

**CREDIT OPINION**

12 November 2020

**Contacts**

Genevieve Nolan +1.212.553.3912  
 VP-Senior Analyst  
 genevieve.nolan@moodys.com

Nicholas Samuels +1.212.553.7121  
 VP-Sr Credit Officer  
 nicholas.samuels@moodys.com

**CLIENT SERVICES**

Americas 1-212-553-1653

Asia Pacific 852-3551-3077

Japan 81-3-5408-4100

EMEA 44-20-7772-5454

# Massachusetts (Commonwealth of)

## Update to credit analysis

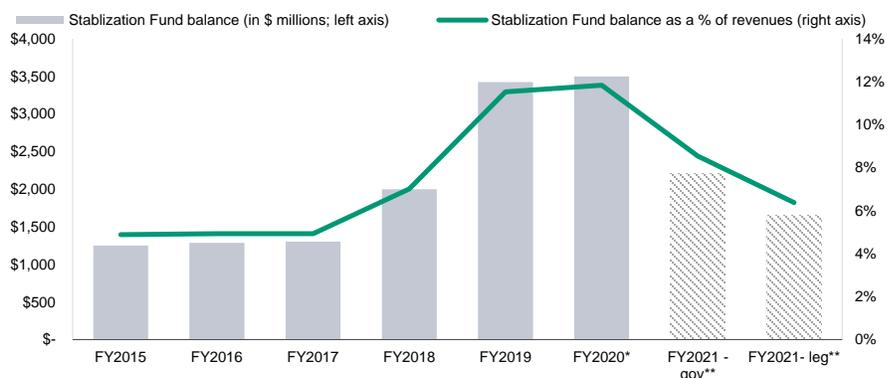
**Summary**

[Massachusetts](#)' (Aa1 stable) economic recovery, while underway, remains sluggish compared to the nation, with the commonwealth generally slower to reopen its economy in an effort to control continued spread of COVID-19. Federal aid has been key credit stabilizing factor during this period, especially for fiscal 2020. The state was able to balance operations without draws on reserves, while still funding key health care response items.

Looking ahead to the new fiscal year, Massachusetts' remains one of the few states without a full-year budget in place, though officials are reportedly looking to approve a spending plan by the end of this month. Reserve draws are projected, though may be moderated if revenue, including a new federal aid program, comes in above expectations (see Exhibit 1). [Long-term liabilities](#) and associated fixed costs remain some of the highest in the nation. The commonwealth's continued adherence to strong governance practices, including proper funding of these liabilities, remains a central credit consideration.

We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety. We do not see any material immediate credit risks for Massachusetts. However, the situation surrounding the coronavirus is rapidly evolving and the longer term impact will depend on both the severity and duration of the crisis. If our view of the credit quality of Massachusetts changes, we will update our opinion at that time.

Exhibit 1

**Reserves draws likely but the size of the ultimate draw remains an open question**


\*Fiscal 2020 stabilization fund balance unaudited \*\*Fiscal 2021 data reflects executive and legislative proposals  
 Sources: Massachusetts Information Statement October 2020; FY2021 House Ways and Means Budget

## Credit strengths

- » Large economy focused on important knowledge sectors that pay above average wages such as healthcare, education and technology
- » Strong financial management practices, particularly willingness to close budget gaps quickly through spending cuts, revenue increases and use of reserves
- » Adequate reserves and commitment to maintain them at levels that provide a healthy buffer for the current economic downturn

## Credit challenges

- » Combined debt and pension liabilities that are sixth highest in the nation relative to GDP, resulting in elevated fixed costs that limit budget flexibility
- » Aging demographic profile with overall population growth that lags the nation
- » Above average exposure to climate risks with most of its gross domestic product generated in coastal counties

## Rating outlook

Massachusetts' stable outlook reflects our expectation that the commonwealth will continue its trend of strong financial management, taking proactive measures to navigate credit challenges emerging during the ongoing global pandemic and more recent social unrest.

