NUVEEN MASSACHUSETTS PREMIUM INCOME MUNICIPAL FUND
Form N-CSR
August 07, 2015

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-07484

Nuveen Massachusetts Premium Income Municipal Fund
(Exact name of registrant as specified in charter)

Nuveen Investments
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Chicago, IL 60606
(Address of principal executive offices) (Zip code)

Kevin J. McCarthy
Nuveen Investments
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Chicago, IL 60606
(Name and address of agent for service)

Registrant's telephone number, including area code: (312) 917-7700

Date of fiscal year end: May 31

Date of reporting period: May 31, 2015

Form N-CSR is to be used by management investment companies to file reports with the Commission not later than 10 days after the transmission to stockholders of any report that is required to be transmitted to stockholders under Rule 30e-1 under the Investment Company Act of 1940 (17 CFR 270.30e-1). The Commission may use the information provided on Form N-CSR in its regulatory, disclosure review, inspection, and policymaking roles.

A registrant is required to disclose the information specified by Form N-CSR, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-CSR unless the Form displays a currently valid Office of Management and Budget ("OMB") control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. ss. 3507.

ITEM 1. REPORTS TO STOCKHOLDERS.

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Chairman's Letter to Shareholders

Dear Shareholders,

A pattern of divergence has emerged in the past year. Steady and moderate growth in the U.S. economy helped sustain the stock market's bull run another year. U.S. bonds also performed well, amid subdued inflation, interest rates that remained unexpectedly low and concerns about the economic well-being of the rest of the world. The stronger domestic economy enabled the U.S. Federal Reserve (Fed) to gradually reduce its large scale bond purchases, known as quantitative easing (QE), without disruption to the markets, as well as beginning to set expectations for a transition into tightening mode.

The economic story outside the U.S. holds much uncertainty. The escalating drama over Greece's debt negotiations has the European economy on edge, while China's economy has decelerated and experienced a great deal of turmoil in its stock markets. Other areas of concern include a surprisingly steep decline in oil prices, the U.S. dollar's rally and an increase in geopolitical tensions, involving the Russia-Ukraine crisis and terrorist attacks across the Middle East and Africa, as well as more recently in Europe.

While a backdrop of healthy economic growth in the U.S. and the continuation of accommodative monetary policy (with the central banks of Japan and Europe stepping in where the Fed has left off) bodes well for the markets, the global outlook has become more uncertain. Indeed, volatility is likely to feature more prominently in the investment landscape going forward. Such conditions underscore the importance of professional investment management. Experienced investment teams have weathered the market's ups and downs in the past and emerged with a better understanding of the sensitivities of their asset class and investment style, particularly in times of turbulence. We recognize the importance of maximizing gains, while striving to minimize volatility.

And, the same is true for investors like you. Maintaining an appropriate time horizon, diversification and relying on practiced investment teams are among your best strategies for achieving your long-term investment objectives. Additionally, I encourage you to communicate with your financial consultant if you have questions about your investment in a Nuveen Fund. On behalf of the other members of the Nuveen Fund Board, we look forward to continuing to earn your trust in the months and years ahead.

William J. Schneider
Chairman of the Board
July 24, 2015

Portfolio Manager's Comments

Nuveen Connecticut Premium Income Municipal Fund (NTC)
Nuveen Massachusetts Premium Income Municipal Fund (NMT)

These Funds feature portfolio management by Nuveen Asset Management, LLC, an affiliate of Nuveen Investments, Inc. Portfolio manager Michael S. Hamilton discusses U.S. economic and municipal market conditions, key investment strategies and the twelvemonth performance of the Nuveen Connecticut and Massachusetts Funds. Michael assumed portfolio management responsibility for these Funds in 2011.

FUND REORGANIZATIONS

Effective before the opening of business on June 9, 2014, certain Massachusetts Funds (the Target Funds) were reorganized into a larger Massachusetts Fund included in this report (the Acquiring Fund) as follows:

The reorganizations are as follows:

Target Funds	Symbol	Acquiring Fund	Symbol
• Nuveen Massachusetts Dividend Advantage Municipal Fund	NMB	Nuveen Massachusetts Premium Income Municipal Fund	NMT
• Nuveen Massachusetts AMT-Free Municipal Income Fund	NGX		

See Notes to Financial Statements, Note 1 – General Information and Significant Accounting Policies, Fund Reorganizations for further information.

What factors affected the U.S. economy and the national municipal market during the twelve-month reporting period ended May 31, 2015?

During this reporting period, the U.S. economy continued to expand at a moderate pace. The Federal Reserve (Fed) maintained efforts to bolster growth and promote progress toward its mandates of maximum employment and price stability by holding the benchmark fed funds rate at the record low level of zero to 0.25% that it established in December 2008. At its October 2014 meeting, the Fed announced that it would end its bond-buying stimulus program as of November 1, 2014, after tapering its monthly asset purchases of mortgage-backed and longer-term Treasury securities from the original $85 billion per month to $15 billion per month over the course of seven consecutive meetings (December 2013 through September 2014). In making the announcement, the Fed cited substantial improvement in the outlook for the labor market since the inception of the current asset

Certain statements in this report are forward-looking statements. Discussions of specific investments are for illustration only and are not intended as recommendations of individual investments. The forward-looking statements and other views expressed herein are those of the portfolio manager as of the date of this report. Actual future results or occurrences may differ significantly from those anticipated in any forward-looking statements, and the views expressed herein are subject to change at any time, due to numerous market and other factors. The Funds disclaim any obligation to update publicly or revise any forward-looking statements or views expressed herein.

