PUBLIC FINANCE MANAGEMENT BOARD

Fiscal Year 2016 Annual Report

Office of Rhode Island General Treasurer Seth M. Magaziner

September 2017

Background

In Rhode Island, there are over 100 entities with the authority to issue public debt, and maintaining and preserving the ability of these entities to borrow is critical for several reasons. First, state and local governments require access to public debt markets to maintain aging infrastructure. Second, public capital investments often attract private investments, which, taken together, helps spur the economy and create jobs. While the issuance of debt is very important to spread out the cost of large projects over time, it must be done responsibly and without excessive risk or cost to taxpayers.

In 2016, at the request of General Treasurer Seth Magaziner, the Rhode Island General Assembly enacted a series of reforms to Rhode Island's debt management practices, including improved research and reporting, stronger oversight, and policies aimed at providing taxpayer savings through more efficient debt issuance.

Subsequent to the passage of these reforms, the Public Finance Management Board (PFMB) has worked with staff in the Office of the General Treasurer to implement new policies and practices to effectuate these goals. The PFMB is a volunteer board of public finance experts formed to advise state and municipal issuers of public debt. For the decade prior to the 2016 debt reforms, the PFMB met on average only 1-2 times per year. Since passage of the 2016 reforms, the PFMB has met 7 times. The enclosed report includes a recap of the PFMB's recent activities and a snapshot of key facts and figure on the state of Rhode Island debt as of the end of the 2016 Fiscal Year.

PFMB Highlights for Fiscal Year 2016 and Fiscal Year 2017

Establishment of the Treasury Division of Debt Management

The FY 2017 budget as enacted included a series of reforms to the state's management of public debt, which Treasury staff is tasked with implementing. Notably, the budget as enacted allowed for the creation of a Division of Debt Management within Treasury, to provide the resources necessary to the PFMB to fulfill its mission.

Francis J. Quinn, was hired in summer 2016 as the state's first Director of Debt Management. The Director is responsible for initiating and maintaining effective relationships with issuers across the state, bond counsel, bond holders, financial advisors, bond rating agencies and other stakeholders. The Director is also responsible for aggregating and publishing comprehensive data on the issuance of state, quasi-public and municipal debt, and staffing PFMB meetings.

Debt Affordability Study

The PFMB's most significant undertaking over the past year was the publication of the first Debt Affordability Study conducted in Rhode Island in nearly two decades. This study is the first of its kind in the nation to set recommended debt limits that incorporate both debt and pension liabilities together, and the first to include the indebtedness of nearly all public debt issuers in a state, including special districts and quasi-public agencies. The study sets guidelines to protect Rhode Islanders from incurring debt that is out of proportion with the ability of the impacted population to repay.

The PFMB considered several factors in developing the study's affordability targets: for each issuer, the PFMB considered relevant peer comparisons, ratings agency guidance, and legal requirements contained in bond indentures. These affordability limits are purely advisory, and represent what the PFMB feels are prudent levels of indebtedness given the available information.

In the study, the PFMB finds the debt burden of the State of Rhode Island to be manageable but above many national peers, and recommends a slight reduction to the state's prior debt affordability targets. Most municipal borrowers are found to be borrowing within acceptable limits, but the study notes that some municipal borrowers carry liabilities in excess of their affordability targets. There are also some quasi-public agencies in Rhode Island that are at, or above, their recommended targets.

The PFMB recognizes that it may be appropriate to temporarily exceed affordability targets if increased capital spending is needed to manage emergency situations or revenues are temporarily impaired by economic downturns. However, issuers of public debt should endeavor to return to their target ratios in normal economic circumstances.

Enhanced Transparency

To date, there has been no central online source of data on public debt that been issued in the State of Rhode Island. While ad-hoc reports have been generated, there has not been a centralized resource in the State that has a full accounting of debt across multiple levels and entities. Over the past several months, Treasury staff has worked with the PFMB to create an electronic database of key information on debt issuance at the state, quasi-public and municipal level. This online resource is projected to be operational and accessible to the public in the 4th quarter of 2017.

The impending launch of this system will also help municipalities and other debt issuers by providing a user-friendly electronic interface that they can use to comply with their debt reporting requirements.

Other Highlights

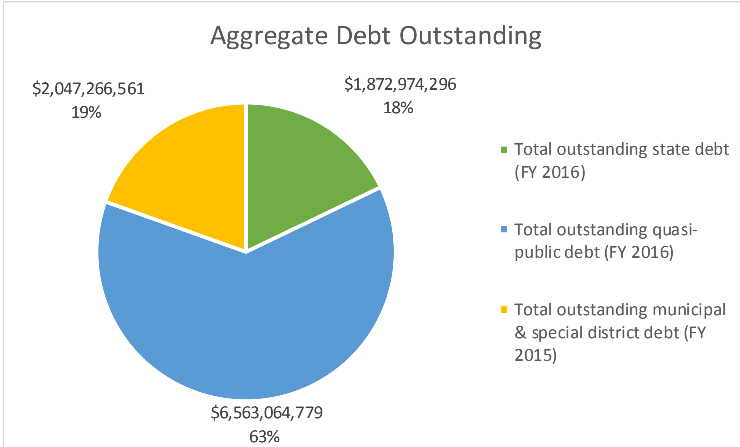
In addition to the initiatives outlined above, the Division of Debt Management and the PFMB have implemented, or are in the process of implementing, the following debt management policies and initiatives:

- Instituted a state financial advisor exclusivity policy to improve the objectivity of financial advice provided to the state.
- Began selling General Obligation debt competitively, saving money on interest expense.
- Developing training programs on rating agency methodology and other public finance issues for public issuers, including municipalities.
- Updating state bond offering disclosure documents to be more current and streamlined, with the goal of making information available to potential investors more relevant, timely, and easily accessible.

The recently enacted debt management reforms and subsequent implementation activity will help bring Rhode Island in line with national best practices, and will empower the PFMB to better fulfill its original purpose of providing strong reporting and accountability for public debt throughout the state. This revised annual report and the PFMB's recent debt affordability study, combined with the ongoing, expanded efforts of Treasury's Division of Debt Management, will further improve the State's financial standing, allowing for more efficient and robust investments in our local economy that will benefit all Rhode Islanders.

Highlights of Public Debt in Rhode Island

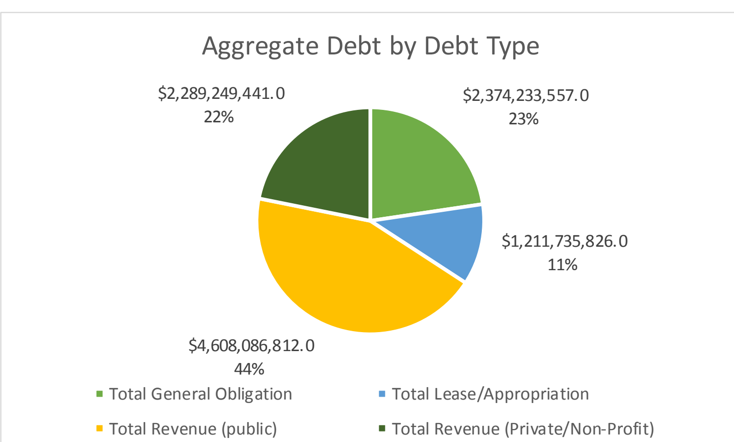
As of June 30, 2016, the State had a total of $1.87 billion of tax-supported debt outstanding. This is the sum of both the state's general obligation debt ($1.05 billion), and of lease/appropriations debt (approximately $821 million).



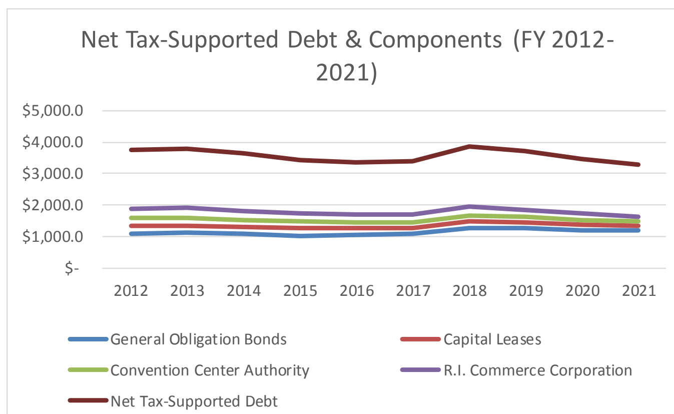
In addition, as of June 30, 2016, the State had approximately $2.83 billion of unfunded actuarial accrued liability (UAAL) for its pensions.

As of June 30, 2016, Quasi-Public Agencies in the State had a total of over $6.5 billion of debt outstanding, including debt held by non-profit and private conduit borrowers. The quasi-public borrower with the most debt outstanding was the Rhode Island Health and Educational Building Corporation (RIHEBC), which had $1.7 billion in total debt outstanding. Of RIHEBC's outstanding debt, approximately 87% is revenue debt for private or non-profit issuers, whereas 13% is public revenue debt.

As of June 30, 2015, municipalities and special districts in the State had a total of $2.0 billion of debt outstanding, consisting of $1.3 billion in municipal general obligation debt; $390.5 million in lease/appropriation debt; and $334.2 million in revenue debt. Municipalities had $3.69 billion of pension liabilities outstanding in FY 2015.



Just under half of the $10.5 billion in total debt outstanding (44%) is public revenue debt. General obligation debt (23%), private/non-profit revenue debt (22%) and lease/appropriation debt (11%) represent the remaining categories of debt outstanding.



As illustrated by the chart above, the state's net tax supported debt has declined over the past 5 fiscal years. Between FY 2012 and FY 2016, the compound annual growth rate was -2.7%. The FY 2018 Capital Budget proposed by the Governor's Office included a decline in net tax-supported debt of -0.8% between FY 2017-2021.

How Rhode Island's Debt Compares

In addition to the debt affordability ratios and comparable pension data outlined in the 2017 debt affordability study, it is meaningful to consider more recent rating agency comparisons of outstanding public debt. In May 2017, Moody's issued its annual US State Debt Median report which reviews and ranks Net Tax-Supported Debt levels for US States. Net Tax-Supported Debt is measured relative to state personal income, population, and general revenue levels. The Tax-Supported Debt to personal income ratio measures the State's debt paid from general taxes and revenues in comparison to personal income, which is considered to be a good measure of the State's aggregate wealth.

Rhode Island's Net Tax-Supported Debt to Personal Income ratio had decreased over the period 2010 - 2015 and its ranking dropped from the 13th highest in the country to the 15th highest. However, last year, the ratios increased from 3.7% to 4.3%, making Rhode Island the 12th highest nationally.

Another Moody's ratio, the Tax-Supported Debt to Population ratio measures the State's debt paid from general taxes and revenues in comparison to the number of individuals in its jurisdiction, which is another measure allowing for comparisons of indebtedness. Since 2006, Rhode Island's Net Tax-Supported Debt per Capita has consistently been below that of the peer state average, but has exceeded the Moody's median. Notably, between 2015 and 2016, RI's Net Tax-Supported Debt to Population increased from $1,813 per capita to $2,131, changing the state's rating from the 13th to 10th highest, nationally. One likely driver of this increase is the Motor Fuel Tax Revenue bond that was issued at approximately $117 million in par value.

Major Debt Events and Ratings Agency Findings in FY 2016

There were three major state-level public debt issuances in Rhode Island in 2016: a motor fuel tax revenue bond; a grant anticipation bond and refunding; and new issuance of general obligation debt. This section provides information on these three issuances, and highlights recent rating agency comments and actions.

In January 2016, the Rhode Island Turnpike and Bridge Authority issued $117.6 million in motor fuel tax revenue bonds (Series 2016A). This bond is secured by revenues received from the ($.035) per gallon of the ($.33) per gallon Motor Fuel Tax, which exists in Title 31, Chapter 36 of R.I.G.L. Specifically, the proceeds from this issuance were used to refinance prior debt that was issued through bond anticipation notes to repair the Claiborne Pell Bridge, and for construction projects on other bridges including the Mount Hope Bridge, the Jamestown Verrazzano Bridge, and the Sakonnet River Bridge.

In June 2016, the Rhode Island Commerce Corporation issued $230.3 million in Grant Anticipation Refunding Bonds (Series 2016A), which would refund existing Grant Anticipation Bonds to provide additional funding for bridges, pavement, transit and transportation infrastructure. In October 2016, the Commerce Corporation issued $245.9 million in new Grant Anticipation Bonds (Series 2016B) for the RhodeWorks plan. Proceeds from this issuance are part of the February 2016 enacted RhodeWorks program, which calls for spending $4.7 billion on the state's infrastructure through 2026.

In May 2016, the State issued two new general obligation bonds: $58.8 million in tax-exempt (Series A) and $13.2 million in federally taxable (Series B) bonds, in addition to refunding $53.8 million in tax-exempt G.O. bonds (Series C). The

Series A bond proceeds were used for capital purposes approved by the voters, including the Veterans' Home, cultural arts, higher education facilities, Brownfields remediation, and other infrastructure and cultural expenditures. The Series B bond proceeds were used for higher education facilities and cultural arts facilities (both of which are federally taxable).

The state GO credit is currently rated Aa2 by Moody's, and AA by Fitch and S&P. All agencies offer a stable outlook for the state.

Analysis

The public debt issued in 2016 provided critical investments in the state's roads, bridges, and other public infrastructure. In the context of today's relatively low interest rate environment, the calculus to borrow modestly more today, in order to decrease deferred maintenance costs in the future, is warranted.

However, despite the current low-interest rate environment, the state must continue to monitor overall liability levels and factors that might impact its credit rating.

Rhode Island's general obligation credit is currently rated Aa2 by Moody's, and AA by Fitch and S&P.

Rhode Island has taken several positive steps to strengthen its credit profile in recent years. The 2015 pension reform settlement agreement and 2015-2016 Medicaid reform have significantly reduced the state's long-term costs. Further, Rhode Island continues to maintain strong budgeting and cash positions, and has not borrowed for cash flow purposes since FY 2012.

Challenges remain. Ratings agencies continue to comment on Rhode Island's long-term economic underperformance with below-average long-term employment growth rates. They have also noted the state's dependence on lottery and gaming revenues in a saturated market, and above average pension and debt liabilities—even after significant reforms.

The state has made important investments in its economy and workforce through new economic development initiatives over the past two years, which will continue to help spur economic development and better position its credit profile; however, it is likely that these investments and initiatives may take time to bear fruit. In the meantime, the state should continue to develop and implement new, sustainable ways to grow the existing workforce and businesses in Rhode Island, and to lure employers from outside of Rhode Island.

The debt affordability analysis that the PFMB published in 2017 is an important step towards better managing outer-year liabilities, but more work is needed to ensure decisions about debt issuance are made within the context of understanding available capacity, and that best practices are followed in the issuance of debt and expenditure of proceeds.

The PFMB and Treasury's Division of Debt Management stands ready and willing to assist as stakeholders consider overall state and local liability levels and credit strengths and weaknesses.

Appendix A: Meeting Agendas and Minutes

Public Finance Management Board

December 3, 2015

9:00 a.m.

Rhode Island State House, Room 205

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Thursday, December 3, 2015 at 9:00 a.m. in Room 205, on the second floor of the State House, Providence, Rhode Island.