## Factors that could lead to an upgrade

- » Moderated debt and pension burdens, especially relative to peers
- » Continued growth of reserves and establishment of stronger constraints on their use
- » Established trend of structural budget balance

## Factors that could lead to a downgrade

- » Protracted structural budget imbalance
- » Reserves or liquidity that falls below adequate levels
- » Growth in leverage relative to state GDP or rising fixed costs relative to state revenue

## Key indicators

Exhibit 2

Massachusetts (Commonwealth of)	2015	2016	2017	2018	2019	50-State Median (2019)
Operating Fund Revenues (000s)	\$32,946,934	\$33,414,744	\$33,910,836	\$36,483,673	\$39,090,431	\$12,439,906
Available Balances as % of Operating Fund Revenues	7.7%	7.4%	6.6%	8.7%	13.9%	9.1%
Nominal GDP (billions)	\$503.2	\$519.1	\$540.0	\$570.5	\$596.6	\$250.6
Nominal GDP Growth	6.4%	3.2%	4.0%	5.6%	4.6%	3.6%
Total Non-Farm Employment Growth	1.9%	1.9%	1.3%	1.2%	1.0%	0.9%
Fixed Costs as % of Own-Source Revenue	20.3%	23.1%	22.8%	20.7%	20.5%	7.8%
Adjusted Net Pension Liabilities (000s)	\$53,989,121	\$65,193,204	\$80,449,143	\$81,227,853	\$77,151,349	\$11,258,253
Net Tax-Supported Debt (000s)	\$39,008,274	\$40,753,424	\$41,744,847	\$42,193,311	\$43,136,088	\$3,864,531
(Adjusted Net Pension Liability + Net Tax-Supported Debt) / GDP	18.5%	20.4%	22.6%	21.6%	20.2%	6.9%

Source: Massachusetts FY15-FY19 CAFRs; US Bureau of Labor Statistics; US Bureau of Economic Analysis'; Moody's Investors Service

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's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

## Profile

The Commonwealth of Massachusetts is the 15th largest state by population, boasting nearly 6.9 million residents in 2019. Its 2019 gross domestic product, reaching \$595.6 billion, ranks 11th among the states. Per capita income was 131.7% of the national average in 2018, second highest in the US.

## Detailed credit considerations

### Economy

Massachusetts continues to experience elevated unemployment relative to the rest of the US, as the state balances public health concerns with reopening shuttered portions of the economy.

Peaking at 17.7% in June, Massachusetts unemployment rate has since declined to 9.6% in September but that remains nearly 2% higher than the US, reflecting the broader shutdown of the state's economy and slower reopening pace, aimed at controlling the spread of coronavirus.

According to the US Bureau of Economic Analysis, in the third quarter of 2020 Massachusetts' GDP grew at an annualized rate of 37.7%, outpacing US growth of 33.1%. This growth was likely fueled by ongoing federal aid, especially supplemental unemployment benefits and assistance for small businesses. In an attempt to maximize access to federal aid the commonwealth enacted new legislation in October to increase state unemployment assistance. The goal is to increase the number of state residents that are eligible for federal lost wages assistance.

The Coronavirus Aid, Relief and Economic Security (CARES) program, along with the supplemental lost wages program, will sunset at calendar year end. Additional federal aid remains a key recovery factor that, as of this publication, is uncertain.

For a more detailed discussion on pre-pandemic and fundamental economic trends, please see our [June 2020 credit opinion](#).

### Finances and liquidity

The commonwealth remains in the midst of finalizing a fiscal 2021 budget. Already on its third interim budget for the current fiscal year, the governor introduced a revised fiscal 2021 budget proposal in mid-October. The legislature introduced its budget the first week in November, with the two sides hoping to reach a consensus by the end of November.

During this period the commonwealth has continued to see revenue growth. Through October fiscal 2021 tax revenue is up 1.3% year-over-year, with growth in both income and sales taxes, the two main revenue sources for the commonwealth. This growth continues a favorable trend, with fiscal 2020 tax revenue essentially flat from fiscal 2019 collections when including deferred income and sales tax payments. The revenue trend, along with federal funding, covered budgeted and supplemental spending in fiscal 2020 without draws on reserves, despite the fact that revenue was still -2.3% below budgeted expectations.