Ratings shown are the highest rating given by one of the following national rating agencies: Standard & Poor's (S&P), Moody's Investors Service, Inc. (Moody's) or Fitch, Inc. (Fitch). Credit ratings are subject to change. AAA, AA, A and BBB are investment grade ratings; BB, B, CCC, CC, C and D are below investment grade ratings. Certain bonds

backed by U.S. government or agency securities are regarded as having an implied rating equal to the rating of such securities. Holdings designated N/R are not rated by these national rating agencies.

Bond insurance guarantees only the payment of principal and interest on the bond when due, and not the value of the bonds themselves, which will fluctuate with the bond market and the financial success of the issuer and the insurer. Insurance relates specifically to the bonds in the portfolio and not to the share prices of a Fund. No representation is made as to the insurers' ability to meet their commitments.

Refer to the Glossary of Terms Used in this Report for further definition of the terms used within this section.

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purchase program as well as sufficient underlying strength in the broader economy to support ongoing progress toward maximum employment in a context of price stability. The Fed also reiterated that it would continue to look at a wide range of factors, including labor market conditions, indicators of inflationary pressures and readings on financial developments, in determining future actions. Additionally, the Fed stated that it would likely maintain the current target range for the fed funds rate for a considerable time after the end of the asset purchase program, especially if projected inflation continues to run below the Fed's 2% longer run goal. However, if economic data shows faster progress, the Fed indicated that it could raise the fed funds rate sooner than expected.

The Fed changed its language slightly in December, indicating it would be "patient" in normalizing monetary policy. This shift helped ease investors' worries that the Fed might raise rates too soon. However, as employment data released early in the year continued to look strong, anticipation began building that the Fed could raise its main policy rate as soon as June. As widely expected, after its March meeting, the Fed eliminated "patient" from its statement but also highlighted the policy makers' less optimistic view of the economy's overall health as well as downgraded their inflation projections. The Fed's April meeting seemed to further signal that a June rate hike was off the table. While the Fed attributed the first quarter's economic weakness to temporary factors, the meeting minutes from April revealed that many Committee members believed the economic data available in June would be insufficient to meet the Fed's criteria for initiating a rate increase. The June meeting bore out that presumption, and the Fed decided to keep the target rate near zero. But the Committee also continued to telegraph the likelihood of at least one rate increase in 2015, which many analysts forecasted for September.

According to the government's most recent estimate, the U.S. economy contracted at a 0.7% annualized rate in the first quarter of 2015, as measured by GDP, compared with an increase of 4.6% in the second quarter of 2014, 5.0% in the third quarter and 2.2% in the fourth quarter. The decline in real GDP growth rate from the fourth quarter of 2014 to the first quarter of 2015 primarily reflects a downturn in both state and local government spending, a decline in exports and consumer spending. These were partly offset by an upturn in federal government spending. The Consumer Price Index (CPI), at -0.2%, was unchanged year-over-year as of May 2015. The core CPI (which excludes food and energy) increased 1.7% during the same period, below the Fed's unofficial longer term inflation objective of 2.0%. As of May 31, 2015, the national unemployment rate was 5.5%, the level considered "full employment" by some Fed officials, down from the 6.3% reported in May 2014. The housing market continued to post consistent gains as of its most recent reading in April 2015. The average home price in the S&P/Case-Shiller Index of 20 major metropolitan areas rose 4.9% for the twelve months ended April 2015 (most recent data available at the time this report was prepared).

Municipal bonds enjoyed strong performance during the twelve-month reporting period, buoyed by a backdrop of low interest rates, improving investor sentiment and favorable supply-demand dynamics. Interest rates were widely expected to rise in 2014, as the economy improved and the Fed wound down its asset purchases. However, the 10-year Treasury yield ended the year even lower than where it began. As a result, fixed income asset classes performed surprisingly well (as yields fall, prices rise and vice versa). At the same time, investors grew more confident that the Fed's tapering would proceed at a measured pace and that the credit woes of Detroit and Puerto Rico would be contained. In addition, credit fundamentals for state and local governments were generally stabilizing, although pockets of trouble remained. California and New York showed marked improvements during 2014, whereas Illinois, New Jersey and Puerto Rico, for example, still face considerable challenges.

Investors' declining risk aversion bolstered demand for higher yielding assets, including municipal bonds, which reversed the tide of outflows municipal bond funds suffered in 2013. While demand and inflows rose, supply continued to be subdued in 2014. More municipal bonds left the market than were added, a condition known as net negative issuance. Part of the reason for net negative issuance was that a significant portion of issuer activity focused on current refundings, in which a new bond is issued to replace the called bond (in contrast to an advanced refunding, where the called bond remains in the market as a pre-refunded bond).