Agenda

1. Call to Order

2. Membership Roll Call

3. Approval of Minutes of Meeting held December 5, 2014*
   Note: meetings of 3/19/15, 6/18/15 & 9/17/15 were cancelled due to lack of any volume cap applications

4. New Request for Approval *

   - RI Student Loan Authority- Allocation of portion of residual volume cap and allow carry forward of same amount $60,000,000

   - RIHMFC- Allocation of a portion of residual volume cap, and allow carry forward of the same amount $ 241,515,000

5. Discussion of State debt practices *

6. Other Business
   - Briefing: Open Government and Disclosure

* Board Members will be asked to vote on this item

Posted on Monday, November 30, 2015

Public Finance Management Board
Regular Meeting Minutes
Thursday, December 3, 2015
9:00 a.m.
Room 205, State House

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Thursday, December 3, 2015 at 9:05 a.m. in Room 205, State House, Providence, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Roll Call of Members

The following members were present:

The Honorable Seth Magaziner, General Treasurer and Chair
Mr. Shawn Brown, Public Member
Mr. Michael DiBiase, Director, Department of Administration
Mr. Robert A. Mancini, Public Member
Mr. Joseph Reddish, Public Member

Also in attendance: Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP, Mr. Jeffrey Padwa, General Counsel of the General Treasurer's Office, and other members of the Treasurer's Staff; Barbara Fields, Richard Hartley and Kara Lachapelle from the Rhode Island Housing and Mortgage Finance Corporation ("RIHMFC"); and Charlie Kelley and Noel Simpson from the Rhode Island Student Loan Association ("RISLA").
There being a quorum, the meeting was called to order at 9:05 a.m.

II. Approval of Minutes

Mr. Magaziner moved to the first agenda item:
<u>Consideration to approve the Public Finance Management Board Minutes</u>. Mr. Mancini moved; Mr. Brown seconded a motion. The following motion was passed by these members who voted in favor: Mr. Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini and Mr. Reddish.

VOTED: To approve the draft of the Minutes of the December 4, 2014 PFMB Regular Meeting.

III. New Request for Approval

Mr. Magaziner moved on to the next agenda item:
<u>Consideration to approve an allocation of volume cap to RISLA</u>. Mr. Charles Kelley, Executive Director of RISLA, presented RISLA's application and discussed, among other items, the Authority's debt issuance history and its upcoming plans, its historical ability to carryforward volume cap issuance, the student loan marketplace, low default rates and the occasion for RISLA to provide refinancing opportunities to existing student loan debtors. Mr. DiBiase moved; Mr. Mancini seconded a motion. The following motion was passed by these members who voted in favor: Mr. Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini and Mr. Reddish.

VOTED: To approve an allocation of volume cap in the amount of $60,000,000 to the Rhode Island Student Loan Authority (RISLA); and to allow that allocation to be carried forward and that

the Board's legal counsel be directed to file the necessary tax forms with the Internal Revenue Service (IRS) in connection therewith.

Mr. Magaziner moved on to the next agenda item:
Consideration to approve an allocation of volume cap to RIHMFC. Ms. Kara LaChapelle, Director of Finance and Technology of RIHMFC, joined by Ms. Barbara Fields and Mr. Richard Hartley, presented RIHMFC's application and discussed, among other items, the Corporation's debt issuance history and its upcoming debt issuance plans, its historical ability to carryforward volume cap issuance, the increased demand for single and multi-family loans. Mr. Reddish moved; Mr. Brown seconded a motion. The following motion was passed by these members who voted in favor: Mr. Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini and Mr. Reddish.

VOTED: To approve an allocation of volume cap in the amount of $241,515,000 to the Rhode Island Housing and Mortgage Finance Corporation (RIHMFC); and to allow that allocation to be carried forward and that the Board's legal counsel be directed to file the necessary tax forms with the Internal Revenue Service (IRS) in connection therewith.

IV. Discussion of State Debt Practices

Members discussed the role that PFMB would assume as part of the Treasurer's recommendations for overhauling public debt management and oversight, and specifically the scope of the study that the Treasurer has recommended of the state's debt management practices to be conducted by the state's new financial advisor, Public Resources Advisory Group ("PRAG"). Member Robert Mancini, president of the Rhode Island Society of Certified Public Accountants, offered his organization's pro bono assistance with debt analysis. All members voiced their agreement that the study should be done; to meet again in January after Treasury works with PRAG, the Society of CPAs, and others to design the scope of the study; and that the PFMB will meet more frequently moving forward.

V. Statutory Required Training of New Members

Mr. Jeffrey Padwa explained that state law requires that members of the PFMB board are required to be trained within six months of appointment on statutory provisions, regulations, the Code of Ethics, the Access to Public Records Act and the Open Meeting Act. He reviewed the PFMB statute and regulations with the members. The Open Meetings Act, APRA and the Open Meetings Act were reviewed and it was explained how they apply to PFMB and its board members. He went on to review the code of ethics and members' responsibilities. Mr. Padwa added that trainings are offered by the Attorney General's office, if members are interested.

Mr. Magaziner opened the floor to other business. There being none, Mr. Magaziner entertained a motion to adjourn the meeting. Mr. DiBiase moved, Mr. Mancini seconded and the following motion was passed. The following members voted in favor: Mr. Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini and Mr. Reddish.

VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 10:10 a.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

Public Finance Management Board

June 30, 2016

10:30 a.m.

Rhode Island State House, Room 205

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Thursday, June 30, 2016 at 10:30 a.m. in Room 205, on the second floor of the State House, Providence, Rhode Island.

Agenda

1. Call to Order

2. Membership Roll Call

3. Chairman's Comments

4. Approval of Minutes of Meeting held February 4, 2016*

5. Legislative Update
   - FY 2017, Article 2 as amended: Relating to Public Finance Management Board
   - Enacted FY 2017 Capital Development Program (November 2016 Referenda)

6. Debt Management Software Demonstration

7. Review and discussion of proposed PFMB regulation changes*

8. Discussion of State debt management affordability study *
   - Presentation from PRAG (Janet Lee and Tom Huestis)

9. New Request for Approval*
   - Rhode Island Infrastructure Bank –
     Qualified Energy Conservation Bond volume cap: $10,901,000

10. Discussion of meeting schedule*

11. Other Business

* Board Members will be asked to vote on this item

Posted on Monday, June 27, 2016

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter please contact Amanda Lucas at (401) 462-7649 at least 24 hours in advance of the scheduled meeting.

Public Finance Management Board

Regular Meeting Minutes
Thursday, June 30th 2016
10:30 a.m.
Room 205, State House

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Thursday, June 30, 2016 at 10:30 a.m. in Room 205, State House, Providence, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Call to Order

The meeting was called to order at 10:32 a.m.

II. Roll Call of Members

The following members were present:

The Honorable Seth Magaziner, General Treasurer and Chair
Mr. Shawn Brown, Public Member from League of Cities & Towns
Mr. Michael DiBiase, Director, Department of Administration
Mr. Robert A. Mancini, Public Member
Mr. Karl D. Landgraf, Public Member
Ms. Maribeth Williamson, Public Member

The following members were absent:

Mr. Douglas Jacobs, Public Member
Mr. Joseph Reddish, Public Member
Ms. Patricia Anderson, Public Member from League of Cities & Towns

Also in attendance: Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP, Mr. Patrick Marr, Chief of Staff for the General Treasurer's Office, and other members of the Treasurer's Staff; Mr. Chris Vitale and Mr. Jeff Diehl on behalf of the Rhode Island Infrastructure Bank.
There being a quorum, the meeting was called to order at 10:32 a.m.

III. Chairman's Comments

The Treasurer introduced Mr. Frank Quinn as the State's new Debt Management Officer and also introduced the newly appointed members: Mr. Landgraf, Ms. Williamson, and Mr. Jacobs. Introductions of present members and legal counsel were made.

IV. Approval of Minutes

Treasurer Magaziner moved to the first agenda item:

Consideration to approve the Public Finance Management Board Minutes. Mr. DiBiase moved; Mr. Brown seconded the motion.

Members who voted in favor:	Treasurer Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini.
Members who voted to oppose:	None
Members who abstained:	Mr. Landgraf and Ms. Williamson.

VOTED: To approve the draft of the Minutes of the February 4, 2016 PFMB Regular Meeting.

V. Legislative Update

Ms. Kelly Rogers, Director of Policy for the Office of the General Treasurer, provided an update on technical changes to the PFMB statutes as a result of the passage of FY 2017, Article 2 as amended. Discussion included the ability to advise municipalities. Mr. Landgraf asked if municipalities seek our advice. The General Treasurer explained that the Board historically has not been very active which may have discouraged municipalities from seeking advice. Mr. Brown asked whether the new general obligation proposal includes the list of special act borrowers. The General Treasurer indicated that the information could be put together. Mr. DiBiase noted that the Veteran's Home should be asterisked as it was previously approved and therefore, should not be included.

VI. Debt Management Software Demonstration

Mr. Patrick Marr, Chief of Staff for the Office of the General Treasurer provided a brief presentation of the software the State currently uses and also presented a demonstration of potential software upgrades. It was explained that the procurement process would be followed to obtain any additional software which would likely occur late in fiscal year 2017.

VII. Review and Discussion of Proposed PFMB Regulation Changes

Attorney Bernardo, legal counsel to the Board, gave a brief overview of the process to make regulatory changes which will be done pursuant to the Administrative Procedures Act. Attorney Bernardo then presented the proposed regulation changes and explained that the changes are primarily to bring the regulations into conformance with Article 2, as amended; however, some changes were done to cover some of the Board's initiatives. Specifically, Section 10 of the Rules and Regulations would broaden and expand the applicability of the fee to include municipalities and quasi-public corporations and fire districts and other special districts. Attorney Bernardo explained that authority for expanding the fees applicability was already provided for in statute, but required inclusion in the regulations. Mr. Brown inquired as to who sets the fee to which Attorney Bernardo explained the fee is statutorily set. Ms. Williamson inquired as to how the advisory seeking process would work. The General Treasurer suggested it will have to be a "wait and see" approach but that the legislation seems to allow for a proactive issuance of advisory opinions. Mr. Landgraf stated that the Board should be careful as to what it is advising suggesting that the Board should stay away from the purpose, but rather looking at whether the issuances are appropriate. Mr. Brown suggested that the Board speak with the Auditor General to see if it would be possible to include certain schedules as part of an audit to assist in data collection. Mr. DiBiase noted that the fee to be imposed was contemplated by the General Assembly. After discussion, Treasurer Magaziner entertained a motion to initiate the rulemaking process based upon the proposed rules and regulations changes. Mr. Mancini moved; Ms. Williamson seconded the motion.

Members who voted in favor: Treasurer Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini, Mr. Landgraf and Ms. Williamson.
Members who voted to oppose: None

VOTED: To consider the adoption of regulations to reflect changes in law applicable to the PFMB, and to provide guidelines and criteria put forth to pursue the Administrative Procedures Act for final promulgation.

VIII. State Debt Management Affordability Study

Ms. Janet Lee and Mr. Tom Huestis from the state's financial advisor, Public Resources Advisory Group (PRAG) gave a brief introduction of their relationship to the Board and then discussed the scope of the proposed affordability study. They acknowledged that they were unaware of any other state that has looked at issues on a statewide scope before and that the study would be performed in three (3) phases. Mr. DiBiase inquired as to whether the study would be using a model or whether there would be individual analysis. The General Treasurer explained that staff resources would be used and that it will likely depend on what data can be gathered. Mr. Brown inquired as to whether or not communities would have the ability to comment or otherwise participate. Treasurer Magaziner explained that it would be helpful to reach out to issuers at some point in the future. There was discussion surrounding whether the study would include GASB 49 requirements, OPEB, and that Phases 2 and 3 were things that the Board wanted to do anyway. Mr. DiBiase and Ms. Williamson both agreed that the fee to conduct the affordability study was reasonable. After discussion, Treasurer Magaziner entertained a motion to authorize PRAG to conduct a study. Mr. DiBiase moved; Mr. Landgraf seconded the motion.

Members who voted in favor: Treasurer Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini, Mr. Landgraf and Ms. Williamson.

Members who voted to oppose: None.

VOTED: To authorize PRAG to conduct an affordability study subject to additional terms and not to exceed $60,000.

IX. Requests for Approval

Treasurer Magaziner moved on to the next agenda item:
Consideration to approve an allocation of Qualified Energy Conservation Bond volume cap to the Rhode Island Infrastructure Bank (RIIB). Mr. Mancini moved; Mr. DiBiase seconded the motion.

Members who voted in favor: Treasurer Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini, Mr. Landgraf and Ms. Williamson.
Members who voted to oppose: None.

VOTED: To approve an allocation of Qualified Energy Conservation Bond volume cap in the amount of $10,901,000 to the Rhode Island Infrastructure Bank.

X. Discussion of Meeting Schedule

Treasurer Magaziner moved on to the next agenda item:
Consideration to approve the proposed meeting schedule to include additional meetings on August 4, 2016 and October 27, 2016 at 9:00 a.m. Ms. Williamson moved; Mr. Mancini seconded the motion.

Members who voted in favor:	Treasurer Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini, Mr. Landgraf and Ms. Williamson.
Members who voted to oppose:	None.

VOTED: To adopt the revised meeting schedule to include August 4, 2016 and October 27, 2016 at 9:00 a.m.

Treasurer Magaziner opened the floor to other business. There being none, Treasurer Magaziner entertained a motion to adjourn the meeting. Ms. Williamson moved; Mr. Mancini seconded and the following motion was passed.

Members who voted in favor:	Treasurer Magaziner, Mr. Brown, Mr. DiBiase, Mr. Mancini, Mr. Landgraf and Ms. Williamson.
Members who voted to oppose:	None.

VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 12:37 p.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

EXHIBIT A

2016 Allocation Resolution No. 2

WHEREAS, the Public Finance Management Board (the "Board") has been created pursuant to the provisions of Chapter 10.1 of Title 42 of the General Laws of the State of Rhode Island, enacted as Chapter 477 of the Public Laws of 1986, effective June 25, 1986; and

WHEREAS, the Internal Revenue Code of 1986, as amended (the "Code"), places volume cap restrictions on the issuance of certain tax exempt private activity bonds issued by State and local issuing authorities within the State of Rhode Island; and

WHEREAS, the provisions of Section 146 of the Code provide that states may allocate the volume cap restrictions among state and local issuing authorities; and

WHEREAS, the American Recovery and Reinvestment Act of 2009 authorized Qualified Energy Conservation Bonds (QECB) to finance certain qualified energy conservation projects; and

WHEREAS, Section 54D of the Internal Revenue Code, 26 U.S.C. §54D, sets a national volume cap limitation on the issuance of QECB and authorizes allocations among the States in proportion to State populations; and

WHEREAS, Internal Revenue Service Notice 2009-29 allocated $10,901,000 in QECB volume cap to the State of Rhode Island; and

WHEREAS, 26 U.S.C. §54D requires that each "large local government" within a State, be allocated a portion of the State's QECB volume cap allocation in the same ratio as the population such large local government bears to the State's population; and

WHEREAS, "large local governments" are defined as any municipality with a population of 100,000 or more; and

WHEREAS, the City of Providence is a "large local government" pursuant to 26 U.S.C. §54D; and

WHEREAS, 26 U.S.C. §54(D)(e)(2)(B) allows a large local government to reallocate its QECB volume cap to a State; and

WHEREAS, the Board, under Section 42-10.1-3 of the General Laws of the State of Rhode Island, is authorized to allocate tax-exempt bond issuance capacity among all issuers in the State of Rhode Island including QECB volume cap; and

WHEREAS, the General Assembly has specifically provided for the allocation process and, in accordance with 26 U.S.C. §54D, the City of Providence's ability to reallocate its QECB volume cap; and

WHEREAS, by resolution approved on June 28, 2016 the City of Providence reallocated all of its QECB volume cap allocation to the Board; and

WHEREAS, Chapter 141, Article 14, Section 17 of the Rhode Island Public Laws 2015 designated the Rhode Island Infrastructure Bank ("RIIB") to be the sole issuer of QECB from the State of Rhode Island's allocation, including any portions of which have been reallocated to the State by local governments.