### Liquidity

Massachusetts may draw on its reserves in the upcoming fiscal year, but even with that draw the balance remains healthy and the state retains additional sources of liquidity to help manage through continued uncertain times.

The commonwealth's budget stabilization fund, its main general reserve fund, reached a record-high \$3.5 billion at the close of fiscal 2020. The commonwealth built up the balance during the prolonged economic expansion, but may draw on this balance for fiscal 2021. Per the governor's updated budget proposal, the commonwealth may use up to \$1.3 billion in stabilization funds in the next fiscal year. The legislature's plan proposes to use up to half of the stabilization fund (see exhibit on page 1).

This use could be rolled back if tax collections come in above budgeted projections and/or if additional federal stimulus funds are enacted. But even if the reserve draw proposed by the legislature is approved, reserves will still be ahead of the fiscal 2017 balance, demonstrating the commonwealth's effectiveness at building up this balance over the last few years.

Outside of the stabilization fund the commonwealth has multiple sources of alternate liquidity, providing even more budgetary buffer should the need arise. The commonwealth will issue \$1.2 billion in Revenue Anticipation Notes this fiscal year, an annual practice since fiscal 2009. The commonwealth also has a \$200 million commercial paper program, \$200 million note purchase agreement with [RBC Capital Markets, LLC](#) (A3 stable) and a \$1.75 billion line of credit opened at the beginning of the pandemic. None of these facilities

have any balances outstanding. The commonwealth also has \$1.7 billion in remaining Coronavirus Relief Fund resources to spend on goods and services delivered by December 30, 2020. The commonwealth plans to spend the entire Coronavirus Relief Fund in coming months.

### Debt and pensions

Given recent capital plans, we expect the commonwealth to continue issuing debt for key priorities, but the overall economy will continue to provide a solid foundation for paying the long-term costs.

Net tax-supported debt reached \$43.7 billion for fiscal 2019 according to [Moody's state debt medians report](#), comprised primarily of general obligation bonds (55%) but also includes sales tax backed debt for other underlying entities (23%). The state's debt levels ranked second-highest among the 50 states on a per capita basis. Debt is elevated in part because of the commonwealth's practice of financing projects for local governments, including a robust school district capital bonding program and debt for the Massachusetts Bay Transportation Authority. Per the governor's fiscal 2020 five-year capital investment plan, the state expects to issue up to \$2.43 billion of general obligation bonds.

### Legal security

Massachusetts pledges its full faith and credit for the payment of principal and interest of general obligation bonds, which includes unrestricted revenue but does not come from a dedicated property tax levy. We note that state law limits annual tax revenue growth and does not exempt debt service payments from this limitation.

### Debt structure

Massachusetts had \$2.6 billion of general obligation variable rate debt outstanding or 5.9% of fiscal 2019 net tax supported debt, with nearly \$1.7 billion of the variable rate debt with \$985 million unhedged. Liquidity facilities contain a mix of three- and five-year term-out provisions that, considering the strength of Massachusetts' market access, should provide ample time to refinance, if necessary. Inclusive of the full amount of the commonwealth's commercial paper program and its note purchase agreement, the variable and short-term debt is 6.8% of total net tax supported debt.

### Debt-related derivatives

The commonwealth's closely watched derivatives portfolio is manageable because of continued efforts to reduce exposure to variable rate debt and liquidity that is sufficient to handle unforeseen circumstances related to its swap agreements.

The total notional amount outstanding has decreased in recent years as the commonwealth takes advantage of refunding opportunities to convert variable rate debt to fixed and terminate associated swap agreements. The remaining four swap agreements are floating-to-fixed hedges with a total notional amount of \$814.1 million across general and special obligation debt. The mark-to-market value was -\$128 million as of September 30, 2020. Two of the four swaps are based on LIBOR; as of now there are no formal plans to replace the LIBOR rate once it expires.