These factors helped drive municipal bond yields lower and tightened yield spreads relative to Treasuries in 2014 overall. However, as 2015 began, market conditions turned more volatile. A series of disappointing economic data underscored the fragility of the U.S. recovery, as well as cast further uncertainty on the timing of the Fed's first rate hike. Issuance was unusually strong at the beginning of 2015, fueling concerns about potential oversupply conditions. Over the twelve months ended May 31, 2015, municipal bond issuance nationwide totaled $397.8 billion, an increase of 34.4% from the issuance for the twelve-month period ended May 31, 2014. The surge in gross issuance is due mostly to increased refunding deals as issuers have been actively and aggressively refunding their outstanding debt given the very low interest rate environment. These refunding transactions have ranged from 40%-60% of total issuance over the past few years. Thus, the net issuance (all bonds issued less bonds redeemed) is actually much lower than the gross issuance. In fact, the total municipal bonds outstanding has actually declined in each of the past four calendar years. So, the gross is surging, but the net is not and this has been an overall positive technical factor on municipal bond investment performance.

At the same time, regulatory changes, increased risk aversion and expectations for rising interest rates have encouraged bond dealers, typically brokers and banks, to reduce the size of their inventories in recent years. By holding smaller amounts of bonds on their books, dealers seek to mitigate their exposure to bonds that could potentially be worth less or be more difficult to sell in the future. As a result, there has been less liquidity in the marketplace, which contributed to periods of increased price volatility in early 2015. The municipal bond market also experienced some seasonal weakness in the first few months of 2015 due to tax-related selling. Finally, divergence in economic growth and central bank policies around the world have reinforced an interest rate differential that favors demand for U.S. Treasuries, maintaining downward pressure on yields.

How were the economic and market conditions in Connecticut and Massachusetts during the twelve-month reporting period ended May 31, 2015?

The Connecticut economy continues its slow recovery, and is expected to continue to lag the national recovery for the near term. Employment declines in local government and the financial sector are cited as reasons for the weakness. As of May 2015, Connecticut's unemployment rate was 6.0%, exceeding the national rate of 5.5%. Connecticut has a high number of defense-related industries that could be vulnerable to cuts in federal defense spending. On February 18, 2015, Governor Malloy released his proposed $40 billion 2016-2017 biennium budget. It is 6.1% larger than the adopted 2014-2015 biennium budget. Under this proposed budget, the state sales tax would be reduced from the current 6.35% to 6.20% beginning November 1, 2015 and to 5.95% in 2017. According to Moody's, Connecticut's per-capita debt burden was the highest in the nation at $5,457 in 2013, in contrast to the national median of $1,054. Connecticut enjoyed the highest per-capita income of the 50 states, at 135% of the national average in 2014. Approximately $7.4 billion in Connecticut municipal bonds were issued during the twelve months ending May 31, 2015, an 18% gross issuance year-over-year increase. At period end, Moody's rated Connecticut "Aa3" with a stable

Portfolio Manager's Comments (continued)

outlook. Moody's downgraded the state's rating from Aa2 to Aa3 on January 20, 2012, citing its depleted reserves and high debt burden. S&P rates Connecticut "AA" with a negative outlook. S&P changed its outlook to negative on March 9, 2015 citing weak economic growth and underperforming revenues.

Massachusetts continued to benefit from a highly diverse economy. Its recent economic downturn was milder than that of the nation as a whole, as the Commonwealth's economy was somewhat protected by significant levels of employment in the relatively stable education and health care sectors. Aided by recent growth in biotechnology, pharmaceuticals and software development, Massachusetts' economy is expected to gain additional momentum. In May 2015, unemployment in the Commonwealth was 4.6%, down from 5.8% in May 2014, and its lowest point since March 2008. According to the U.S. Department of Commerce, Bureau of Economic Analysis, Massachusetts' per capita income is second highest among the 50 states. At $59,182 for calendar year 2014, it is 128% of the national average. According to the S&P/Case-Shiller Index of 20 major metropolitan areas, housing prices in Boston rose 1.8% over the twelve months ended April 2015 (most recent data available at the time this report was prepared), compared with an average increase of 4.9% nationally. In March 2015, the Commonwealth's $38.1 billion budget for Fiscal 2016 was introduced, representing a 4.4% increase over the adopted Fiscal 2015 budget. The proposed budget calls for no new taxes or fees, but proposes $457 million in "revenue solutions," including a tax amnesty program and the sale of a former courthouse in Cambridge. It anticipates 4.8% growth in tax revenues. According to Moody's, Massachusetts' debt burden is second highest in the nation (after Connecticut) on a per capita basis ($4,887 versus the median of $1,054) and third highest as a percentage of the state GDP (8.4% versus the median of 2.4%). As of March 2015, Moody's rated Massachusetts Aa1 with a stable outlook, and S&P rated the commonwealth AA+ with a stable outlook. For the twelve months ended May 31, 2015, Massachusetts' tax-exempt bond supply totaled $10.0 billion, a 5.7% gross issuance increase over the prior twelve months.

What key strategies were used to manage these Funds during the twelve-month reporting period ended May 31, 2015?