NOW THEREFORE, under the authority granted by law, the Board hereby makes the following findings and allocations:

1. Based upon the provisions of the Code, the Board makes the following allocations of the QECB volume cap of the State:

A. To the Rhode Island Infrastructure Bank, an amount equal to $10,901,000.

2. Any amount issued under allocation may only be issued for purposes authorized under the laws of the State of Rhode Island and the United States for which a volume cap allocation is required under the provisions of the Code.

3. This Resolution shall take effect upon its adoption by the Board effective June 30, 2016.

Dated: June 30, 2016

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Public Finance Management Board

August 4, 2016

9:00 a.m.

Rhode Island State House, Room 205

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Thursday, August 4, 2016 at 9:00 a.m. in Room 205, on the second floor of the State House, Providence, Rhode Island.

Agenda

1. Call to Order

2. Approval of Minutes of Meeting held June 30, 2016*

3. Debt Affordability Study update

4. PFMB Rules and Regulations update

5. Debt Management Technology and Communications update

6. Presentation on FY 2017 General Obligation Proposals

7. Discussion of Reports/Articles:

   - New England Public Policy Center Report: *Why is State and Local Government Capital Spending Lower in the New England States than in Other U.S. States*?

   - Wall Street Journal: *Needed: A Contingency Plan for Secular Stagnation*

8. Adjourn

   * Board Members will be asked to vote on this item

Posted on Monday, August 1, 2016

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter please contact Charon Rose at (401) 222-1353 at least 24 hours in advance of the scheduled meeting.

Public Finance Management Board
Regular Meeting Minutes
Thursday, August 4th, 2016
9:00 a.m.
Room 205, State House

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Thursday, August 4, 2016 at 9:00 a.m. in Room 205, State House, Providence, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Call to Order

The meeting was called to order at 9:08 a.m.

II. Roll Call of Members

The following members were present:

The Honorable Seth Magaziner, General Treasurer and Chair
Mr. Shawn Brown, Public Member from League of Cities & Towns
Mr. Michael DiBiase, Director, Department of Administration
Mr. Robert A. Mancini, Public Member
Mr. Karl D. Landgraf, Public Member
Ms. Maribeth Williamson, Public Member
Mr. Douglas Jacobs, Public Member
Mr. Joseph Reddish, Public Member
Ms. Patricia Anderson, Public Member from League of Cities & Towns

Also in attendance: Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP, Mr. Patrick Marr, Chief of Staff for the General Treasurer's Office, Mr. Frank Quinn, Director of Debt Management, and other members of the Treasurer's Staff;
There being a quorum, the meeting was called to order at 9:08 a.m.

III. Chairman's Comments

The Treasurer outlined the agenda noting the day's meeting will mainly consist of updates on current projects. Given the light agenda with no actionable items, he also wanted to engage the committee in discussion regarding two timely and relevant articles.

IV. Approval of Minutes

Treasurer Magaziner moved to the first agenda item:
Consideration to approve the Public Finance Management Board Minutes.

On a motion by Ms. Williamson and seconded by Mr. Mancini, it was unanimously

VOTED: To approve the draft of the Minutes of the June 30th, 2016 PFMB Regular Meeting.

V. Debt Affordability Study Update

Mr. Quinn advised that the first draft of Phase I will be made available the week of August 22nd. Most of the data for Phase I has been collected with Phase II nearing completion. Phase III data will be a bit more complicated to collect given the significant number of entities and relative dearth of information readily available.

For definition, Phase I will report on the State and public and quasi-public corporations. Phase II will report on local municipal debt and Phase III will report on fire districts and special districts.

Treasurer Magaziner noted he joined Mr. Quinn at a meeting with the Division of Municipal Finance at the Department of Administration (DOA) and discussed how data can be collected from these municipalities, saying it will not be an easy task. While some of this information is found in CAFRs and financial statements, it is not in a form where it is readily usable; it will be necessary to comb through the data to obtain the necessary numbers. He believes gathering comprehensive data from the larger municipalities will be a good start to the process. Treasurer Magaziner reminded the board that no other state has attempted to conduct a debt study that includes all debt issuers in the state.

The board asked questions.

VI. PFMB Rules and Regulations Update

Mr. Marr provided background on the PFMB rules and regulations stating that the existing rules and regulation largely mirrored the statue prior to being included in the Governor's budget. Once legislation passed, there was a conflict between that statute and the existing rules and regulations necessitating they be revised.

The Board approved the new draft rules and regulations at the June meeting. They are now posted on the Treasury website, available for public comment, through August 31st after which time they will be brought before the board to be finalized. Since publicly posting, about a week prior to the August 4th meeting date, there had been no public comments made.

VII. Debt Management Technology and Communications Update

Mr. Marr stated there have been productive discussions with Socrata; a company the office has been engaged with regarding the public facing debt management portal, though nothing has been finalized. Additionally, a PFMB website page is being developed as part of the larger Treasury website. The portal will include information on all PFMB related matters including meeting minutes, articles, reports and statistical information. It is expected the page will be operational by the September meeting.

VIII. Presentation of FY 2017 General Obligation Proposals

Treasurer Magaziner provided background on the State's general obligation debt that will appear on the November 2016 ballot, stating there is about $230 million worth of this type of debt that will be subject to voter approval. Under current PFMB guidelines, set in 1999, the State has a target ratios of total debt to personal income tax supported debt of no more than 5-6% and total debt service to general fund revenues to of not to exceed 7 1/2 %. Assuming the issuance of the proposed new debt, combined with existing debt, the debt ratios will remain comfortably below the credit guidelines.

Mr. Quinn highlighted the overall outcome of the report was positive.

IX. Discussion of Reports/Articles

Treasurer Magaziner began the discussion starting with the *New England Public Policy Center Report: Why is State and Local Government Capital Spending Lower in the New England States than in Other U.S. States*? He summarized they found New England states, especially Rhode Island, are near the bottom when it comes to capital spending which includes spending on roads, highways, university buildings. Rhode Island is an outlier as it has disproportionate debt outstanding is for private purposes, which include housing, student loans and economic development. If private purpose debt is excluded, Rhode Island debt versus the national average is actually lower. Treasurer Magaziner noted the data used for the study was census data, which can be inconsistent. He opened the floor for discussion on the findings.

Next, the board talked of the Wall Street Journal article *Needed: A Contingency Plan for Secular Stagnation Study* predicting that the environment over the past few years with low growth and low interest rates will continue for quite some time. The Treasurer opened the floor for discussion on the assertion.

Treasurer Magaziner opened the floor to other business. There being none, Treasurer Magaziner entertained a motion to adjourn the meeting.

On a motion by Ms. Williamson and seconded by Mr. Mancini, it was unanimously
VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 10:04 a.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

Public Finance Management Board

September 22, 2016

9:00 a.m.

Rhode Island State House, Room 205

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Thursday, September 22, 2016 at 9:00 a.m. in Room 205, on the second floor of the State House, Providence, Rhode Island.

Agenda

1. Call to Order

2. Approval of Minutes of Meeting held August 4, 2016*

3. PFMB Rules and Regulations:

    - Review and consideration of public comments received regarding the proposed changes to PFMB Rules and Regulations
    - Approval of final rules to be filed with the Secretary of State's Office in accordance with the Administrative Procedures Act*

4. Review and discussion of the 2016 State Debt Report

5. Debt Affordability Study Update:

    - Presentation by Janet Lee of PRAG Advisors regarding Phase 1of the Debt Affordability Study

6. Debt Management Technology and Communications update

7. Adjourn*

   * Board Members will be asked to vote on this item

Posted on Monday, September 19, 2016

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter please contact Charon Rose at (401) 222-1353 at least 24 hours in advance of the scheduled meeting.

Public Finance Management Board
Regular Meeting Minutes
Thursday, September 22, 2016
9:00 a.m.
Room 205, State House

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Thursday, September 22, 2016 at 9:00 a.m. in Room 205, State House, Providence, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Call to Order

The meeting was called to order at 9:12 a.m.

II. Roll Call of Members

The following members were present:

The Honorable Seth Magaziner, General Treasurer and Chair
Mr. Karl D. Landgraf, Public Member
Ms. Maribeth Williamson, Public Member
Mr. Douglas Jacobs, Public Member
Mr. Joseph Reddish, Public Member

Mr. Shawn Brown, Public Member from League of Cities & Towns arrived at 9:20 a.m.

Also in attendance: Ms. Janet Lee and Mr. Thomas Huestis, Public Resources Advisory Group (PRAG); Mr. Frank Quinn, Director of Debt Management; Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP; Mr. Patrick Marr, Chief of Staff for the General Treasurer's Office, and other members of the Treasurer's Staff.

III. Approval of Minutes

Treasurer Magaziner moved to the first agenda item:
Consideration to approve the Public Finance Management Board Minutes.

On a motion by Ms. Williamson and seconded by Mr. Reddish, it was unanimously
VOTED: To approve the draft of the Minutes of the August 4th, 2016 PFMB Regular Meeting.

IV. PFMB Rules and Regulations

On a motion by Mr. Jacobs and seconded by Ms. Williamson, it was unanimously
VOTED: To move the review of the PFMB Rules and Regulations to the end of the agenda

Treasurer Magaziner recalled the process of developing the PFMB Rules and Regulations: the board drafted a proposed set of rules and those were then posted for the public to allow feedback. Some issuing agencies and the League of Cities and Towns had comments on the proposed rules. These comments were heard at a public meeting held on September 12^{th}, and the Board has been provided with the written comments from the interested parties as well as the transcription from that meeting.

The comments contained three major themes: first, to restore the refunding credit as applied to refunding bond issues; second, to exempt municipal and regional entities from the assessment of the PFMB fee; and third, if the second comment were declined, to avoid a double assessment on certain obligations issued to serve as underlying security for a related debt issuance.

Mr. Landgraf asked what the percentage of total issuance was comprised of refunding bonds. Mr. Marr offered that over the last eight fiscal years (2008-2015), refunding issuance at the state and quasi level represented 30% of issuance, and at the local level it represented 16% of issuance. It was also clarified by Mr. Bernardo that underwriters, not the municipalities, will be assessed the fees.

Related to the 30-day notification period prior to a bond sale, Mr. Landgraf noted there will be times when, due to emergencies, it will be difficult to provide such notification that far in advance. The board agreed a 30-day period is important, however it is understood that there may be times when the 30-day notice period and the penalty may be waived.

Related to the $250 per day penalty for late reporting, Mr. Landgraf stated it is excessive and ultimately only hurts the taxpayer. The board determined that no penalties will be assessed until staff has developed and presented alternate proposals to the board that encompasses a fairer, more nuanced approach to applying fines.

Treasurer Magaziner mentioned the additional concern surrounding the definition of leases. Mr. Bernardo explained that "leases" are cited in the statute only as they apply to the types of entities to which the statute pertains. Treasurer Magaziner suggested the board direct staff on how to it should be determined. Ms. Williamson agreed that flat fees or flat application across various size municipalities will not work.

Mr. Brown asked about a question presented by the cities and towns. Mr. Bernardo stated this is not within the rule as the fees are not assessed on municipalities.

The Board discussed common structures where municipal obligations are issued to serve as underlying security for a related debt issuance. Rhode Island Infrastructure Bank (RIIB) and Rhode Island Health and Educational Building Corporation (RIHEBC) transactions were discussed. In these situations, municipalities often issue a bond to RIIB or RIHEBC which secures, in part, the RIIB or RIHEBC issue. Under the proposed regulations, each of the obligations would be assessed a fee.

The board asked questions.

Mr. Brown made a motion to restore the refunding credit to the proposed changes to the PFMB fee requirement. The motion failed due to a lack of a second.

On a motion by Mr. Jacobs and seconded by Ms. Williamson, it was

VOTED: To approve the adoption of a final rule, as amended in Section 10 to exempt from the assessed fee those governmental debt obligations which serve as underlying security for a related

debt issuance; and authorize the Treasury staff to file the final rule, as amended, with the Secretary of State's Office in accordance with the Administrative Procedures Act.

V. Review and Discussion of the 2016 State Debt Report

Treasurer Magaziner stated that the State Debt Report was being distributed for informational purposes and that any suggested changes would be reflected in next year's report as this report is final. Board members were encouraged to provide feedback at the conclusion of their review.

Mr. Quinn summarized the 2016 State Debt Report for fiscal year end 2015, highlighting key points in the report and concluding that Rhode Island has made, and is continuing to make, strides in improving its fiscal condition.

Mr. Landgraf suggested that going forward the report should contain a reference to the 2011 state legislation that places bondholders of Rhode Island municipal issues ahead of other creditors in the case of bankruptcy. In terms of credit quality and enhancement, Mr. Landgraf expressed that the legislation is significant and should be a key factor in the state's rating.

Mr. Reddish said while the report had great information, the next report should attempt to relate the findings more to the taxpayer: what do the findings mean for them? Coupled with the new PFMB website, the yearly report should make the information more palatable for the public going forward.

VI. Debt Affordability Study Update

Treasurer Magaziner prefaced the conversation by reminding the Board of the parameters of the study, that it be as comprehensive as possible, and include state, municipal, quasi-public corporations, public corporations, fire districts, special districts and, regional issuers, and have ratios that are inclusive of other liabilities such as pensions and OPEB liabilities – none of which have been done by another state. There is no other state that incorporates state pension guidelines or that has conducted a study that covers all issuers in the state. Treasurer Magaziner stated it is not intended that the Board make any decisions regarding targets or ratios until all three phases of the study are completed. The main point of the day's discussion will be to determine which ratios and metrics will be most meaningful when looking to settle on ratios later in the process.

Ms. Lee and Mr. Huestis provided the Debt Affordability Study Update on Phase I, which covers only state debt. Ms. Lee began by outlining the state's current and projected outstanding tax supported debt and long-term liabilities.

Attention was drawn to the fact the state has made its full pension ARC for the last 19 years and has consistently funded 100% of the OPEB ARC, which is uncommon for most states. Mr. Jacobs asked how, if the full pension ARC had been made for nearly 20 years, did the state incur such a large pension liability. Treasurer Magaziner explained the ARCs are governed by their own set of assumptions and, for a period of time, the state had been using unrealistic assumptions in addition to the fact the state had an aggressive asset allocation, making the portfolio vulnerable to downturns that occurred in 2001-2002, 2008-2009. The pension plan demographics are also dissimilar to many other places in that half of the participants are retired and collecting benefits, creating higher costs.

Ms. Lee then explained how the state compared to its peer states. Mr. Jacobs asked how peer states were determined and Mr. Huestis responded that traditionally New England states have used each other as peers given their similar size, situations and ratings. It was noted that future reports should include a national median or national average in addition to being more discerning in peer selection and broaden the peer set beyond the New England states.

Ms. Lee showed how each of the three rating agencies assess debt ratios. She noted that both OPEB and pension ARCs are not incorporated in debt ratios anywhere, nor are they incorporated in ratings although the rating agencies are now looking more closely at these ratios.

