (A1 stable) benefits from growing revenues stemming from strong economic development and a rapidly expanding tax base, a stable and manageable debt burden while increasing city infrastructure investment, and modestly improving yet healthy operating reserves. The city's primary credit weakness remains its poorly funded pension plans despite pension reform. The city's unfunded pension liabilities will continue growing for the forseeable future because its statutory contribution schedule remains below our "tread water" indicator, while investment returns lag plan targets.

The costs associated with pension challenges are exacerbated by reduced revenue-raising flexibility on existing property under state law effective fiscal 2021. However, based on our expectations of continued strong revenue growth from new construction and sales taxes, and the city's long range financial planning, these operational pressures in combination with the trajectory of the pension funds, and the need to maintain core services, will be manageable over the near term.

Exhibit 1

Reduced ANPL post-reform expected to increase due to weak annual contributions and investment returns



Operating revenues include the general fund and debt service fund Source: Moody's Investors Service, city audited financial reports

Credit strengths

- » Large, rapidly growing and diverse tax base that anchors the Dallas/Fort Worth metroplex
- » Population and employment growth that surpass national averages

- » Eight consecutive years of surpluses have increased reserves
- » Legal flexibility to further adjust pension benefits for current employees on a prospective basis

Credit challenges

- » Recent legislative reform that reduces flexibility to raise property tax revenues starting in fiscal 2021
- » Pension liabilities expected to increase from weak contributions and investment returns
- » Budgetary pressures over the medium term stemming from rising pension costs coupled with maintenance of city service and continued infrastructure investment

Rating outlook

The stable outlook reflects the significantly reduced unfunded pension liability following reform of the Dallas Police and Fire Pension (DPFP), and continued strong economic growth which affords ample financial flexibility. Despite reduced revenue-raising flexibility under new state law starting in 2021, the stable outlook considers the strong new construction activity which will aid in driving revenue growth. Additionally, the stable outlook considers the city's adequate level of operating reserves, and its enhanced fiscal management as evidenced by its implementation in the past few years of forward-planning tools, including the biennial budget and longer range financial projections.

Factors that could lead to an upgrade

- » Material reduction in Moody's Adjusted Net Pension Liability (ANPL) relative to operating reserves
- » Demonstrated balanced operations inclusive of pension funding at actuarially determined levels

Factors that could lead to a downgrade

- » Trend of pension asset accumulation that lags targets; increases to the ANPL and weakened annual contributions
- » Trend of declining operating reserves
- » Significant increase in the debt burden

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.

Key indicators

Exhibit 2

Dallas, TX	2014	2015	2016	2017	2018
Economy/Tax Base					
Total Full Value (\$000)	\$87,251,522	\$93,138,211	\$100,318,937	\$110,387,629	\$118,314,678
Population	1,232,360	1,244,270	1,257,730	1,270,170	1,286,380
Full Value Per Capita	\$70,800	\$74,854	\$79,762	\$86,908	\$91,975
Median Family Income (% of US Median)	71.0%	71.1%	71.6%	72.3%	72.3%
Finances					
Operating Revenue (\$000)	\$1,327,996	\$1,377,442	\$1,355,442	\$1,441,984	\$1,506,713
Fund Balance (\$000)	\$162,886	\$195,532	\$178,987	\$224,582	\$263,690
Cash Balance (\$000)	\$155,980	\$198,819	\$187,938	\$215,589	\$245,393
Fund Balance as a % of Revenues	12.3%	14.2%	13.2%	15.6%	17.5%
Cash Balance as a % of Revenues	11.7%	14.4%	13.9%	15.0%	16.3%
Debt/Pensions					
Net Direct Debt (\$000)	\$1,656,911	\$1,854,845	\$1,933,095	\$1,804,061	\$2,057,083
3-Year Average of Moody's ANPL (\$000)	\$5,860,728	\$6,476,453	\$7,117,560	\$7,974,113	\$7,599,579
Net Direct Debt / Full Value (%)	1.9%	2.0%	1.9%	1.6%	1.7%
Net Direct Debt / Operating Revenues (x)	1.2x	1.3x	1.4x	1.3x	1.4x
Moody's - adjusted Net Pension Liability (3-yr average) to Full Value (%)	6.7%	7.0%	7.1%	7.2%	6.4%
Moody's - adjusted Net Pension Liability (3-yr average) to Revenues (x)	4.4x	4.7x	5.3x	5.5x	5.0x

Fund balance and cash balance includes general and debt service funds Source: Moody's Investors Service, city audited financial reports

Profile

The city of Dallas is the ninth largest city in the US and the third largest city in Texas behind <u>Houston</u> (Aa3 stable) and <u>San Antonio</u> (Aaa stable). The city serves as the anchor to the Dallas-Fort Worth metroplex. The current population in Dallas is approximately 1.3 million.