A backdrop of supportive technical and fundamental factors helped sustain the municipal market's rally during this reporting period. From the beginning of the period through the end of January 2015, yields fell sharply, particularly in the intermediate to longer maturity ranges, then rose slightly through the end of the period. The overall decline in interest rates helped sustain a general rise in municipal bond prices for the period as a whole. In general, municipal bonds in Connecticut and Massachusetts tended to lag the overall municipal market return for the reporting period. During this time, we continued to take a bottom-up approach to discovering sectors that appeared undervalued as well as individual credits that we believed had the potential to perform well over the long term.

Municipal supply nationally, as well as in Connecticut and Massachusetts, improved during this twelve-month period over that of the previous twelve months. However, much of this increase was attributable to refunding activity as bond issuers, prompted by low interest rates, sought to lower debt service costs by retiring older bonds from the proceeds of lower cost new bond issues. While some of this activity continued to be current refundings (in which the refunded bond matures or is redeemed within 90 days and therefore has no net effect on supply), we began to see an uptick in advance refundings (in which the refunded bond remains outstanding up to several more years). The increase in advance refundings contributed to greater supply in the marketplace, broadly speaking.

Much of our investment activity focus was on reinvesting the cash generated by current calls into bonds with intermediate and longer maturities that could help us offset the decline in rates and maintain investment performance potential, as well as keep the Funds fully invested. Trading activity was fairly active during this reporting period for both Funds. NTC emphasized bonds with 15- to 30-year term structures and purchases represented a range of sectors, including health care, higher education and water and sewer. Although we maintained a preference for revenue-supported sectors over tax-supported sectors, NTC also added some local general obligation (GO) bonds. NMT added bonds when attractive issues came to market, including credits in the higher education, hospital systems and water and sewer sectors. NMT purchased some shorter term, pre-refunded bonds to help maintain the Fund's duration and more closely align it with that of the benchmark index. Similar to NTC, NMT also emphasized revenue sectors over GO bonds.

Generally, the cash to finance the Funds' purchases came from bonds that were called or sold from the Funds' allocations of very short maturity (less than one year) paper. NTC also reduced its exposure to Puerto Rico bonds during this reporting period and sold a portion of one holding for a lower yielding University of Connecticut Student Fee revenue bond to help fund the purchases of more attractive values along the yield curve.

As of May 31, 2015, the Funds continued to use inverse floating rate securities. We employ inverse floaters for a variety of reasons, including duration management, income enhancement and total return enhancement.

How did the Funds perform during the twelve-month reporting period ended May 31, 2015?

The tables in each Fund's Performance Overview and Holding Summaries section of this report provide the Funds' total returns for the one-year, five-year and ten-year periods ended May 31, 2015. Each Fund's total returns at common share net asset value (NAV) are compared with the performance of a corresponding market index and a Lipper classification average.

For the twelve months ended May 31, 2015, the total returns at common share NAV for NTC and NMT outperformed the returns for their respective state's S&P Municipal Bond Index as well as the S&P Municipal Bond Index. For the same period, these two Funds lagged the average return for the Lipper Other States Municipal Debt Funds Classification. Shareholders should note that the performance of the Lipper Other States classification represents the overall average of returns for funds from ten states with a wide variety of municipal market conditions, making direct comparisons less meaningful.

Key management factors that influenced the Funds' returns included duration and yield curve positioning, sector allocation and credit exposure. Keeping the Funds fully invested throughout the reporting period also was beneficial for performance. In addition, the use of regulatory leverage was an important positive factor affecting the performance of the Funds. Leverage is discussed in more detail later in the Fund Leverage section of this report.

In this reporting period, municipal bonds with intermediate and longer maturities generally outperformed those with shorter maturities. In general, the Funds' durations and yield curve positioning were positive for performance. Consistent with our long term strategy, these Funds tended to have longer durations than the municipal market in general, with overweightings in the longer parts of the yield curve that performed well and underweightings in the underperforming shorter end of the curve. NTC and NMT benefited most strongly from overweight allocations to credits with durations eight years and longer and underweight allocations to durations four years and shorter.

Portfolio Manager's Comments (continued)

During this reporting period, lower rated bonds generally outperformed higher quality bonds, as the municipal market rally continued and investors became more willing to accept risk. NTC's credit quality positioning was a positive contributor to relative performance, boosted by its underweight to the underperforming AAA rated bonds and exposure to strong-performing non-rated bonds. In NMT, however, credit allocation had an overall neutral impact on relative performance. An underweight to AAA rated bonds, a slight overweight to BBB rated bonds and an overweight to non-rated bonds added to relative returns, but gains were offset by an underweight to A rated credits, which detracted from relative performance.