Treasurer Magaziner acknowledged the challenge PRAG had in developing this study as this information is not centralized; PRAG must individually delve into each state's financial information to compile this report.

The board discussed keeping the recommended debt affordability measures as outlined by PRAG and will continue to monitor each area.

The board asked questions.

VII. Debt Management Technology and Communications Update

Mr. Marr presented the Board information on the new website. He noted it will be the administrative and communications home for all PFMB materials, including meeting minutes, presentations and yearly reports. The deployment of the website is consistent with Treasurer Magaziner' s transparency initiative. Before the website goes live, the Board can access and explore the site via password and supply any feedback to the staff so necessary changes can be made prior to it becoming a public page.

Mr. Landgraf expressed he envisioned more for the website, imagining a relationship database that is user friendly and provides information regarding all bonded debt. Mr. Marr explained that is the intention for the future and they are working with a potential vendor to take steps toward that end. However, both Mr. Marr and Treasurer Magaziner noted that given there had previously never been a site devoted to the PFMB and its materials, the evolution of its contents will be an ongoing process.

VIII. Chairman's Comments

Treasurer Magaziner said he was very happy with the initial draft and initial versions of both the PFMB Rules and Regulations and the Debt Affordability Study. He believed this meeting was a productive one and looks forward to building this momentum in the October meeting.

Treasurer Magaziner opened the floor to other business. There being none, Treasurer Magaziner entertained a <u>motion to adjourn the meeting</u>.

On a motion by Ms. Williamson and seconded by Mr. Jacobs it was unanimously
VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 11:15 a.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

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Public Finance Management Board

October 27, 2016

9:00 a.m.

Rhode Island State House, Room 205

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Thursday, October 27, 2016 at 9:00 a.m. in Room 205, on the second floor of the State House, Providence, Rhode Island.

Agenda

1. Call to Order

2. Approval of Minutes of Meeting held September 22, 2016*

3. Discussion of Board Elections

4. Debt Management Technology and Communications update

5. Debt Affordability Study Update:

    - Presentation by Janet Lee of PRAG Advisors regarding Phases I & II of the Debt Affordability Study

6. Presentation by Boston College on the uniform methodology of assessing local pension liability

7. Adjourn*

    * Board Members will be asked to vote on this item

Posted on Monday, October 24, 2016

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter please contact Tiffany Kaschel at (401) 462-7699 at least 24 hours in advance of the scheduled meeting.

Public Finance Management Board

Regular Meeting Minutes
Thursday, October 27, 2016
9:00 a.m.
Room 205, State House

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Thursday, October 27, 2016 at 9:00 a.m. in Room 205, State House, Providence, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Call to Order

The meeting was called to order at 9:01 a.m.

II. Roll Call of Members

The following members were present: Mr. Karl Landgraf, Ms. Maribeth Williams, Mr. Douglas Jacobs, Mr. Joseph Reddish, Ms. Patricia Anderson and General Treasurer Seth Magaziner.

Mr. Shawn Brown arrived at 9:08 a.m.
Mr. Michael DiBiase arrived at 9:34 a.m.

Also in attendance: Ms. Janet Lee and Mr. Thomas Huestis, Public Resources Advisory Group (PRAG); Jean-Pierre Aubry, Associate Director of State and Local Research, Boston College; Mr. Frank Quinn, Director of Debt Management; Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP; Mr. Patrick Marr, Chief of Staff for the General Treasurer's Office, and other members of the Treasurer's Staff.

III. Approval of Minutes

Treasurer Magaziner moved to the first agenda item:
Consideration to approve the Public Finance Management Board Minutes.

On a motion by Ms. Williamson and seconded by Mr. Reddish, it was unanimously
VOTED: To approve the draft of the Minutes of the September 22, 2016 PFMB Regular Meeting.

IV. Discussion of Board Elections

Per statute, it is required that, in addition to a Chairman, that the Board annually elect a Vice-Chair and a Secretary. Treasurer Magaziner stated he welcomes volunteers. The vote to approve the positions will be placed on the agenda at the next meeting.

V. Debt Management Technology and Communications Update

Mr. Marr provided an update on both the public facing debt portal and the issuer facing portion of the debt portal, presenting a live demonstration of the website. He began by showing the issuer facing portion of the portal, noting the site is live. He navigated several areas, illustrating the contents available.

Next, he explained that over the past month, staff has been working to incorporate online versions of the notice of proposed sale and notices of final sale. He showed the hard copy form that issuers are presently required to provide the office and compared it to the online version that was developed, noting that content wise they are quite similar but that the online version will ease the current process, which is less user friendly and causes gaps in data collection. In order to use the online version to submit a notice, a user will have to sign up to use the site with basic identifying information. Once credentials are created, the user can then not only file their notices but also access their past submissions as well and even edit them as needed. Users also can print their submissions. He demonstrated these points.

He stated that any feedback from the board or the public are welcome and added that the office will be sending out solicitations to all previous issuers to inform them of how to sign up for the site and how to complete the forms in order to gather user feedback in that manner as well. As is, the site is ready for a soft launch.

In regards to the public facing portal, Mr. Marr said staff are working to create a data model to build a summary of all debt issuance. The model that will be used is based off the Socrata platform that is utilized by the State of California for its debt portal but Rhode Island's platform can establish various data points of interest specific to this state. Socrata has created a staging site for Treasury while the contract for their services is undergoing the state procurement process.

The board asked questions.

VI. Debt Affordability Study Update

Treasurer Magaziner outlined the phases of the study. Still in Phase I, the current focus is on the state's direct tax supported debt and data collection. Phase II is the state-level, quasi-public agency debt and Phase III encompasses municipal debt. The board is not voting to consider any suggested targets for any issuers until all three phases are complete as the board should have all of the information available before making recommendations.

Treasurer Magaziner reminded the board they provided feedback to PRAG at the previous meeting indicating they would like to see the peer set broadened outside of neighboring states and that the ratios incorporate pension liabilities in addition to traditional bonded debt as it is difficult to determine how much debt can be afforded if only looking narrowly at bonds and not other liabilities. Now the board must determine how to measure and standardize these ratios in order to best establish real "apples to apples" comparisons. There are several ways to make these measurements. PRAG and the Boston College Center for Retirement Research will be presenting the various methods of measuring liabilities at this meeting with the goal of the board being to select the methodology it likes best so it can then be applied to creating the measures to the state's debt.

Ms. Lee began by presenting the debt and pension ratios of twenty-seven (27) comparably rated states as reported by each of the three ratings agencies.

The board asked questions.

Ms. Lee summarized the ratios used by each of the three ratings agencies, highlighting each agency's indicators and net pension liability criteria. This encompasses reports issued on comparability as well as specific statistics tracked in their respective ratings methodology. Both Fitch and Moody's normalize to a common assumed rate of return, whereas S&P does not, making their approach not conducive to the standardization goals of the board.

The board asked questions.

Mr. Huestis gave an update on Phase II as the groundwork is currently being laid for that aspect of the study. Phase II involves the long-term liabilities of quasi-public agencies, which do not include tax-supported debt of the state. He then outlined the various types of quasi-public agencies and the different considerations in the application guidelines of revenue and conduit bonds. As PRAG moves into the next phase, Treasurer Magaziner stated they will be reaching out to these various agencies to gain an understanding of how they approach the different types of debt and what kind of metrics the ratings agencies use for the issuers in order to build a comparison with other states.

VII. Uniform Methodology of Assessing Local Pension Liability Presentation

Related to the PRAG discussion, Mr. Aubry offered an overview of the cost burden of pension and OPEB plans. He explained the purpose of Boston College's study was to test the generalizations made about the costs of pension plans, namely to determine if all plans are indeed struggling. The sample size includes all 50 states, 178 counties and 173 cities (although only the top 50 cities are reported). The cost burdens were calculated by: applying GASB 68 to determine the liability of each level of government; normalizing figures by determining the rate of return and amortization method; and, selecting an appropriate revenue base. Their findings show that although a handful of states are struggling with the financial burden imposed by retirement programs, most are managing quite well. Mr. Aubry concluded by stating a full analysis of the burden of employee retirement costs should consider all jurisdictions and all major costs.

Treasurer Magaziner said he liked the pension analysis and would like to explore similar analysis utilizing the state's policy figures. He discussed the possibility of utilizing Mr. Aubry's approach for the pension analysis piece and the "apples to apples" debt methodology provided by PRAG to produce a comprehensive report.

The board asked questions.

VIII. Chairman's Comments

Treasurer Magaziner welcomed comments, questions and feedback from the board on any of the topics discussed at the meeting. He also addressed the necessary change in December's meeting date and said a survey would be forthcoming to gauge the availability of members for an alternate date.
He thanked the board and presenters for the time.

Treasurer Magaziner opened the floor to other business. There being none, Treasurer Magaziner entertained a <u>motion to adjourn the meeting</u>.

On a motion by Ms. Williamson and seconded by Mr. Jacobs it was unanimously
VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 10:35 a.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

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Public Finance Management Board

December 12, 2016

9:00 a.m.

50 Service Avenue, 2nd floor
Warwick

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Monday December 12, 2016 at 9:00 a.m. in the large conference room, on the second floor of the 50 Service Avenue, Warwick, Rhode Island.

<u>Agenda</u>

1. Call to Order

2. Approval of Minutes of Meeting held October 27, 2016*

3. Board Elections*

4. Request for Volume Cap Approval*
   - Rhode Island Student Loan Authority
   - Rhode Island Housing and Mortgage Finance Corporation

5. Debt Affordability Study Update:
   - Presentation by Janet Lee of PRAG Advisors regarding Phases II & III of the Debt Affordability Study

6. Chairman's Report

7. Adjourn*

* Board Members will be asked to vote on this item

Posted on Thursday December 8, 2016

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter please contact Tiffany Kaschel at (401) 462-7699 at least 24 hours in advance of the scheduled meeting.

Public Finance Management Board

Regular Meeting Minutes
Monday, December 12, 2016
9:00 a.m.
50 Service Avenue, Warwick

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Monday, December 12, 2016 at 9:00 a.m. in the large conference room of 50 Service Avenue, Warwick, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Call to Order

The meeting was called to order at 9:05 a.m.

II. Roll Call of Members

The following members were present: Mr. Shawn Brown, Mr. Karl Landgraf, Mr. Douglas Jacobs, Mr. Joseph Reddish, Mr. Robert Mancini, and General Treasurer Seth Magaziner.

Mr. Michael DiBiase arrived at 9:17 a.m.

Also in attendance: Mr. Charles Kelley, Director of the Rhode Island Student Loan Authority (RISLA); Mr. Noel Simpson, Deputy Director of RISLA; Ms. Barbara Fields, Executive Director of Rhode Island Housing (RI Housing); Ms. Kara Lachappelle, Chief Financial Officer, Rhode Island Housing (RI Housing); Mr. Rick Hartley, Treasurer of Rhode Island Housing; Ms. Janet Lee and Mr. Thomas Huestis, Public Resources Advisory Group (PRAG); Mr. Frank Quinn, Director of Debt Management; Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP; Mr. Patrick Marr, Chief of Staff for the General Treasurer's Office, and other members of the Treasurer's Staff.

III. Approval of Minutes

Treasurer Magaziner moved to the first agenda item:
<u>Consideration to approve the Public Finance Management Board Minutes</u>.

On a motion by Mr. Landgraf and seconded by Mr. Jacobs, it was unanimously
VOTED: To approve the draft of the Minutes of the October 27, 2016 PFMB Regular Meeting.

IV. Board Elections

Treasurer Magaziner explained that by statute, the board is required to have both a Vice-Chair and a Secretary. At the October meeting, he had solicited volunteers for the positions. He stated Mr. Landgraf had volunteered for the Vice Chair position.

On a motion by Mr. Brown and seconded by Mr. Mancini, it was unanimously
VOTED: To elect Mr. Karl Landgraf to the Vice-Chair position

Mr. Reddish then offered to serve as Secretary.

On a motion by Mr. Brown and seconded by Mr. Mancini, it was unanimously
VOTED: To elect Mr. Joseph Reddish to the Secretary position

V. Rhode Island Student Loan Authority - Request for Volume Cap Approval

Mr. Bernardo explained the purpose of volume cap approval, reiterating it was one of the main purposes the board was created.

Mr. Jacobs noted it would be beneficial in the future to have a record as to when and how past allocations have been used, including any outstanding balances. Mr. Reddish contributed that in addition to having a clear sense as to how the agencies can use the funds, he would like the board to explore if the agencies receiving the allocations are adequately communicating to the public they have funds available to assist them with their loan needs.

In addition to the letters sent to the board from the agencies, Treasurer Magaziner welcomed both RISLA and RI Housing to present commentary.

Mr. Kelley began by summarizing the mission of RISLA and the services they provide. He then acknowledged the points made by Mr. Reddish regarding the marketing of their products. He stated RISLA works to make people aware of their programs through the colleges and universities but notes advertising on its own behalf is cost prohibitive, making it challenging. Mr. Kelley discussed another challenge of RISLA, stating that their bonds, not backed by the state, are subject to the alternative minimum tax, which makes them difficult to sell and achieve the lowest possible rate.

Treasurer Magaziner asked Mr. Kelley how RISLA determines the volume cap they request and how much typically remains. Mr. Kelley replied they work closely with universities, using their admissions and financial aid data to establish their request. He said they typically use close to all of the funds requested on a yearly basis.

The board asked questions.

On a motion by Mr. Landgraf and seconded by Mr. Mancini, it was unanimously
VOTED: To approve a $60 million allocation of a portion of the residual volume cap and allow RISLA to carry forward the same amount

VI. Rhode Island Housing - Request for Volume Cap Approval

Ms. Fields conveyed RI Housing has had a busy year, noting that homeownership numbers for the year will top those in 2007, which has been the benchmark with which it has measured itself. This is attributed to the improved real estate market and low rates. She also addressed Mr. Reddish's concern about marketing its services, saying RI Housing works with 36 broker and lender firms to help communicate homeownership programs, which accounts for 80% of the business it receives. She then spoke about the other services the agency provides and the type of customers they serve.

Ms. Lachappelle added that this year, RI Housing assisted 1400 first-time homebuyers and built or renovated 1700 rental apartments. She stated that $100 million dollars on the multi-family side and $250 million on the homebuyer side has been invested in the Rhode Island real estate market, which brings added revenue to the state.

The board asked questions.

On a motion by Mr. Mancini and seconded by Mr. Jacobs, it was
VOTED: To approve a $242.875 million allocation of a portion of the residual volume cap and allow RI Housing to carry forward the same amount

Mr. DiBiase and Treasurer Magaziner abstained from voting due to their positions on the Housing Board.

VII. Debt Affordability Study Update

Treasurer Magaziner outlined the debt affordability study phases, stating that Phase I is largely complete and now it is at the board's discretion as to what will be done with the data. Phase II is currently underway. He reiterated the board is to hold off making recommendations on debt targets until all three phases have been completed.

Mr. Huestis summarized the timetable of the study as shown in the distributed work plan. He stated they are waiting for additional data from Boston College (BC) as it related to Phase I. Treasurer Magaziner recalled the consensus reached at a previous meeting regarding targets and that collectively the board would like to see the pension liability incorporated with the traditional tax supported debt liability to establish its recommendations. At the board's September meeting, Boston College's Center of Retirement Research presented peer comparisons for pension liabilities across states. Staff has moved to engage Boston College to gather information that would allow for normalization of data among RI and the other states and would include assumed rates of return and amortization schedules that will permit a more "apples-to-apples" comparison across the states. This data should be received within the next month, at which time it will be combined with the tax supported debt information gathered by PRAG and presented to the board to evaluate the findings and determine their implications.