Detailed credit considerations

Economy and tax base: strong economic indicators and tax base growth to continue

Dallas' tax base will continue to grow over the next several years as job creation continues to be robust, driving demand for commercial and residential property. New construction across property types will continue, though at an expected slower pace, following several years of robust new development. Additionally, residential property appreciation is positive but showing signs of slowing amid declining affordability. As of fiscal 2020, the city's tax base grew an additional 7.8% year-over-year, reaching over \$140 billion. The city's projections conservatively assume tax base growth tapers over the next five years.

Demographic and socioeconomic trends in Dallas continue to be favorable. While concerns over a national economic downturn have surfaced, employment growth in Dallas continues to be strong, outpacing state and national levels. Dallas continues to have the largest job base in the metro area, serving as a home to many fortune 500 companies, and a daytime population that increases by over 20% relative to the resident population. The unemployment rate remains low, at 3.5% as of August 2019, reflecting a very tight labor market. Professional services and construction have been important drivers of job growth, which are generally high-wage jobs; this, coupled with the tight labor market, is pushing up wages in the Dallas metro area. Most recently, <u>Uber Technologies</u> (B2 stable) <u>announced it had chosen Dallas</u> for new office space in the central business area of the city, promising to create 2,500 new high-paying jobs.

5 November 2019

Financial operations and reserves: general fund reserves increasing despite rising public safety expenditures

The city's operating reserves have been increasing, and are expected to remain stable over the next several years supported by reserve policies, long range financial planning and continued economic growth. Longer term, the city's financial position will be challenged by balancing increasing pension and public safety expenses, as well as general costs of services, with reduced revenue-raising flexibility under Senate Bill 2 (SB2).

Fiscal 2018 (ending September 30) again ended in a strong \$20 million general fund surplus, bringing available general fund reserves to \$234.8 million, or 18.5% of general fund revenues. Similar to the last several years, the city has been able to realize a surplus through revenues exceeding the budget, coupled with expenditure savings, largely from personnel vacancies. Unaudited fiscal 2019 results point to another surplus of approximately \$9 million, with officials citing strong revenue growth and personnel savings as the main drivers. The fiscal 2020-2021 biennial budget is balanced, incorporating increasing pension contributions and higher public safety salaries under a new meet and confer agreement. Notably, the city has pulled back on aggressive public safety hiring targets as recruitment and retention remains difficult, and recently conducted a staffing study in order to re-think appropriate staffing levels. The positive reported financial results are somewhat muted by persistent annual underfunding of the pension plans post pension reform. The underfunding is due to statutory and local ordinance caps on contributions, as well as investment returns which lag plan targets.

Starting in fiscal 2021, the city's property tax revenue-raising flexibility will decrease to 3.5% from 8% of revenues on existing property; new values are excluded from the annual revenue cap calculation. The city has historically not captured the previously allowable 8% property tax increase, and has been decreasing the tax rate since 2016 amid strong property value appreciation. In 2020, the tax rate will again be decreased slightly, to \$7.766 per \$1000 of AV, from \$7.767. The city's five year general fund projection conservatively assumes decreases in assessed value (AV) which bring it in line with the new legislation.

LIQUIDITY

As of fiscal 2018, total cash and investments in the general fund was up to \$216.3 million, from \$203.5 million in 2017, representing a healthy 17% of general fund revenues. Inclusive of the debt service fund, total operating funds cash stood at \$245.4 million, or 16.3% of operating revenues.

Debt and pensions: manageable debt burden; significantly improved ANPL post-reform increasing again as expected

The city's debt burden will continue to be stable and manageable as planned annual issuances are outpaced by strong tax base growth. The \$1.05 billion bond package approved in November 2017 is being issued in phases, with \$888.5 million in authorization remaining to date. The bond package represents the primary mechanism for funding improvements to aging infrastructure, and investing in new infrastructure needed to manage growth. The city maintains a debt policy which stipulates a maximum debt burden of 4% of the estimated market value of the taxable property in the city. Inclusive of accreted interest on outstanding bonds, the city has typically maintained a debt burden of approximately 2% of AV. As of fiscal 2019, the city's net direct debt totaled \$2.06 billion, or 1.5% of the fiscal 2020 AV.