The Funds' sector positioning generally contributed positively to performance, although to a greater extent in NTC than in NMT. Both Funds benefited from overweight allocations to the strong-performing health care sector and underweight allocations to the underperforming tax-supported sectors. The health care sector was among the top-performing sectors in the broad municipal market during this reporting period, bolstered by investor demand for lower rated credits, generally improving credit fundamentals and increasing merger and acquisition activity within the hospital industry, which resulted in more pre-refundings of hospital bonds. Conversely, tax supported bonds were among the weakest performing groups. Although the tax-supported sectors encompass a wide range of credit ratings, the underperformance of higher quality issues has been one of the main reasons the tax-supported sectors have tended to lag revenue sectors. Relative gains in both Funds were also driven by an overall underweight and favorable positioning in the utilities sector. Within the sector, an overweight allocation to resource recovery, a group that performed well, and an underweight position in the underperforming public power group were advantageous to the Funds' performance. Additionally, an overweight to the education sector (and higher education bonds, in particular) added value to NTC and an overweight to the housing sector (especially multi-family bonds) was a positive influence for NMT. However, NMT's exposure to the industrial development revenue (IDR) sector detracted from relative performance, as our selections within the sector lagged the benchmark index.

Individual credit selection was another meaningful contributor to the two Funds' relative performance during this reporting period. NTC benefited from an increase in refunding activity, particularly among lower rated credits. Stamford Mill River Corridor Project and Yale-New Haven Hospital System were advance refunded with six-year calls, rather than the usual one to three years, which led to significant price rallies. NTC captured a large return from this price appreciation. Other standout performers for NTC included credits issued for Guam Waterworks Authority and the Harbor Point Infrastructure Improvement Project. NMT's credit selection was advantageous to performance, with gains driven by a diverse group of bonds from lower rated and non-rated segments and with longer duration structures.

As noted in the previous Shareholder Fund Report, we continue to monitor the ongoing economic problems of Puerto Rico for any impact on the Funds' holdings and performance. The Puerto Rico credits offered higher yields, added diversification and triple exemption (i.e., exemption from most federal, state and local taxes). However, Puerto Rico's continued economic weakening, escalating debt service obligations, and long-standing inability to deliver a balanced budget led to multiple downgrades on its debt over the past two years. Puerto Rico general obligation debt currently is rated Caa3/CCC-/CC (below investment grade) by Moody's, S&P and Fitch, respectively, with negative outlooks.

Puerto Rico's Governor, Alejandro García Padilla, recently announced a major shift in his administration's long-standing position on the government's commitment to debt repayment, declaring the Commonwealth's "debt is not payable" and Puerto Rico will no longer borrow to address annual budget deficits. The Commonwealth plans to meet with various creditors and bondholders over the next few months to attempt to negotiate a comprehensive debt restructuring or postponement of debt service payments. The likelihood of reaching consensus is questionable and the process will likely take several months to unfold. Puerto Rico commenced discussions with creditors with a public presentation in mid-July, but no details were provided. The governor has appointed a working group to develop a

comprehensive five-year fiscal plan, which will include recommendations for fiscal adjustments (budget cuts),

structural and institutional reforms and debt restructuring. The plan must be presented to the governor by August 30, 2015 and legislative measures to enact the plan are to be passed by October 1. A Puerto Rico public corporation failed to make a scheduled transfer on July 15, 2015 (subsequent to the close of this reporting period), for an annual appropriation debt service payment due August 1, 2015. The payment was not included in the FY2016 budget, so the failure to make the transfer was somewhat expected. The August 1 debt service payment from the trustee to bondholders is expected to be missed.

On July 12, 2015, a federal appeals court confirmed a lower court's decision finding Puerto Rico's Debt Recovery Act to be unconstitutional. This eliminates a path to debt restructuring the Commonwealth had hoped to be able to pursue. Puerto Rico's non-voting Representative in Congress introduced legislation that would make chapter 9 bankruptcy available to the Commonwealth's public corporations earlier this year and a congressional committee hearing was held on February 26, 2015. A companion bill was introduced in the U.S. Senate on July 15, 2015. Thus far, authorizing chapter 9 for Puerto Rico has gained support from Democrats in the House and Senate, but Republican support has not yet materialized.

In light of the evolving economic situation in Puerto Rico, Nuveen's credit analysis of the Commonwealth had previously considered the possibility of a default and restructuring of public corporations and we adjusted our portfolios to prepare for such an outcome, although no such default or restructuring has occurred to date. The Nuveen complex's entire exposure to obligations of the government of Puerto Rico and other Puerto Rico issuers totaled 0.34% of assets under management as of May 31, 2015. As of May 31, 2015, Nuveen's limited exposure to Puerto Rico generally was invested in bonds that were insured, pre-refunded (and therefore backed by securities such as U.S. Treasuries), or tobacco settlement bonds. Overall, the small size of our exposures meant that our Puerto Rico holdings had a negligible impact on performance.

Overall, NTC reduced its allocation to Puerto Rico to 2.8% by the end of the period from 4.1% at the beginning of the period. The remaining Puerto Rico exposure was held in high quality credits with structures that we consider attractive, including tobacco issues, insured bonds and escrowed-to-maturity bonds (backed by U.S. Treasuries). NMT began the period with exposure of 2.4% and ended the reporting period at 0.7%, composed of an escrowed-to-maturity bond (backed by U.S. Treasuries) and a University of the Sacred Heart Project bond.