### Pensions and OPEB

The commonwealth's unfunded long-term liabilities are some of the highest in the nation and the state's contributions are consistently below the amount necessary to prevent the current liability from growing, posing a credit challenge over the longer term.

Based on the commonwealth's [fiscal 2019 pension data](#), Massachusetts' adjusted net pension liability (ANPL) was \$77.2 billion or 201% of revenue. The 50-state median ANPL to revenue is 80%, with the commonwealth ranking fifth highest in the nation. While the commonwealth contributes more than the full amount of its actuarially determined contribution annually, the state's contributions are consistently below an amount necessary to prevent the unfunded liability from growing each year, reaching only 77% of our "tread water" benchmark in fiscal 2019. Massachusetts reported other post employment benefit (OPEB) liabilities were \$14.2 billion as of fiscal 2019, with a slightly lower adjusted net OPEB liability (ANOL) of \$13.7 billion. At 2.3% of GDP, the commonwealth's ANOL liability is above the state median of 1.0% of GDP.

## ESG considerations

### Environmental

Massachusetts' exposure to rising sea level and storm damage is elevated, but the credit impacts are somewhat mitigated by robust state and local preparedness and resiliency efforts. For a description of these considerations, please see our [Massachusetts Credit Opinion](#) from earlier this year, published on June 4.

### Social

The commonwealth benefits from multiple social strengths, especially its highly educated work force and elevated income levels. For a description of these considerations, please see our [Massachusetts Credit Opinion](#) from earlier this year, published on June 4.

### Governance

Despite chronically adopting late budgets, Massachusetts' governance is strong. For a description of these considerations, please see our [Massachusetts Credit Opinion](#) from earlier this year, published on June 4.

## Rating methodology and scorecard factors

The [US States and Territories methodology](#) includes a scorecard, which summarizes the 10 rating factors generally most important to the state and territory credit profiles. Because the scorecard is a summary, and may not include every consideration in the credit analysis for a specific issuer, a scorecard-indicated outcome may or may not map closely to the actual rating assigned.

Massachusetts' Aa1 rating is one notch higher than its scorecard-indicated outcome, because it incorporates the long-term economic growth that has provided the commonwealth with a strong base for paying its outsized liabilities, as discussed in this credit opinion.

Exhibit 3

### US States and territories rating methodology scorecard Massachusetts (Commonwealth of)

Rating Factors	Measure	Score
<b>Factor 1: Economy (25%)</b>		
a) Per Capita Income Relative to US Average [1]	131.3%	Aaa
b) Nominal Gross Domestic Product (\$ billions) [1]	\$596.6	Aaa
<b>Factor 2: Finances (30%)</b>		
a) Structural Balance	Aa	Aa
b) Fixed Costs / State Own-Source Revenue [2]	20.5%	Baa
c) Liquidity and Fund Balance	Aa	Aa
<b>Factor 3: Governance (20%)</b>		
a) Governance / Constitutional Framework	Aa	Aa
<b>Factor 4: Debt and Pensions (25%)</b>		
a) (Moody's ANPL + Net Tax-Supported Debt) / State GDP [2] [3]	20.2%	A
<b>Factors 5 - 10: Notching Factors [4]</b>		
Adjustments Up: None	0	
Adjustments Down: None	0	
<b>Rating:</b>		
a) Scorecard-Indicated Outcome		Aa2
b) Actual Rating Assigned		Aa1

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

[2] Fixed costs and debt and pensions measures are based on data from the most recent debt and pensions medians report published by Moody's

[3] ANPL stands for adjusted net pension liability

[4] Notching factors 5-10 are specifically defined in the US States and Territories Rating Methodology

Source: US Bureau of Economic Analysis; State CAFRs; Moody's Investors Service

© 2020 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/OR ITS CREDIT RATINGS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S INVESTORS SERVICE 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 INVESTORS SERVICE CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

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

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

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

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

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

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$2,700,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody's.com](http://www.moody's.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.

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

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

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

## CLIENT SERVICES

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