DEBT STRUCTURE

All of the city's debt is fixed rate. Principal amortization is relatively rapid considering the city issues annually, with 70% of principal retired in ten years.

DEBT-RELATED DERIVATIVES

The city is not a party to any debt-related derivative agreements.

PENSIONS AND OPEB

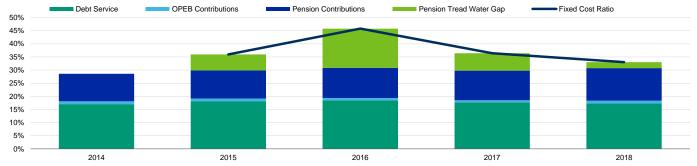
The city is now two years into the public safety pension reform, and while reform significantly improved the pension landscape for the city, the pension burden remains elevated and is expected to increase. Annual contributions have improved, but remain below a level that would prevent the unfunded liabilities from growing. Additionally, solvency challenges remain, particularly for the Dallas Police and Fire Pension Fund (DPFP). Required accumulation of DPFP assets is highly dependent on investment returns and higher near-term contributions tied to payroll targets. Deviation from these key targets over the medium term could require further benefit changes or higher contributions, placing additional pressure on the general fund budget amid decreasing revenue-raising flexibility, as discussed.

The city's adjusted net pension liability (ANPL), reflective of all three of the city's single-employer plans ¹, was \$6.4 billion, or a high 4.3 times revenues. The ANPL was calculated based on a discount rate of 3.6%, while the plans assume 7.25-7.75%. The 2018 ANPL

is significantly reduced compared to 2017, as reform measures are now incorporated into reporting. As of fiscal 2017, the ANPL was a much higher \$8.1 billion, based on a rate of 4.1%, representing 5.6 times 2017 operating revenues. The city's ANPL is net of support to ERF from essential enterprises, including the water utilities and the airport.

The city's fixed costs are high, especially when considering pension contributions at a "tread water" level, though have been brought to more manageable levels post-reform. Moody's calculates fixed costs as debt service, pension contributions and retiree health benefits (OPEB) relative to operating revenues. For Dallas, fixed costs represent a high 30.8% of 2018 revenues. If contributions were at a level that would prevent the liability from growing, or treading water, the amount would need to increase by \$34.4 million, or 2.3% of 2018 operating revenues. The tread water indicator assumes all plan assumptions are met, including the high assumed rates of return. The DPFP contributions are set by statute, while the ERF's are capped by local ordinance.

Exhibit 4
City's fixed costs are high but significantly moderated post-reform



Source: Moody's Investors Service, city audited financial reports, pension plan valuation reports

The 2018 pension metrics are significantly improved for the city, bringing them to levels that are still high but closer to large city peers. However, the funding plan for DPFP, the largest of the city's plans by liability, is not without risk. Deviation from key assumptions would jeopardize the accumulation of pension assets and the amortization of the unfunded liability. Favorably, HB 3158 requires key parties to look at further needed changes after an initial 7 year period, or 2024. The plan is governed by state statute, and further changes may be made at the state level, though the reform allows some key changes to be made by the board. DPFP's unfunded liability is expected to fully amortize by 2057, based on assumptions such as a 7.25% static earnings rate and payroll that increases by at least 3.09% per year through 2037 and 2.75% thereafter.

Reaching the assumptions underlying the amortization will be a challenge, though favorably the city has the legal ability to make further changes if warranted, albeit politically challenging. In 2018, the asset position for all plans eroded, as was seen nationally for pension plans with calendar year-end dates given poor equity market performance. The ERF plan reported a -4.4% loss in its 2018 audit, while the DPFP was up 2.1% per its January 2019 valuation report, given its smaller exposure to the equity market and higher exposure to real estate. While point-in-time, the low to negative returns represent a further deviation from plan targets. Based on Moody's calculations, if DPFP were to earn 5% static returns, and increase public safety payroll by at least 3% annually, the funded status of the plan would erode significantly over the 38 year period, as assets would only marginally increase given annual benefit payments exceeding inflows, while the liability would continue to grow. However, assuming a lower 2.75% annual payroll increases, as considered by the actuary, and higher 7% compound returns but with annual volatility, the plan could run out of assets by 2039.

Management and governance: high institutional framework score

The city operates under a council-manager form of government. Dallas' city manager and CFO have worked to implement enhanced forward-thinking and strategic planning to bolster the already sophisticated financial management of the city. The political will exhibited over the course of fiscal 2017 to bring about needed reforms to the public safety pension further demonstrate the strength of the management team in place at the city.