Mr. Huestis continued the overview of the schedule, mainly concerning what will occur between this meeting and the next.

Ms. Lee noted the challenges with Phase II, saying the quasi-public agencies have a variety of outstanding debt and bonding programs, and that PRAG must reach out to the various agencies to ascertain how each one handles these various programs, as they all do so differently. She said the quasi-agencies are broken down into two categories, direct issuers and conduit issuers and proceeded to explain their differences.

Treasurer Magaziner stated he hopes to have information for all issuers, comparing them to both peers and rating agency published guidelines so it will give the public an idea of who the different issuers are, what the most important considerations are for each and how they stack up against each other, as well as similar entities in other states. He expressed the benefit of having all of this information compiled and held in one place.

VIII. Chairman's Comments

Treasurer Magaziner welcomed comments, questions and feedback from the board on any of the topics discussed at the meeting.

He asked the board if they preferred meeting at the 50 Service Avenue location in lieu of the State House. The board agreed to hold future meetings at the Warwick location.

Treasurer Magaziner opened the floor to other business. There being none, Treasurer Magaziner entertained a motion to adjourn the meeting.

On a motion by Mr. Mancini and seconded by Mr. Brown it was unanimously
VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 10:27 a.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

2873748.1/4822-1

Public Finance Management Board

February 2, 2017

9:00 a.m.

50 Service Avenue, 2nd floor
Warwick

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Thursday, February 2, 2017 at 9:00 a.m., in the large conference room located at 50 Service Avenue, Second Floor, Warwick, Rhode Island.

<u>Agenda</u>

1. Call to Order

2. Approval of Minutes of Meeting held December 12, 2016*

3. Debt Affordability Study Update:
   - Presentation by Janet Lee and Thomas Huestis of Public Resources Advisory Group (PRAG Advisors) regarding Phases I, II & III of the Debt Affordability Study

4. Volume Cap Presentation – Gene Bernardo, Frank Quinn

5. Dashboard of Proposed Issuer Information – Frank Quinn

6. Chairman's Report

7. Adjourn*

* Board Members will be asked to vote on this item

Posted on January 27th, 2017

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter please contact Tiffany Kaschel at (401) 462-7699 at least 24 hours in advance of the scheduled meeting.

Public Finance Management Board

Regular Meeting Minutes
Thursday, February 2, 2017
9:00 a.m.
50 Service Avenue, Warwick

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Thursday, February 2, 2017 at 9:00 a.m. in the large conference room of 50 Service Avenue, Warwick, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Call to Order

The meeting was called to order at 9:09 a.m.

II. Roll Call of Members

The following members were present: Mr. Shawn Brown, Mr. Michael DiBiase, Mr. Karl Landgraf, Mr. Douglas Jacobs, Mr. Joseph Reddish, Ms. Maribeth Williamson, and General Treasurer Seth Magaziner. Mr. DiBiase left the meeting at 10:33 a.m.

The following members were absent: Ms. Patricia Anderson and Mr. Robert Mancini

Also in attendance: Ms. Janet Lee and Mr. Thomas Huestis, Public Resources Advisory Group (PRAG); Mr. Charles Kelley, Director of the Rhode Island Student Loan Authority (RISLA); Mr. Noel Simpson, Deputy Director of RISLA; Ms. Kara Lachepelle, Chief Financial Officer, Rhode Island Housing (RI Housing); Mr. Richard Hartley, Treasurer of Rhode Island Housing; Mr. Frank Quinn, Director of Debt Management; Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP; and other members of the Treasurer's Staff.

III. Approval of Minutes

Treasurer Magaziner moved to the first agenda item:
Consideration to approve the Public Finance Management Board Minutes.

On a motion by Mr. Brown and seconded by Mr. Reddish, it was unanimously
VOTED: To approve the draft of the Minutes of the December 12th 2016 PFMB Regular Meeting.

IV. Debt Affordability Study Update

Treasurer Magaziner began by explaining that Ms. Lee and Mr. Huestis will be presenting information on Phase II and Phase III of the Debt Affordability Study. Regarding Phase II with the quasi-public agencies, he stated PRAG will go through each, one-by-one, reviewing the outstanding debt for each agency, how it compares to similar peers and how it compares to rating agencies' guidelines on appropriate levels of debt. He hoped to have a brief conversation following each to ascertain the Board's opinions, satisfaction levels of agency standing as well as what additional aspects they may like to see in order to make a determination about what affordability guidelines should look like for that particular agency. Phase III, containing data from municipalities and districts, can be broadly discussed as affordability guidelines can be applied uniformly; municipalities do not have the varying missions quasi-public agencies do, which necessitate a more individualized approach. Based on the data collected from PRAG and the feedback from the Board, staff will return next month with preliminary recommendations on affordability guidelines for each agency as well as guidelines for the cities and towns.

Mr. Huestis encouraged the members to interrupt at any time with questions.

Ms. Lee then proceeded to lead the Board through each of the twelve quasi-public agencies, outlining their outstanding debts, their credit ratings and the types of security. The Board asked questions relevant to each agency. Ultimately, the Board asked for more information on RI Resource Recovery Corporation, RI Turnpike and Bridge Authority, Narragansett Bay Commission, and RI Airport Corporation related to their project plans and liabilities. Members also found it prudent to gather information on each agency's affordability projections for one to two years in the future.

Mr. Landgraf noted data being used is from 2015 and having more current information will assist in making stronger recommendations. Mr. Jacobs added he found it important to set standards based on both a current and projected basis.

Ms. Lee then gave an overview of the municipalities. One recommendation coming from PRAG regarding Phase III was to combine districts with the municipalities in which they are located when presenting the data and determining affordability guidelines. The reason being is that (usually) both the districts and municipalities are funded by the same population and in the same manner, typically with respect to the property taxes of the area. The members questioned the fairness of combining a poorly managed district with a well performing municipality or vice versa. Would the well performing entity be penalized for the underperformer? How would that be accounted for? Treasurer Magaziner offered the possible solution of displaying the debt in three ways: debt of the municipalities only, the combination of debt from districts and municipalities, and the combination of debt from districts and municipalities funded by property taxes. This would help frame the numbers. This will be represented in future versions of the report.

Treasurer Magaziner noted that they will also be adding pension liabilities to the report in Phase III for a more "apples to apples" comparison among municipalities. Ultimately, he would like to see OPEB added as well but that may be too arduous to incorporate in this edition of the study.

The Board asked questions.

V. Volume Cap Presentation

At the December meeting, the Board requested additional information on the Volume Cap. Mr. Quinn and Mr. Bernardo developed informational material regarding the Volume Cap. Mr. Bernardo then summarized the history and purpose of Volume Cap. He provided the Board detail on the differing bonds and the subsets of those bonds, defining the qualifying nature of each.

Mr. Kelley and Mr. Simpson of RISLA and Ms. Lachepelle and Mr. Hartley of RI Housing were made available for questions.

The board asked questions.

Due to the length of the meeting, Treasurer Magaziner suggested tabling the remaining item on the agenda, the Dashboard of Proposed Issuer Information, and revisiting it next month.

On a motion by Mr. Brown and seconded by Mr. Reddish, it was unanimously
VOTED: To move the remaining agenda item to the next meeting.

VI. Chairman's Comments

Treasurer Magaziner thanked PRAG and staff for their hard work producing such a comprehensive study. He was pleased with the discussions the presentation yielded and looks forward to concluding the study in April.

Treasurer Magaziner opened the floor to other business. There being none, Treasurer Magaziner entertained a motion to adjourn the meeting.

On a motion by Mr. Reddish and seconded by Mr. Brown it was unanimously
VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 11:27 a.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

2873748.1/4822-1

Public Finance Management Board

March 16, 2017

10:30 a.m.

50 Service Avenue, 2nd floor
Warwick

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Thursday, March 16, 2017 at 10:30 a.m. in the large conference room located at 50 Service Avenue, Second Floor, Warwick, Rhode Island.

<u>Agenda</u>

1. Call to Order

2. Approval of Minutes of Meeting held February 2, 2017*

3. Chairman's Report
    - Upcoming GO Issuance
    - Update on 2017 Debt Issuance

4. Discussion and Consideration of Proposed Fee and Reporting Change*

5. Discussion of Debt Affordability Limits
    - Presentation by PRAG

6. Adjourn*

* Board Members will be asked to vote on this item

Posted on March 10, 2017

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter please contact Tiffany Kaschel at (401) 462-7699 at least 24 hours in advance of the scheduled meeting.

Public Finance Management Board
Regular Meeting Minutes
Thursday, March 16th, 2017
10:30 a.m.
50 Service Avenue, Warwick

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Thursday, March 16, 2017 at 10:30 a.m. in the large conference room of 50 Service Avenue, Warwick, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Call to Order

The meeting was called to order at 10:32 a.m.

II. Roll Call of Members

The following members were present: Ms. Patricia Anderson, Mr. Michael DiBiase, Mr. Karl Landgraf, Mr. Douglas Jacobs, Mr. Robert Mancini, Mr. Joseph Reddish, Ms. Maribeth Williamson, and General Treasurer Seth Magaziner.

Mr. DiBiase left the meeting at 11:38 a.m.; Mr. Mancini left at 11:42 a.m.

The following members were absent: Mr. Shawn Brown

Also in attendance: Ms. Janet Lee and Mr. Thomas Huestis, Public Resources Advisory Group (PRAG); Mr. Frank Quinn, Director of Debt Management; Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP; and other members of the Treasurer's Staff.

III. Approval of Minutes

Treasurer Magaziner moved to the first agenda item:
<u>Consideration to approve the Public Finance Management Board Minutes for February 2nd 2017</u>.

On a motion by Mr. Landgraf and seconded by Ms. Williamson, it was unanimously
VOTED: To approve the minutes of the February 2nd, 2017 PFMB Regular Meeting.

IV. Chairman's Report

Treasurer Magaziner noted the state is planning a general obligation bond issuance next month and welcomed Mr. Quinn to speak about the proposed schedule of activities for those issuances. Mr. Quinn explained there would be between $80 and $85 million of general obligation bonds issued, with the final amount to be determined by the state's Budget Office. He proceeded to give an overview of the process and timeline of those issuances.

Treasurer Magaziner then apprised the Board on the progress made under the new reporting process by which the issuers are required to directly report to Treasury their intent to issue and notice of final sale. He pointed to the summary provided in the board packet that illustrated what has been received by the office since the reporting requirements were implemented. He also noted that the public portal by which issuers can submit their reports electronically is still in the works and the Board will receive a formal update on its progress at next month's meeting.

V. Discussion and Consideration of Proposed Fee and Reporting Change

The proposed changes to both fees and reporting methodology come as a result of conversations with multiple municipalities. Treasurer Magaziner prefaced the discussion by explaining there must be a balance of providing the public all of the information it deserves without becoming overly burdensome to issuers, especially smaller issuers without full time finance staff or large budgets.

The proposed changes:

- Only issuances that exceed one million dollars would be subject to the fee, which equals 1/40th of one percent of the issuance
- Notices of proposed sale and notices of final sale under a quarter of a million dollars are exempt from reporting. There are no exemptions from filing an annual report.
- Leases of any type are not subject to fees. This is not a change to existing policy as it is not expressed in the statute, it merely provides clarification on the topic.

The board asked questions.

On a motion by Ms. Williamson and seconded by Mr. Reddish, it was unanimously
VOTED: To adopt the proposed changes to the fee and reporting requirements

Mr. Quinn will notify issuers of the changes following the meeting.

VI. Discussion of Debt Affordability Limits

Treasurer Magaziner explained that PRAG will be walking through its recommendations from all three phases of the Debt Affordability Study (DAS). He encouraged members to ask questions and provide feedback so those changes may be incorporated into the final product that will be presented and voted on in April; there was not to be a vote taken at this month's meeting.

Ms. Lee summarized the findings from Phase I regarding state debt. Based on the findings, it was recommended the debt affordability measures be updated to include long-term pension liabilities as rating agencies and the overall municipal debt market are giving more attention to pension liabilities (Boston College will incorporate and standardize RI's pension liabilities with those of other states in this version of the DAS. It will be determined at a later date whether to include OPEB in the next iteration of the study in 2019). Additionally, both ARCs should be continued to be funded at 100%. The board should also consider updating the ratios using outstanding and authorized debt, and adjusting the targets appropriately to make them in line with current conditions.

The Board asked questions.

Ms. Lee summarized the findings from Phase II regarding quasi-public agencies. Based on the findings, debt affordability recommendations were provided for each agency.

The Board asked questions.

Ms. Lee summarized the findings from Phase III regarding municipalities and special districts. State statutory limitations for municipalities, as well as rating agency debt and liability measures used by ratings agencies were considered when developing the recommendations. Based on the findings, it was recommended the debt affordability measures be updated to include the allocable portions of the fire district and regional school district debt to towns and cities, and apply debt affordability measures to the overall debt of cities and town. These measures will also account for net pension liabilities of cities and towns. PRAG also recommended changes to the affordability targets.

The Board asked questions.

Treasurer Magaziner thanked the Board and PRAG for their time and effort. The feedback from the Board throughout the Debt Affordability Study has produced a stronger product. He looks forward to returning next month to finalize the study and discuss how the group can make the report more palatable for public consumption.

Treasurer Magaziner opened the floor to other business. There being none, Treasurer Magaziner entertained a motion to adjourn the meeting.

On a motion by Mr. Reddish and seconded by Mr. Jacobs was unanimously
VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 12:34 p.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

2873748.1/4822-1

Public Finance Management Board

April 17, 2017

9:00 a.m.

50 Service Avenue, 2nd floor
Warwick

Public Finance Management Board

Notice of Meeting

The next meeting of the Public Finance Management Board has been scheduled for Monday, April 17, 2017 at 9:00 a.m. in the large conference room located at 50 Service Avenue, Second Floor, Warwick, Rhode Island.

Agenda

1. Call to Order

2. Approval of Minutes of Meeting held March 16, 2017*

3. Debt Affordability Study

    - Presentation by PRAG
    - Questions and Answers
    - Public Comment
    - Consideration of Final Debt Affordability Targets and Report*

4. Data Portal Update and Presentation

5. Update on Year to Date Statewide Debt Issuance

6. Update on Pending State General Obligation Bond Sale

7. Discussion of Future Board Initiatives

8. Adjourn*

* Board Members will be asked to vote on this item

Posted on April 13, 2017

Anyone wishing to attend this meeting who may have special needs for access or services such as an interpreter please contact Tiffany Kaschel at (401) 462-7699 at least 24 hours in advance of the scheduled meeting.

Public Finance Management Board

Regular Meeting Minutes
Monday April 17th, 2017
9:00 a.m.
50 Service Avenue, Warwick

A meeting of the members of the Public Finance Management Board ("PFMB") was held on Monday April 17th, 2017 at 9:00 a.m. in the large conference room of 50 Service Avenue, Warwick, Rhode Island, pursuant to duly posted public notice of the meeting and notice duly provided to all members.

I. Call to Order

The meeting was called to order at 8:59 a.m.

II. Roll Call of Members

The following members were present: Ms. Patricia Anderson, Mr. Shawn Brown, Mr. Michael DiBiase, Mr. Karl Landgraf, Mr. Robert Mancini, Mr. Joseph Reddish, and General Treasurer Seth Magaziner.

Ms. Maribeth Williamson arrived are 9:03 a.m.
Mr. DiBiase and Ms. Williamson left at 10:38 a.m.