Fund Leverage

IMPACT OF THE FUNDS' LEVERAGE STRATEGIES ON PERFORMANCE

One important factor impacting the returns of the Funds relative to their comparative benchmarks was the Funds' use of leverage through their issuance of preferred shares and/or investments in inverse floating rate securities, which represent leveraged investments in underlying bonds. The Funds use leverage because our research has shown that, over time, leveraging provides opportunities for additional income, particularly in the recent market environment where short-term market rates are at or near historical lows, meaning that the short-term rates the Fund has been paying on its leveraging instruments have been much lower than the interest the Fund has been earning on its portfolio of long-term bonds that it has bought with the proceeds of that leverage. However, use of leverage also can expose the Fund to additional price volatility. When a Fund uses leverage, the Fund will experience a greater increase in its net asset value if the municipal bonds acquired through the use of leverage increase in value, but it will also experience a correspondingly larger decline in its net asset value if the bonds acquired through leverage decline in value, which will make the Fund's net asset value more volatile, and its total return performance more variable over time. In addition, income in levered funds will typically decrease in comparison to unlevered funds when short-term interest rates increase and increase when short-term interest rates decrease. Leverage had a positive impact on the performance of these Funds over this reporting period.

As of May 31, 2015, the Funds' percentages of leverage are as shown in the accompanying table.

	NTC	NMT
Effective Leverage*	38.48%	37.23%
Regulatory Leverage*	33.70%	35.05%

* Effective Leverage is a Fund's effective economic leverage, and includes both regulatory leverage and the leverage effects of certain derivative and other investments in a Fund's portfolio that increase the Fund's investment exposure. Currently, the leverage effects of Tender Option Bond (TOB) inverse floater holdings are included in effective leverage values, in addition to any regulatory leverage. Regulatory leverage consists of preferred shares issued or borrowings of a Fund. Both of these are part of a Fund's capital structure. Regulatory leverage is subject to asset coverage limits set forth in the Investment Company Act of 1940.

THE FUNDS' REGULATORY LEVERAGE

As of May 31, 2015, the Funds have issued and outstanding Variable Rate MuniFund Term Preferred (VMTP) Shares as shown in the accompanying table.

	VMTP Shares		
	Series		Shares Issued at Liquidation Value
NTC	2017	$	106,000,000
NMT	2017	$	74,000,00

During the current reporting period, NMT refinanced all of its MuniFund Term Preferred (MTP) Shares with the proceeds from newly issued VMTP Shares.

Refer to Notes to Financial Statements, Note 4 — Fund Shares, Preferred Shares for further details on MTP and VMTP Shares and each Fund's respective transactions.

Common Share Information

COMMON SHARE DISTRIBUTION INFORMATION

The following information regarding the Funds' distributions is current as of May 31, 2015. Each Fund's distribution levels may vary over time based on each Fund's investment activity and portfolio investments value changes.

During the current reporting period, each Fund's distributions to common shareholders were as shown in the accompanying table.

	Per Common Share Amounts	
Ex-Dividend Date	NTC	NMT
June 2014*	$ 0.0570	$ 0.0555
July	0.0570	0.0555
August	0.0570	0.0555
September	0.0570	0.0555
October	0.0570	0.0555
November	0.0570	0.0555
December	0.0570	0.0575
January	0.0570	0.0575
February	0.0570	0.0575
March	0.0570	0.0590
April	0.0570	0.0590
May 2015	0.0570	0.0590
Ordinary Income Distribution**	$ 0.0002	$ —
Market Yield***	5.42%	5.39%
Taxable-Equivalent Yield***	8.01%	7.89%

* In connection with NMT's reorganization, the Fund declared a dividend of $0.0147 per common share with an ex-dividend date of June 4, 2014, payable on July 1, 2014 and a dividend of $0.0408 per common share with an ex-dividend date of June 17, 2014, payable on July 1, 2014.

** Distribution paid in December 2014.

*** Market Yield is based on the Fund's current annualized monthly dividend divided by the Fund's current market price as of the end of the reporting period. Taxable-Equivalent Yield represents the yield that must be earned on a fully taxable investment in order to equal the yield of the Fund on an after-tax basis. It is based on a combined federal and state income tax rate of 32.3% and 31.7% for Connecticut and Massachusetts, respectively. When comparing a Fund to investments that generate qualified dividend income, the Taxable-Equivalent Yield would be lower.

Each Fund in this report seeks to pay regular monthly dividends out of their net investment income at a rate that reflects its past and projected net income performance. To permit each Fund to maintain a more stable monthly dividend, the Fund may pay dividends at a rate that may be more or less than the amount of net income actually earned by the Fund during the period. If a Fund has cumulatively earned more than it has paid in dividends, it will hold the excess in reserve as undistributed net investment income (UNII) as part of the Fund's net asset value. Conversely, if a Fund has cumulatively paid in dividends more than it has earned, the excess will constitute a negative UNII that will likewise be reflected in the Fund's net asset value. Each Fund will, over time, pay all its net investment income as dividends to shareholders.

As of May 31, 2015, the Funds had positive UNII balances for tax purposes and positive UNII balances for financial reporting purposes.