Texas Cities have an Institutional Framework score of "Aa", which is strong. The sector's major revenue sources (property taxes and sales taxes) account for about a third of revenues each and are subject to a cap; the remaining third is derived from other fees and is not subject to a cap. Property taxes, are subject to a statutory cap of \$25 per \$1,000 of assessed values, with no more than \$15

U.S. PUBLIC FINANCE MOODY'S INVESTORS SERVICE

allocated for debt. Most cities are well under the cap, and on an annual basis can increase their property tax revenues by 8% on existing property without voter approval. Most cities are at the sales tax cap for operating purposes. Unpredictable revenue fluctuations tend to be minor, or under 5% annually. Across the sector, fixed and mandated costs are generally less than 25% of expenditures and are primarily debt service expenditures. Unpredictable expenditure fluctuations tend to be minor, under 5% annually.

Rating methodology and scorecard factors

The <u>US Local Government General Obligation Debt</u> methodology includes a scorecard, a tool providing a composite score of a local government's credit profile based on the weighted factors we consider most important, universal and measurable, as well as possible notching factors dependent on individual credit strengths and weaknesses. Its purpose is not to determine the final rating, but rather to provide a standard platform from which to analyze and compare local government credits.

Exhibit 5

Dallas, TX

Rating Factors	Measure	Score
Economy/Tax Base (30%) [1]		
Tax Base Size: Full Value (in 000s)	\$140,237,632	Aaa
Full Value Per Capita	\$109,017	Aa
Median Family Income (% of US Median)	72.3%	Baa
Notching Factors: ^[2]		
Regional Economic Center		Up
Finances (30%)		
Fund Balance as a % of Revenues	17.5%	Aa
5-Year Dollar Change in Fund Balance as % of Revenues	7.9%	Α
Cash Balance as a % of Revenues	16.3%	Aa
5-Year Dollar Change in Cash Balance as % of Revenues	6.9%	Α
Management (20%)		
Institutional Framework	Aa	Aa
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures (x)	1.0x	Α
Debt and Pensions (20%)		
Net Direct Debt / Full Value (%)	1.6%	Aa
Net Direct Debt / Operating Revenues (x)	1.5x	Α
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value (%)	5.4%	Baa
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues (x)	5.0x	Baa
Notching Factors: ^[2]		
Unusually Strong or Weak Security Features (3)		Up
Other Analyst Adjustment to Debt and Pensions Factor (specify):		Down
	Scorecard-Indicated Outcome	A1
	Assigned Rating	A1

^[1] Economy measures are based on data from the most recent year available

Source: US Census Bureau, Moody's Investors Service

Endnotes

1 The city participates in three single-employer systems: the Employees' Retirement Fund (ERF), DPFP, and the Supplemental Police and Fire Plan. Contribution rates for the systems are set by ordinance or statutes, and the ERF and DPFP are each managed by separate boards. In 2017, the city, DPFP and the state, were able to come to an agreement around pension reform: HB 3158 implemented sweeping changes to the DPFP plan, including reduced prospective pension benefits for current and future employees, significant reductions to DROP, including time limits to participation, ceased lump-sum withdrawals and elimination of guaranteed interest, increased statutorily required contributions from the city and the membership, and governance

^[2] Notching factors are specifically defined in the US Local Government General Obligation Debt methodology dated September 27, 2019

^[3] Standardized adjustments are outlined in the GO Methodology Scorecard Updated for 2019 publication

changes. ERF also implemented changes in 2017, with the approval by the city council and voters in November 2016 to create a new tier of reduced pension benefits for new employees hired on or after January 1, 2017. The new tier reduces the normal cost and the pace at which pension liabilities are accrued.

© 2019 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-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, 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 OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S RATINGS. 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 ON ON TON STITUTE 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 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 CREDIT 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 ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$2,700,000. 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.

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 ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

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

REPORT NUMBER

1197638

Contacts **CLIENT SERVICES** Denise Rappmund +1.214.979.6865 Heather Guss +1.214.979.6881 Americas 1-212-553-1653 VP-Senior Analyst Analyst Asia Pacific 852-3551-3077 denise.rappmund@moodys.com heather.guss@moodys.com Japan 81-3-5408-4100 Gera M. McGuire +1.214.979.6850 Alexandra S. Parker +1.212.553.4889 VP-Sr Credit Officer/ MD-Public Finance EMEA 44-20-7772-5454 Manager alexandra.parker@moodys.com gera.mcguire@moodys.com