The following members were absent: Mr. Douglas Jacobs

Also in attendance: Mr. Thomas Huestis, Public Resources Advisory Group (PRAG); Mr. Brian Daniels, Executive Director, Rhode Island League of Cities and Towns; Mr. Patrick Marr, Treasury Chief of Staff; Ms. Kelly Rogers, Treasury Deputy Treasurer for Public Finance and Policy; Mr. Frank Quinn, Director of Debt Management; Mr. Eugene Bernardo, Esq., Legal Counsel from Partridge Snow & Hahn LLP; and other members of the Treasurer's Staff.

III. Approval of Minutes

Treasurer Magaziner moved to the first agenda item:
Consideration to approve the Public Finance Management Board Minutes for March 16th 2017.

On a motion by Mr. Reddish and seconded by Mr. Brown, it was unanimously
VOTED: To approve the minutes of the March 16th, 2017 PFMB Regular Meeting.

IV. Debt Affordability Study Presentation

Treasurer Magaziner thanked the board, staff and PRAG for their respective contributions to the study. He explained that they will go through each recommendation and recall the rationale for each. He noted some targets had changed from last month's draft after incorporating feedback from issuers.

Mr. Huestis led the Board through the recommendations and targets for the state issuers, quasi-public issuers and municipalities. The board asked questions relevant to each portion of the study.

Mr. DiBiase raised a concern about the target for the combined debt and pension ratios to assessed value for municipalities. He pointed to the fact that municipalities have widely varying ratios and was concerned the target may be too aggressive.

Treasurer Magaziner asked the Board to consider how useful the ratio is as well as how appropriate it is. He recommended the Board reflect on how to approach the target and revisit it following public comments as they may provide additional insight into the matter.

Treasurer Magaziner opened the floor for public comment at which time, Mr. Daniels spoke on behalf of Rhode Island League of Cities and Towns. He explained the League had brought a copy of the Debt Affordability Study to its Executive Committee meeting at which time several issues were raised, specifically regarding housing aid and enterprise debt. Some communities receive a significant portion of reimbursement for their housing aid from the state and that should be explicitly illustrated in the report for a better representation of debt in that area. Treasurer Magaziner stated that specific aid would be broken out and PRAG confirmed the charts and tables could be adjusted for clearer reflection. As it relates to enterprise debt, Mr. Daniels suggested Overall Debt and Net Pension Liability to Assessed Value is not the best representation of ability to pay debt and recommended using Personal Income instead of Assessed Value. It was determined that the report would compare municipal liabilityes to both Assessed Value and Personal Income.

Returning to the combined debt and pension ratio to assessed value issue, the Board discussed moving the target to the midway point of the standard single A rating to make it more attainable and realistic goal for communities.

On a motion by Mr. Brown and seconded by Ms. Williamson, it was unanimously
VOTED: To amend the municipal target ratio for debt and pension liability/assessed value from 4.5% to 6.3%

On a motion by Mr. Brown and seconded by Ms. Williamson, it was unanimously
VOTED: To adopt the Debt Affordability Study as amended

V. Data Portal Update and Presentation

Mr. Marr presented the data portal that will showcase debt data across the state. The site is powered by archived debt data from 2011-2016. It will expand in the future as the site grows and issuers utilize online forms for proposed and final sales. He illustrated how one may use the site and the various ways to explore and analyze the data with visualizations, sorting and charts. He then solicited opinions from the Board.

Mr. Reddish asked if it were possible to add a section for feedback to proactively enhance user experience. He also asked that each page clearly describe what the data means and place it in context for the user. Mr. Marr agreed those provisions would be added.

Treasurer Magaziner stated Board members would be issued credentials to login to the site so they could explore and provide further feedback prior to the launch.

VI. Update on Year to Date Statewide Debt Issuance

Mr. Quinn provided an update on the year-to-date statewide debt issuance. He noted fee collections have markedly increased since the previous meeting with approximately 1/3rd of expected revenues to date received from state and quasi issuers and 1/4th expected revenues received from municipalities. The remainder of the fees are to be received in the coming weeks as issuances are scheduled to close.

Mr. Quinn then apprised the Board of an upcoming state G.O. bond issuances, detailing the parameters and schedule of their issues.

The Board asked questions.

VII. Discussion on Future Board Initiatives

With the Debt Affordability Study now concluded, Treasurer Magaziner asked the Board what they would like to pursue as a body. He offered several possibilities before opening the floor, including, but not limited to, exploring debt coverage trends over time, providing different mapping options on the website or organizing professional development. The goal should be to make the PFMB more helpful to issuers.

Ms. Rogers proposed a statewide coordinated issuance calendar, which would list state, quasi and municipal proposed sales which would head off such matters as having two large issuers being out to market at the same time.

The Board offered their suggestions.

Treasurer Magaziner opened the floor to other business. There being none, Treasurer Magaziner entertained a <u>motion to adjourn the meeting</u>.

On a motion by Mr. Reddish and seconded by Mr. Brown was unanimously
VOTED: To adjourn the meeting.

There being no further business, the meeting adjourned at 11:16 a.m.

Respectfully submitted,

Seth Magaziner,
General Treasurer

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Appendix B: New Issuance Data

The Public Finance Management Board

Summary of Debt Issuance by Agency and the State of R. I.

Calendar Year 2017

Initial Date		Delivery Date	Maturity Date	Original Issue Amount	Fees Due	Total Due by Agency	% of Total	Total Rec.'d	Date Rec.'d	Report of Final Sale Received	Bond Counsel Fee	Firm
	State of Rhode Island											
4/14/17	General Obligation Bonds											
	CCDL of 2017, Series A (Tax-Exempt)	4/25/17	5/1/2037	91,000,000.00	22,750.00							
	CCDL of 2017, Refunding Series B (Tax-Exempt)	4/25/17	8/1/2031	66,920,000.00	16,730.00	39,480.00		39,480.00	5/9/17	5/12/17	65,000.00	Hinckley Allen
				157,920,000.00								
5/8/17	Lease Participation Certificates											
	Nursing Education Center Project - 2017 Ser. A	6/21/17	6/1/2027	9,050,000.00								
	U.R.I. Energy Conservation Project - 2017 Ser. B	6/21/17	6/1/2032	6,910,000.00								
	Energy Conservation Project - 2017 Refunding Ser. C	6/21/17	5/1/2023	5,005,000.00								
	School for the Deaf Project - 2017 Refunding Ser. D	6/21/17	4/1/2029	19,635,000.00								
	Central Power Plant Project - 2017 Refunding Ser. E	7/6/17	10/1/2020	8,000,000.00								
				48,600,000.00	12,150.00			12,150.00	6/21/17	7/19/17	92,500.00	Partridge Snow

Fees Due Total	% collected	Fees Collected Total
51,630.00	100.0%	51,630.00

The Public Finance Management Board

RI Housing & Mortgage Finance Corp

Calendar Year 2017

Initial Date		Delivery Date	Maturity Date	Original Issue Amount	Fees Due	Total Due by Agency	% of Total	Total Rec.'d	Date Rec.'d	Report of Final Sale Received	Bond Counsel Fee	Firm
	R I Hsing & Mtge Finance Corp											
3/13/17	Multi-Family Housing Revenue Note (Colony House Apartments Project), Series 2017	3/30/17	4/1/2050	13,865,000.00	3,466.25			3,466.25	3/31/17	9/1/17		Nixon Peabody
3/20/17	Multi-Family Development Bonds											
	2017 Series 1-A (Non-AMT)	4/27/17	10/1/2047	15,560,000.00								
	2017 Series 1-B (Non-AMT)	4/27/17	10/1/2052	1,725,000.00								
	2017 Series 2-T (Federally Taxable)	4/27/17	10/1/2032	14,400,000.00								
	2017 Series 3-T (Federally Taxable)	4/27/17	4/1/2020	7,600,000.00								
				39,285,000.00	9,821.25			9,821.25	4/27/17	5/24/17	35,000.00	Nixon Peabody
9/1/17	Bond			9,000,000.00	2,250.00			0.00		No		Nixon Peabody

	Fees Due Total	% collected	Fees Collected Total
Total:	15,537.50	85.5%	13,287.50

The Public Finance Management Board

R I Health & Educ Bldg Corp

Calendar Year 2017

Initial Date		Delivery Date	Maturity Date	Original Issue Amount	Fees Due	Total Due by Agency	% of Total	Total Rec.'d	Date Rec.'d	Report of Final Sale Received	Bond Counsel Fee	Firm
12/16/16	Public Schools Revenue Bond Financing Program Revenue Refunding Bonds, Ser. 2017 A (City of Woonsocket)	3/21/17	5/15/2034	58,965,000.00	14,741.25			14,741.25	3/21/17 WT	4/19/17	35,000.00	Locke Lord
1/18/17	Higher Education Facility Revenue Bonds (Providence College Issue) Series 2017	3/29/17	11/1/2047	46,415,000.00	11,603.75			11,603.75	7/20/17	4/28/17	49,000.00	Locke Lord
1/19/17	Public Schools Revenue Bond Financing Program Revenue Bonds, Ser. 2017 C (Town of Barrington Issue)	4/20/17	N/A	63,480,000.00	15,870.00			15,870.00	4/20/17 WT	5/17/17	52,000.00	Locke Lord
2/3/17	Higher Education Facility Revenue Refunding Bonds, N. E. Institute of Technology Issue, Ser. A, B, C, D & E	3/9/17	9/1/2030	36,450,000.00	9,112.50			9,112.50	3/10/17	3/24/17	45,000.00	Hinckley Allen
1/3/17	Public Schools Revenue Bond Financing Program Revenue Refunding Bonds, Ser. 2017 B (Pooled) (Narragansett and Scituate)	3/22/17	5/15/2029	14,375,000.00	3,593.75			3,593.75	4/11/17	4/11/17	6,000.00	Taft & McSally
4/18/17	Public Schools Revenue Bond Financing Program Revenue Bonds, (City of Pawtucket)	5/23/17	5/15/2037	35,500,000.00	8,875.00			0.00		No		Locke Lord

4/24/17	Revenue Bonds, Series 2017 F (Town of Tiverton)	6/1/17	5/5/2038	19,835,000.00	4,958.75		4,958.75	6/22/17	6/28/17	40,000.00	Partridge Snow
5/16/17	Public Schools Revenue Bond Financing Program, Series 2017 D - Town of Middletown	5/19/17	5/15/2037	9,750,000.00	2,437.50		2,437.50	5/16/17	5/19/17	30,000.00	Greenberg Traurig
5/22/17	Educational Facilities Revenue Bonds, Meeting Street Issue, Series 2017	6/15/17	6/15/2047	30,000,000.00	7,500.00	8/22 Not Closed	0.00		No		Hinckley Allen
6/1/17	Public Schools Revenue Bond Financing Program Revenue Bonds, Series 2017 H (City of Cranston)	7/20/17	5/15/2038	5,000,000.00	1,250.00		1,250.00	8/10/17	8/10/17	30,000.00	Greenberg Traurig
6/8/17	Public Schools Revenue Bond Financing Program Revenue Refunding Bonds, Series 2017 E (City of Pawtucket Issue)	6/14/17	5/15/??	23,615,000.00	5,903.75		5,903.75	6/9/17	7/13/17	45,000.00	Locke Lord
6/9/17	Public Schools Revenue Bond Financing Program Revenue Bonds, Series 2017 G (Town of North Providence)	7/11/17	5/15/2042	36,655,000.00	9,163.75		9,163.75	8/3/17	8/9/17	40,000.00	Hinckley Allen
6/21/17	Higher Education Facilities Revenue Bonds (Brown University Issue) Series 2017 A	7/19/17	9/1/2047	141,125,000.00	35,281.25		35,281.25	7/19/17	8/4/17	65,000.00	Partridge Snow
8/3/17	Higher Education Revenue Bonds, (University of Rhode Island) Series 2017	9/25/17	?/?/2047	133,787,000.00	33,446.75		0.00		No		Locke Lord
8/25/17	Bond	??	??	20,000,000.00	5,000.00		0.00		No		Partridge Snow
					Fees Due Total	**% collected**	**Fees Collected Total**				
					168,738.00	67.5%	113,916.25				

The Public Finance Management Board

Rhode Island Infrastructure Bank

Calendar Year 2017

Initial Date		Delivery Date	Maturity Date	Original Issue Amount	Fees Due	Total Due by Agency	% of Total	Total Rec.'d	Date Rec.'d	Report of Final Sale Received	Bond Counsel Fee	Firm
1/3/17	Septic Revolving Fund Loan (2016)	2/6/17	2/16/2027	300,000.00	0.00	8/4 Not Closed				No		Taft & McSally
	(Town of North Kingstown)											
1/23/17	Wastewater Treatment System Refunding Rev. Bds	1/31/17	9/1/2022	27,705,000.00	6,926.25			6,926.25	1/31/17	2/15/17	90,000.00	Nixon Peabody
	(City of Cranston / Triton Ocean State LLC Project)									City Bond Counsel	90,000.00	Locke Lord
	Series 2016 (Federally Taxable)											
3/8/17	Water System Revenue Bonds, 2017 Ser. A	4/13/17		3,730,000.00	932.50			0.00		5/12/17	23,000.00	Locke Lord
	(City of Warwick)											
3/8/17	Water System Revenue Bonds, 2017 Ser. A	4/13/17		33,443,000.00	8,360.75			0.00		5/12/17	33,000.00	Locke Lord
	(City of Newport)											
6/30/16	Safe Drinking Water Subordinated Refunding	2/14/2017	10/1/2029	23,785,000.00	5,946.25			5,946.25	2/27/17	2/28/17	60,000.00	Nixon Peabody
	Revenue Bonds, Series 2017 A								WT			
3/13/17	Water Pollution Control Revolving Fund Revenue Bds	3/22/17	10/1/2038	28,130,000.00	7,032.50			7,032.50	4/13/17	4/14/17	50,000.00	Nixon Peabody
	Series 2017 A (Green Bonds) (Pooled Loan Issue)								WT		25,000.00	Taft & McSally
5/10/17	Safe Drinking Water Revolving Fund Revenue Bonds,	5/10/17	10/1/2036	11,350,000.00	2,837.50			2,837.50	5/10/17	5/10/17	50,000.00	Nixon Peabody
	Series 2017 B (Green Bonds) (Pooled Loan Issue)											

4/14/17	G.O. Road Bonds (Taxable) dated 5/25/17			5,000,000.00	1,250.00		1,250.00	6/5/17	6/29/2017	7,500.00	Locke Lord LLP
	Town of East Greenwich, R. I.										
4/14/17	G.O. Road Bonds (Taxable) dated 5/25/18			3,000,000.00	750.00		750.00	6/5/17	6/29/17	6,700.00	Locke Lord LLP
	City of Pawtucket, R. I.										
4/21/17	Water Pollution Control Refunding Revenue Bonds	6/28/17	10/1/2032	41,120,000.00	10,280.00		10,280.00	6/28/17	6/30/17	60,000.00	Nixon Peabody
	Series 2017 B										
					Fees Due Total	**% collected**	**Fees Collected Total**				
				Total:	44,315.75	79.0%	35,022.50				

The Public Finance Management Board

Other Quasi-Public Agencies (State and Muni)