All monthly dividends paid by the Funds during the current reporting period were paid from net investment income. If a portion of the Fund's monthly distributions was sourced from or comprised of elements other than net investment income, including capital gains and/or a return of capital, shareholders would have received a notice to that effect. For financial reporting purposes the composition and per share amounts of each Fund's dividends for the reporting period are presented in this report's Statement of Changes in Net Assets and Financial Highlights, respectively. For income tax purposes, distribution information for each Fund as of its most recent tax year end is presented in Note 6 — Income Tax Information within the Notes to Financial Statements of this report.

COMMON SHARE REPURCHASES

During August 2014, the Funds' Board of Trustees reauthorized an open-market share repurchase program, allowing each Fund to repurchase an aggregate of up to approximately 10% of its outstanding shares.

As of May 31, 2015, and since the inception of the Funds' repurchase programs, the Funds have cumulatively repurchased and retired common shares as shown in the accompanying table.

	NTC	NMT
Common Shares Cumulatively Repurchased and Retired	155,000	—
Common Shares Authorized for Repurchase	1,460,000	935,000

During the current reporting period, the Funds repurchased and retired their common shares at a weighted average price per common share and a weighted average discount per common share as shown in the accompanying table.

	NTC	NMT
Common Shares Repurchased and Retired	95,000	—
Weighted Average Price per Common Share Repurchased and Retired	$ 12.53	—
Weighted Average Discount per Common Share Repurchased and Retired	13.26%	—

OTHER COMMON SHARE INFORMATION

As of May 31, 2015, and during the current reporting period, the Funds' common share prices were trading at a premium/(discount) to their common share NAVs as shown in the accompanying table.

	NTC	NMT
Common Share NAV	$ 14.35	$ 14.67
Common Share Price	$ 12.62	$ 13.14
Premium/(Discount) to NAV	(12.06)%	(10.43)%
12-Month Average Premium/(Discount) to NAV	(12.94)%	(10.23)%

Risk Considerations

Fund shares are not guaranteed or endorsed by any bank or other insured depository institution, and are not federally insured by the Federal Deposit Insurance Corporation. Past performance is no guarantee of future results. Fund common shares are subject to a variety of risks, including:

Investment, Price and Market Risk. An investment in shares is subject to investment risk, including the possible loss of the entire principal amount that you invest. Your investment in shares represents an indirect investment in the municipal securities owned by the Funds, which generally trade in the over-the-counter markets. Shares of closed-end investment companies like these Funds frequently trade at a discount to their net asset value (NAV). Your shares at any point in time may be worth less than your original investment, even after taking into account the reinvestment of Fund dividends and distributions.

Tax Risk. The tax treatment of Fund distributions may be affected by new IRS interpretations of the Internal Revenue Code and future changes in tax laws and regulations.

Issuer Credit Risk. This is the risk that a security in a Fund's portfolio will fail to make dividend or interest payments when due.

Interest Rate Risk. Fixed-income securities such as bonds, preferred, convertible and other debt securities will decline in value if market interest rates rise.

Reinvestment Risk. If market interest rates decline, income earned from a Fund's portfolio may be reinvested at rates below that of the original bond that generated the income.

Call Risk or Prepayment Risk. Issuers may exercise their option to prepay principal earlier than scheduled, forcing a Fund to reinvest in lower-yielding securities.

Inverse Floater Risk. The Funds may invest in inverse floaters. Due to their leveraged nature, these investments can greatly increase a Fund's exposure to interest rate risk and credit risk. In addition, investments in inverse floaters involve the risk that the Fund could lose more than its original principal investment.

Leverage Risk. Each Fund's use of leverage creates the possibility of higher volatility for the Fund's per share NAV, market price, distributions and returns. There is no assurance that a Fund's leveraging strategy will be successful. Certain aspects of the recently adopted Volcker Rule may limit the availability of tender option bonds, which are used by the Funds for leveraging and duration management purposes. The effects of this new Rule, expected to take effect in mid-2015, may make it more difficult for a Fund to maintain current or desired levels of leverage and may cause the Fund to incur additional expenses to maintain its leverage.

Municipal Bond Market Liquidity Risk. Inventories of municipal bonds held by brokers and dealers have decreased in recent years, lessening their ability to make a market in these securities. This reduction in market making capacity has the potential to decrease a Fund's ability to buy or sell bonds, and increase bond price volatility and trading costs, particularly during periods of economic or market stress. In addition, recent federal banking regulations may cause certain dealers to reduce their inventories of municipal bonds, which may further decrease a Fund's ability to buy or sell bonds. As a result, the Fund may be forced to accept a lower price to sell a security, to sell other securities to raise cash, or to give up an investment opportunity, any of which could have a negative effect on performance. If the Fund needed to sell large blocks of bonds, those sales could further reduce the bonds' prices and hurt performance.

NTC

Nuveen Connecticut Premium Income Municipal Fund
Performance Overview and Holding Summaries as of May 31, 2015

Refer to the Glossary of Terms Used in this Report for further definition of the terms used within this section.