Calendar Year 2017

Initial Date		Delivery Date	Maturity Date	Original Issue Amount	Fees Due	Total Due by Agency	% of Total	Total Rec.'d	Date Rec.'d	Report of Final Sale Received	Bond Counsel Fee	Firm
	Rhode Island Student Loan Auth											
3/10/17	Student Loan Program Revenue Bonds	5/4/17	12/1/2035	50,255,000.00	12,563.75			12,563.75	5/5/17	5/15/17	No C.O.I.	Cameron &
	2017 Senior Series A (AMT)										paid from	Mittleman
											proceeds.	
					12,563.75		100.0%	12,563.75				
	Housing Authority of the City of Providence											
3/22/17	R.I. Capital Funds Housing Revenue Bond,	4/12/17	3/1/2035	16,000,000.00	4,000.00			4,000.00	4/12/17	4/13/17	35,000.00	Partridge Snow
	Series 2017											
					4,000.00		100.0%	4,000.00				
	Providence Public Buildings Authority											
9/7/17	Lease Revenue Bonds	10/10/17	10/10/2038	45,000,000.00	0.00			0.00		No		Locke Lord LLP
					0.00			0.00				
	Woonsocket Housing Authority											
4/7/17	Capital Fund Housing Revenue Bonds, Series 2017	4/7/17	9/1/2017	4,945,000.00	1,236.25			1,236.25	4/10/17	4/10/17	45,000.00	Robinson Cole

Fees Due Total	% collected	Fees Collected Total
1,236.25	100.0%	1,236.25

The Public Finance Management Board
Summary of Debt Issuance by Cities & Towns
Calendar Year 2017

Date	Amount		PFMB Fee	PFMB Fee Received	Date Rec'd	City or Town	Bond Counsel Fee	Bond Counsel	Description of Issue	Report of Final Sale Received
12/22/16	$ 20,000,000.00	0.00025	$ 5,000.00	$ 5,000.00	3/29/17	City of East Providence, R. I.	$ 18,500.00	Locke Lord LLP	G.O. Tax Anticipation Notes	4/25/17
12/22/16	339,639.55	0.00025	N/A	N/A		Town of West Warwick, R. I.	6,500.00	Locke Lord LLP	Tax-Exempt Lease Purchase Agreement	2/24/17
1/5/17	6,000,000.00	0.00025	1,500.00	1,500.00	2/8/17	Town of Cumberland	8,500.00	Moses Afonso Ryan	G.O. Tax Anticipation Notes	2/23/17
1/10/17	11,815,000.00	0.00025	2,953.75	2,953.75	2/9/17	Town of Portsmouth, R.I.	25,000.00	Moses Afonso Ryan	G.O. Bonds, Series 2017 A (Tax-Exempt)	2/17/17
1/10/17	600,000.00	0.00025	150.00	150.00	2/9/17	Town of Portsmouth, R.I.	-	Moses Afonso Ryan	G.O. Bonds, Series 2017 B (Federally Taxable)	2/17/17
1/20/17	12,000,000.00	0.00025	3,000.00	3,000.00	4/12/17	Kent County Water Authority	25,000.00	Locke Lord LLP	General Revenue Bonds, 2017 Series A	5/12/17
1/20/17	5,100,000.00	0.00025	1,275.00	1,275.00	3/30/17	Town of Coventry, R.I.	2,500.00	Locke Lord LLP	G.O. Bonds, 2017 Series A dated 3/30/17	4/27/17
1/20/17	1,200,000.00	0.00025	300.00	300.00	3/7/17	Town of Barrington, R. I.	8,000.00	Locke Lord LLP	G.O. Bonds, dated 3/8/17	4/7/17
2/2/17	1,400,000.00	0.00025	350.00	350.00	2/13/17	Town of Johnston, R. I.	32,500.00	Mack Law Assoc.	Special Obligation Tax Increment Bonds Phase 1	2/15/17
3/8/17	16,272,095.00	0.00025	4,068.02			City of Providence, R. I.	35,000.00	Locke Lord LLP	Water System Revenue Bonds, 2017 Series A	6/9/17
3/8/17	2,500,000.00	0.00025	625.00			City of East Providence, R. I.		Locke Lord LLP	Water System Revenue Bonds	
3/27/17	2,500,000.00	0.00025	N/A	N/A		City of Warwick, Rhode Island		Locke Lord LLP	Tax-Exempt Master Lease Purchase	
4/7/17	1,500,000.00	0.00025	375.00	375.00	5/23/17	Town of Scituate, R. I.	5,000.00	Taft & McSally LLP	G.O. Tax Anticipation Notes dtd 5/17/17	5/25/17
4/24/17	17,950,000.00	0.00025	4,487.50	5,100.00	6/14/17	City of Pawtucket, R. I.	13,500.00	Locke Lord LLP	G.O. Bond Anticipation Note, Ser. 2017-1 dtd 6/14/17	7/14/17
4/24/17	2,450,000.00	0.00025	612.50			City of Pawtucket, R. I.	-	Locke Lord LLP	G.O. Bond Anticipation Note, Ser. 2017-2 dtd 6/28/17	7/14/17
5/12/17	12,116,000.00	0.00025	N/A	N/A		Town of West Warwick, R. I.		Locke Lord LLP	Lease Purchase Agreement	
5/23/17	6,890,000.00	0.00025	1,722.50	1,722.50	7/19/17	Town of West Warwick, R. I.	21,000.00	Locke Lord LLP	G.O. Refunding Bonds, Series 2017 A	8/18/17
5/24/17	3,890,000.00	0.00025	972.50	972.50	7/19/17	Town of Westerly, R. I.	20,000.00	Moses Afonso Ryan	G.O. Refunding Bonds	7/19/17
5/26/17	5,435,000.00	0.00025	1,358.75	1,358.75	7/25/17	City of Central Falls, R. I.	18,000.00	Locke Lord LLP	G.O. Refunding Bonds, 2017 Series A	8/25/17
5/26/17	390,000.00	0.00025	N/A	N/A		Town of Middletown		Locke Lord LLP	Tax-Exempt Lease	
5/30/17	674,000.00	0.00025	N/A	N/A		Town of New Shoreham		Moses Afonso Ryan	Bond - 8/30 not closed	
2/28/17	27,705,000.00	0.00025	6,926.25			City of Cranston, Rhode Island	90,000.00	Locke Lord LLP	Wastewater Treatment System Revenue Bonds	
							90,000.00	Nixon Peabody	(Triton Ocean State LLC Project) 2017 Issue	
6/20/17	1,920,000.00	0.00025	480.00	8/30 not closed		Pascoag Utility District		Moses Afonso Ryan	Water System Revenue Bonds dated 8/10/17	
6/22/17	3,555,000.00	0.00025	888.75	888.75	6/21/17	Town of Bristol, Rhode Island		Mack Law Assoc.	G.O. Bonds, Series 2017 A	
6/22/17	6,905,000.00	0.00025	1,726.25	1,726.75	6/21/17	Town of Bristol, Rhode Island		Mack Law Assoc.	G.O. Refunding Bonds, Series 2017 B	
6/22/17	830,000.00	0.00025	207.50	207.50	6/21/17	Town of Bristol, Rhode Island		Mack Law Assoc.	G.O. Bonds, Series 2017 C (Federally Taxable)	
6/30/17	500,000.00	0.00025	N/A	N/A		Charlestown Fire District	8/4 not closed	Taft & McSally LLP	Tax-Exempt Lease	
6/30/17	530,000.00	0.00025	N/A	N/A		City of Pawtucket, R. I.		Locke Lord LLP	Lease Purchase Agreement	
6/30/17	290,000.00	0.00025	N/A	N/A		Town of Hopkinton, R. I.		Locke Lord LLP	Lease Purchase Agreement	
6/30/17	655,000.00	0.00025	N/A	N/A		Town of West Warwick, R. I.		Locke Lord LLP	Lease Obligations	
6/30/17	1,680,000.00	0.00025	N/A	N/A		City of Providence, R. I.		Locke Lord LLP	Lease Purchase Agreement	
6/30/17	2,850,000.00	0.00025	N/A	N/A		City of East Providence, R. I.		Locke Lord LLP	Lease Purchase Agreement	
6/30/17	3,015,000.00	0.00025	N/A	N/A		City of Warwick, Rhode Island		Locke Lord LLP	Lease Purchase Agreement	
7/11/17	2,435,000.00	0.00025	608.75			Town of Johnston, R. I.		Pannone Lopes	G.O. Bond, Series 2017 A	8/16/17
7/13/17	5,420,000.00	0.00025	1,355.00	1,355.00	8/31/17	Town of South Kingstown, R. I.		Locke Lord LLP	G.O. Bonds 2017 Series A	
7/24/17	15,000,000.00	0.00025	3,750.00			City of Cranston, Rhode Island		Locke Lord LLP	G.O. Bond Anticipation Notes	
7/24/17	2,775,000.00	0.00025	693.75			Town of Burrillville		Locke Lord LLP	G.O. Refunding Bonds, 2017 Series A	
8/3/17	1,527,826.02	0.00025	381.96	381.46		City of Warwick, Rhode Island	Not Paid from Pro	Locke Lord LLP	Master Equipment Lease/Purchase Agreement	8/3/17
8/24/17	1,435,000.00	0.00025	358.75			Town of Bristol, Rhode Island		Mack Law Assoc.	Bond	
8/25/17	11,745,000.00	0.00025	2,936.25			City of Woonsocket		Adler Pollock	Bond	
8/25/17	2,501,000.00	0.00025	625.25			Town of Richmond, R. I.		Partridge Snow	Bond	
9/7/17	300,000.00	0.00025	N/A	N/A		Town of Scituate, R. I.		Taft & McSally LLP	Note	
		0.00025								
		0.00025								
	$ 224,595,560.57		**$ 49,688.98**	**$ 28,616.96**			**$ 419,000.00**			

Appendix C: PFMB Budget Data

Public Finance Management Board

			FY 2016		**FY 2017**
10.067.1910994	Revenues	$	94,484	$	335,588
10.067.1910104	Expenditures				
	Personnel	$	109,991	$	275,588
	Annual Retainer for F.A.	$	29,000	$	37,500
	Debt Study Expense	$	-	$	76,697
	Debt Portal Expense			$	36,000
	Legal	$	16,439	$	32,431
	Banking and Debt Mng Fees	$	4,638	$	7,030
	All other Operating	$	1,888	$	7,136
	Total Expenditures	$	161,956	$	472,381

Appendix D: Ratings Publications

FITCH RATES RHODE ISLAND'S $50MM LEASE PARTICIPATION CERTIFICATES 'AA-'; OUTLOOK STABLE

Fitch Ratings-New York-30 May 2017: Fitch Ratings has assigned a 'AA-' rating to the following state of Rhode Island and Providence Plantations lease participation certificates:

--$9.2 million (nursing education center project - 2017 series A);
--$6.9 million (University of Rhode Island energy conservation project - 2017 series B);
--$5.115 million (energy conservation project - 2017 refunding series C);
--$19.97 million (school for the deaf project - 2017 refunding series D);
--$8.24 million (central power plant project - 2017 refunding series E).

The Rating Outlook is Stable.

SECURITY
Appropriation-backed debt issued by the state, including the lease participation certificates, is supported by payments from the state subject to annual legislative appropriation.

KEY RATING DRIVERS

State Appropriation
The 'AA-' rating on the certificates, one notch below the state's 'AA' Fitch Issuer Default Rating (IDR), is based on debt service paid from annual legislative appropriations.

Rhode Island's 'AA' Issuer Default Rating (IDR) is based on conservative and prudent fiscal management, stable financial performance, and a moderate long-term liability position, offset by below-average economic growth. The state's particularly deep recession and tepid recovery inform Fitch's assessment of the state's modest economic and revenue growth prospects. Rhode Island continues to maintain its rainy day fund at the statutory 5% of revenues and retains substantial spending control. Rhode Island's budget outlook assumes structural gaps in future years that will require continued fiscal discipline.

Economic Resource Base
Rhode Island's economy, weighted towards education and health services, has grown slower than national trends with a demographic profile weaker than most states. The state's recessionary job losses were among the worst of the states during the great recession, and the pace of recovery has lagged the nation. Fitch anticipates continued economic expansion but at a modest pace. The population has been relatively flat since the turn of the century, trailing national growth, and is also slightly older than the national median. A relatively high concentration of colleges and universities and slightly above-average educational attainment levels indicate the potential for more robust growth.

Revenue Framework: 'a' factor assessment
Fitch anticipates Rhode Island's revenues will grow modestly in line with its broad but slow-growth economy. The state has complete legal control over its revenues.

Expenditure Framework: 'aa' factor assessment
Rhode Island maintains solid expenditure flexibility with a moderate burden of carrying costs for liabilities and the broad expense-cutting ability common to most U.S. states. Medicaid remains a key expense driver and a focus of the state's expenditure control efforts.

Long-Term Liability Burden: 'aa' factor assessment
Rhode Island's long-term liabilities are moderate, but above the U.S. states median. The burden reflects reductions from significant pension benefit changes enacted in 2011.

Operating Performance: 'aaa' factor assessment
Rhode Island has exceptionally strong gap-closing ability with wide-ranging budgetary management capabilities and a strong commitment to maintaining a prudent reserve. During the expansion, the state has enacted largely structurally balanced budgets and taken steps to improve financial flexibility.

RATING SENSITIVITIES
IDR LINKAGE: The rating for the certificates is sensitive to changes in Rhode Island's 'AA' IDR, to which it is linked.

FUNDAMENTAL CHARACTERISTICS: The IDR is sensitive to changes in the state's fundamental credit characteristics. Weakened fiscal discipline could negatively affect the rating, while materially improved economic growth prospects could positively affect the rating.

MORAL OBLIGATION COMMITMENT: Rhode Island's IDR incorporates Fitch's expectation that the state will sustain its support of state moral obligation debt previously issued for a now-bankrupt video game company. Failure to meet that commitment going forward would exert negative rating pressure.

CREDIT PROFILE

Revenue Framework
Rhode Island's personal income tax (PIT) and sales and use tax together account for approximately 60% of the state's general fund receipts. The PIT alone makes up approximately 40%. Both revenue sources are economically sensitive and respond quickly to shifts in the state's economic trajectory.

Historical revenue growth, adjusted for the estimated impact of policy changes, has trailed both national economic growth and inflation over the last decade. Nominal revenue growth has been more robust, but reflects tax policy changes including on capital gains and tobacco implemented during the height of the recession. Fitch anticipates the long-term trend for revenue growth will be in line with baseline historical performance.

Rhode Island has no legal limitations on its independent ability to raise revenues through base broadenings, rate increases, or the assessment of new taxes or fees.

Expenditure Framework
As in most states, education and health and human services spending are Rhode Island's largest operating expenses. Steady recent increases in education spending relate to implementation of a new funding formula for K-12 education. Medicaid is the primary driver of health and human services spending.

Absent policy actions the pace of spending growth is likely to be above the relatively tepid pace of anticipated revenue growth in Rhode Island, requiring proactive budget management to ensure balance. Recent rapid growth in K-12 education spending will level off after fiscal 2018 once the state fully implements the new funding formula.

Controlling Medicaid spending has been a priority for the current administration and early results indicate some success in flattening the rate of spending growth in the existing program. Fitch will continue to monitor the state's ability to sustain these cost improvements.

Federal action to revise Medicaid's programmatic and financial structure remains a possibility given recent House passage of the American Health Care Act (AHCA) and the President's proposed fiscal 2018 budget. Both include a basic restructuring of federal Medicaid funding to a capped amount. Whether a change in Medicaid funding has consequences for Fitch's assessment of the state's credit quality would depend on management's fiscal response to those changes. Responses that create long-term structural deficits or increased liability burdens could negatively affect both the expenditure framework assessment and the state's IDR.