Average Annual Total Returns as of May 31, 2015

	Average Annual		
	1-Year	5-Year	10-Year
NTC at Common Share NAV	4.96%	4.66%	4.51%
NTC at Common Share Price	5.03%	3.36%	3.10%
S&P Municipal Bond Connecticut Index	1.61%	3.25%	3.80%
S&P Municipal Bond Index	3.25%	4.72%	4.51%
Lipper Other States Municipal Debt Funds Classification Average	5.43%	6.33%	5.12%

Past performance is not predictive of future results. Current performance may be higher or lower than the data shown. Returns do not reflect the deduction of taxes that shareholders may have to pay on Fund distributions or upon the sale of Fund shares. Returns at NAV are net of Fund expenses, and assume reinvestment of distributions. Comparative index and Lipper return information is provided for the Fund's shares at NAV only. Indexes and Lipper averages are not available for direct investment.

This data relates to the securities held in the Fund's portfolio of investments as of the end of the reporting period. It should not be construed as a measure of performance for the Fund itself. Holdings are subject to change.

Ratings shown are the highest rating given by one of the following national rating agencies: Standard & Poor's Group, Moody's Investors Service, Inc. or Fitch, Inc. Credit ratings are subject to change. AAA, AA, A and BBB are investment grade ratings; BB, B, CCC, CC, C and D are below-investment grade ratings. Certain bonds backed by U.S. Government or agency securities are regarded as having an implied rating equal to the rating of such securities. Holdings designated N/R are not rated by these national rating agencies.

Fund Allocation (% of net assets)	
Long-Term Municipal Bonds	157.6%
Other Assets Less Liabilities	2.5%
Net Assets Plus Floating Rate Obligations & VMTP Shares, at Liquidation Value	160.1%
Floating Rate Obligations	(9.3)%
VMTP Shares, at Liquidation Value	(50.8)%
Net Assets	100%

Portfolio Composition (% of total investments)	
Education and Civic Organizations	21.6%
Health Care	20.4%
Tax Obligation/General	16.4%
Tax Obligation/Limited	15.8%
Water and Sewer	10.0%
U.S. Guaranteed	7.1%

Other	8.7%
Total	100%

Credit Quality
(% of total investment exposure)

AAA/U.S. Guaranteed	18.4%
AA	54.2%
A	20.1%
BBB	4.1%
N/R (not rated)	3.2%
Total	100%

NMT

Nuveen Massachusetts Premium Income Municipal Fund
Performance Overview and Holding Summaries as of May 31, 2015

Refer to the Glossary of Terms Used in this Report for further definition of the terms used within this section.

Average Annual Total Returns as of May 31, 2015

	Average Annual		
	1-Year	5-Year	10-Year
NMT at Common Share NAV	4.84%	5.52%	4.94%
NMT at Common Share Price	3.75%	2.86%	3.30%
S&P Municipal Bond Massachusetts Index	2.85%	4.26%	4.48%
S&P Municipal Bond Index	3.25%	4.72%	4.51%
Lipper Other States Municipal Debt Funds Classification Average	5.43%	6.33%	5.12%

Past performance is not predictive of future results. Current performance may be higher or lower than the data shown. Returns do not reflect the deduction of taxes that shareholders may have to pay on Fund distributions or upon the sale of Fund shares. Returns at NAV are net of Fund expenses, and assume reinvestment of distributions. Comparative index and Lipper return information is provided for the Fund's shares at NAV only. Indexes and Lipper averages are not available for direct investment.

This data relates to the securities held in the Fund's portfolio of investments as of the end of the reporting period. It should not be construed as a measure of performance for the Fund itself. Holdings are subject to change.

Ratings shown are the highest rating given by one of the following national rating agencies: Standard & Poor's Group, Moody's Investors Service, Inc. or Fitch, Inc. Credit ratings are subject to change. AAA, AA, A and BBB are investment grade ratings; BB, B, CCC, CC, C and D are below-investment grade ratings. Certain bonds backed by U.S. Government or agency securities are regarded as having an implied rating equal to the rating of such securities. Holdings designated N/R are not rated by these national rating agencies.

Fund Allocation (% of net assets)	
Long-Term Municipal Bonds	151.8%
Other Assets Less Liabilities	2.2%
Net Assets Plus Floating Rate Obligations & VMTP Shares, at Liquidation Value	154.0%
VMTP Shares, at Liquidation Value	(54.0)%
Net Assets	100%

Portfolio Composition (% of total investments)	
Education and Civic Organizations	26.2%
Health Care	21.6%
Tax Obligation/Limited	14.1%
Tax Obligation/General	10.3%
U.S. Guaranteed	8.8%
Transportation	5.0%
Water and Sewer	4.6%

Other	9.4%
Total	100%

Credit Quality
(% of total investment exposure)

AAA/U.S. Guaranteed	13.6%
AA	50.8%
A	21.8%
BBB	8.5%
BB or Lower	3.3%
N/R (not rated)	2.0%
Total	100%

Shareholder Meeting Report

The annual meeting of shareholders was held in the offices of Nuveen Investments on March 26, 2015 for NTC; at this meeting the shareholders were asked to elect Board Members.

	NTC Common and Preferred shares voting together as a class	Preferred Shares
Approval of the Board Members was reached as follows:		
William Adams IV		
For	12,541,308	—
Withhold	350,425	—
Total	12,891,733	—
Jack B. Evans		
For	12,533,188	—
Withhold		