Rhode Island retains substantial flexibility to cut spending as needed, with the broad expense-cutting authority common to most U.S. states. Fixed carrying costs for debt and retiree benefits are above average for a state but represent a low budget burden. Unlike most state and local governments, Rhode Island contributes the full actuarially calculated contribution towards its other post-employment benefits (OPEB). The state recently completed a long-term liability burden study that covers both debt and retiree liabilities and expects to conduct a new one biennially. Fitch anticipates that if the study is regularly updated and accompanied by prudent management guidelines, it would help the state preserve its expenditure flexibility over time.

Long-Term Liability Burden

Rhode Island's combined burden of debt and unfunded pension liabilities of approximately 10% is well above the states' median of 5.1% (both per Fitch's November 2016 State Pension Update report) but still only a moderate long-term pressure. The state's debt position has moderated, with more disciplined debt issuance policies and cash-funding of capital projects. The pension liability calculations include 100% of the liability for state employees in the employees' retirement system (ERS), approximately 40% of the teachers' liability in ERS (the state's GASB 68 proportionate share), and 100% of the liability for the judicial retirement benefit trusts and the state police retirement benefits trust. The ERS liabilities encompass over 95% of the net pension liabilities attributed to the state by Fitch.

Comprehensive 2011 pension reforms significantly reduced the unfunded liability and lowered annual employer contributions. The 2011 reforms included limiting annual benefit cost of living adjustments (COLA) and introducing hybrid defined benefit and defined contribution plans. Litigation settlements regarding these and earlier pension changes preserved nearly all of the originally expected savings and removed a negative credit risk.

EXPECTATION OF COMMITMENT TO MORAL OBLIGATION

The state's willingness to continue paying debt service on bonds issued in 2010, which carry a moral obligation commitment from the state, and were issued on behalf of a now bankrupt video game company are an important credit consideration for Fitch. Despite significant public debate about the state's commitment, each enacted budget since the state commitment was triggered has included the all necessary debt service appropriations. Actual expenditures will be net of any proceeds the state receives from related litigation.

Failure to fully appropriate for debt service on moral obligation bonds that were originally issued by a state agency would lead Fitch to reassess the state's commitment to bondholders and likely trigger negative rating action on the state's IDR, general obligation and appropriation-backed debt ratings. Consistent with Fitch's criteria for moral obligation pledges, Fitch does not anticipate moving those ratings below investment-grade as these moral obligation bonds were a project-specific commitment with limited direct state involvement.

Operating Performance

Rhode Island retains significant flexibility to address cyclical economic and revenue downturns, and has repeatedly demonstrated its commitment to maintaining a solid financial position. Through the great recession, the state enacted revenue and expenditure changes to address budget shortfalls, most of which were recurring in nature. Rhode Island also benefits from structural budget features including the governor's ability to reduce allotments and delay spending pending legislative approval, and a statutory requirement to budget less than 100% of consensus revenue projections. The current 97% expenditure limit provides an annual 3% operating cushion, in line with the state's historical revenue volatility of 3% in a moderate economic downturn as calculated using Fitch's Analytical Sensitivity Tool (FAST).

The state also maintains a budget reserve providing an additional source of flexibility. Rhode Island drew on the reserve in fiscal 2009 at the height of the last recession but impressively added to it annually through all other years of the downturn despite ongoing budget challenges. The budget reserve has been at its statutory maximum, currently 5% of revenues, since the fiscal 2009 draw.

Conservative budget management, even in times of relative economic expansion, reflects Rhode Island's ongoing commitment to fiscal prudence. Since fiscal 2011, the state has ended every fiscal year with expenditures below and revenues ahead of the originally enacted budget.

Rhode Island has also taken steps to improve its fiscal flexibility. In fall of 2011, while revenues were in the midst of a second year of growth after recessionary declines, the state enacted the structural changes to its pension systems that materially reduced the liability and annual funding requirements. In May, the state's retirement board made various changes to its actuarial assumptions including lowering the assumed rate of return on pension funds within its control to 7% from 7.5%. To manage expenditure, the state implemented legislative and executive changes in fiscal year 2016 that resulted in essentially flat growth in Medicaid spending after two years of nearly double digit percentage growth. The Medicaid spending growth rate is likely to increase in fiscal year 2017 and 2018, but Fitch anticipates it will remain below prior levels.

Current Developments

The state is currently engaged in legislative deliberations over the fiscal 2018 budget. A recent downward revision to the official revenue forecast adds some complexity to the ongoing negotiations. The governor's executive budget proposal includes relatively modest spending and revenue-raising proposals including two years of free college tuition for residents and a change in the sales tax to encourage more online sellers to remit tax revenues to the state.

Medicaid remains a focus, with the state's ongoing Reinventing Medicaid initiative anticipated to yield another $40 million in savings through administrative adjustments and provider rate freezes and cuts, among other changes. Through fiscal 2016, the administration reported $90 million in recurring savings attributable to the initiative. By 2018, the administration anticipates annual recurring savings could reach $140 million versus the pre-reform cost trajectory. As noted earlier, federal changes to Medicaid funding could significantly alter these projections.

Rhode Island's multiyear budget outlook shows challenges, but structural budgetary protections mitigate associated risks. In the executive budget the governor forecast current services general revenue fund deficits of $151 million and $184 million in fiscal years 2019 and 2020, respectively, based on the enactment of the fiscal 2018 executive budget proposals. In addition to modest economic growth, a key driver of the forecast shortfalls is a reduction in lottery and gaming-related revenues due to the anticipated opening of gaming facilities in adjacent southeastern Massachusetts.

The constitutional funding formula that calculates contributions to the budget reserve account (capped at 5% of general revenues) limits annual appropriations to 97% of estimated revenues, providing an important fiscal cushion. With the rainy day fund at its statutory cap, excess revenues flow to a capital projects fund, thereby reducing debt issuance.

Revenue collections through April indicate the state is trailing enacted budget estimates, and the May revenue estimating conference revised its forecast for fiscal 2017 and 2018 downward. The state now forecasts taxes and total general revenues will be essentially flat year over year (yoy), rather than the 2.2% growth in taxes (a $72.7 million difference) and 1.5% growth in general revenues incorporated into the enacted budget. Personal income tax receipts remain largely on track for the budgeted 4% yoy gain, while sales tax collections are now projected to be up 3% versus the budgeted 4.3%, a difference of $13 million. Business taxes account for the majority of the shortfall and are now forecast to be down 3.4% versus the budgeted gain of 9.6%, a difference of $56 million.

Despite this shortfall, the state still anticipates ending the year with an operating surplus, due both to the 97% of revenues appropriations limit and to ongoing expenditure controls. Based solely on the May revenue estimating conference and caseload estimating conference, the state forecasts a budget surplus for the current year at $10.7 million.

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In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis and InvestorTools.

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Applicable Criteria
U.S. Tax-Supported Rating Criteria (pub. 18 Apr 2016)
https://www.fitchratings.com/site/re/879478

Rhode Island & Providence Plantations

New Issue Report

Ratings

Long-Term Issuer Default Rating	AA

New Issues

$91,000,000 General Obligation Consolidated Capital Development Loan Bonds, Series 2017A	AA
$67,945,000 General Obligation Consolidated Capital Development Loan Refunding Bonds, Series 2017B	AA

Outstanding Debt

General Obligation Bonds	AA
Appropriation-Backed Debt	AA–

Rating Outlook

Stable

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New Issue Summary

Sale Date: April 25, 2017

Series: $91 million general obligation (GO) bonds, consolidated capital development loan of 2017, series A (tax-exempt); $67.945 million RI GO bonds, consolidated capital development loan of 2017, refunding series B (tax-exempt).

Purpose: To finance various capital projects and refund certain outstanding bonds.

Security: Pledge of the state's full faith and credit.

Analytical Conclusion

Rhode Island's 'AA' Issuer Default Rating (IDR) is based on conservative and prudent fiscal management, stable financial performance, and a moderate long-term liability position, offset by below-average economic growth. The state's particularly deep recession and tepid recovery inform Fitch's assessment of the state's modest economic and revenue growth prospects. Rhode Island continues to maintain its rainy day fund at the statutory 5% of revenues and retains substantial spending control. Rhode Island's budget outlook assumes structural gaps in future years that will require continued fiscal discipline.

Key Rating Drivers

Economic Resource Base: Rhode Island's economy, weighted towards education and health services, has grown slower than that of the nation with a demographic profile weaker than most states. RI's job losses during the last recession were among the worst of the states, and the pace of recovery has lagged the nation. Fitch anticipates modest continued economic expansion. Rhode Island's population has been flat since the turn of the century and the state is slightly older than the national median. A relatively high concentration of colleges and universities, and slightly above-average educational attainment, indicate the potential for more robust growth.

Revenue Framework: 'a' factor assessment. Fitch anticipates Rhode Island's revenues will slowly grow in line with its broad, but slow-growth economy. The state has complete legal control over its revenues.

Expenditure Framework: 'aa' factor assessment. The state maintains solid expenditure flexibility with a moderate burden of carrying costs for liabilities and the broad expense-cutting ability common to most U.S. states. Medicaid remains a key expense driver and a focus of the state's expenditure control efforts.

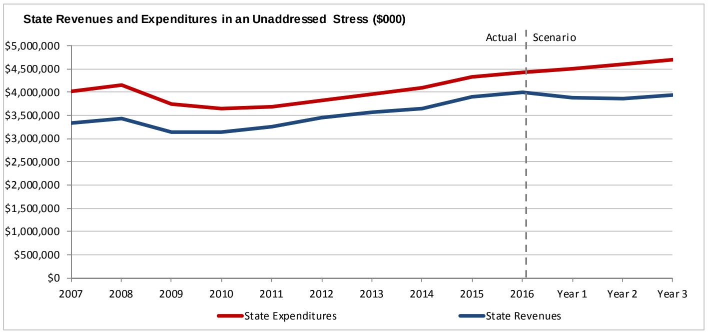
Long-Term Liability Burden: 'aa' factor assessment. Rhode Island's long-term liabilities, while above the median for U.S. states, are moderate. The state adopted significant pension benefit changes in 2011, largely maintained in litigation settlements, to reduce its liability.

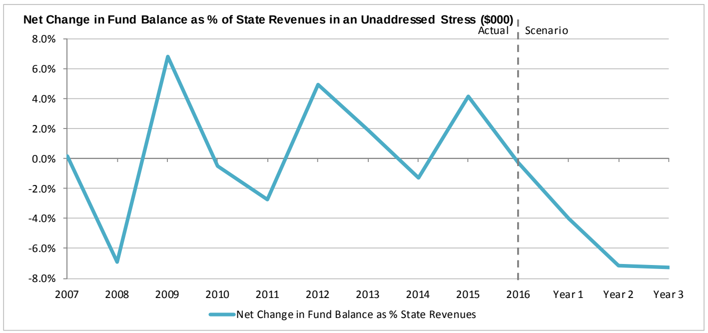
Operating Performance: 'aaa' factor assessment. Rhode Island has exceptionally strong gap-closing ability with wide-ranging budgetary management capabilities and a strong commitment to maintaining a prudent budget reserve. During the expansion, the state has enacted largely structurally balanced budgets and taken steps to improve financial flexibility.

Rhode Island & Providence Plantations, State of (RI)

Scenario Analysis

v. 2.0 2017/04/14





Analyst Interpretation of Scenario Results:

Rhode Island retains significant flexibility to address cyclical economic and revenue downturns, and has repeatedly demonstrated its commitment to maintaining a solid financial position. Through the great recession, the state enacted legislative revenue and expenditure changes to address budget shortfalls, most of which were recurring in nature. Rhode Island also benefits from structural budget features including the governor's ability to reduce allotments and delay spending pending legislative approval, and a statutory requirement to budget less than 100% of consensus revenue projections. The current 97% expenditure limit provides an annual 3% operating cushion, in line with the state's historical revenue volatility of 3.1% in a moderate economic downturn as calculated using Fitch's Analytical Sensitivity Tool (FAST).

The state also maintains a budget reserve providing an additional source of flexibility. Rhode Island drew on the reserve in fiscal 2009 at the height of the last recession, but impressively added to it annually through all other years of the downturn despite ongoing budget challenges. The budget reserve has been at its statutory maximum, currently 5%, since the fiscal 2009 draw.

Scenario Parameters:	Year 1	Year 2	Year 3
GDP Assumption (% Change)	(1.0%)	0.5%	2.0%
Expenditure Assumption (% Change)	2.0%	2.0%	2.0%
Revenue Output (% Change)	(3.0%)	(0.5%)	2.1%

Revenues, Expenditures, and Net Change in Fund Balance	Actuals										Scenario Output		
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Year 1	Year 2	Year 3
Expenditures													
Total Expenditures	5,887,801	6,088,665	5,959,769	6,161,002	6,216,325	6,231,660	6,349,163	6,717,714	7,210,678	7,283,134	7,428,797	7,577,373	7,728,920
% Change in Total Expenditures	0.9%	3.4%	(2.1%)	3.4%	0.9%	0.2%	1.9%	5.8%	7.3%	1.0%	2.0%	2.0%	2.0%
State Expenditures	4,018,465	4,152,055	3,740,953	3,642,954	3,674,990	3,820,398	3,946,719	4,087,036	4,320,715	4,418,128	4,506,491	4,596,620	4,688,553
% Change in State Expenditures	3.8%	3.3%	(9.9%)	(2.6%)	0.9%	4.0%	3.3%	3.6%	5.7%	2.3%	2.0%	2.0%	2.0%
Revenues													
Total Revenues	5,209,589	5,358,152	5,351,937	5,654,745	5,794,583	5,859,078	5,965,671	6,282,276	6,787,820	6,860,125	6,796,773	6,837,009	6,976,448
% Change in Total Revenues	(0.7%)	2.9%	(0.1%)	5.7%	2.5%	1.1%	1.8%	5.3%	8.0%	1.1%	(0.9%)	0.6%	2.0%
Federal Revenues	1,869,336	1,936,610	2,218,816	2,518,048	2,541,335	2,411,262	2,402,444	2,630,678	2,889,963	2,865,006	2,922,306	2,980,752	3,040,367
% Change in Federal Revenues	(4.7%)	3.6%	14.6%	13.5%	0.9%	(5.1%)	(0.4%)	9.5%	9.9%	(0.9%)	2.0%	2.0%	2.0%
State Revenues	3,340,253	3,421,542	3,133,121	3,136,697	3,253,248	3,447,816	3,563,227	3,651,598	3,897,857	3,995,119	3,874,466	3,856,256	3,936,081
% Change in State Revenues	1.7%	2.4%	(8.4%)	0.1%	3.7%	6.0%	3.3%	2.5%	6.7%	2.5%	(3.0%)	(0.5%)	2.1%
Excess of Revenues Over Expenditures	(678,212)	(730,513)	(607,832)	(506,257)	(421,742)	(372,582)	(383,492)	(435,438)	(422,858)	(423,009)	(632,024)	(740,364)	(752,472)
Total Other Financing Sources	683,106	494,194	821,001	491,475	333,440	543,514	450,833	388,937	588,695	412,757	476,947	463,634	466,194
Net Change in Fund Balance	4,894	-236,319	213,169	-14,782	-88,302	170,932	67,341	-46,501	160,837	-10,252	-155,077	-276,730	-286,278
% Total Expenditures	0.1%	(3.9%)	3.6%	(0.2%)	(1.4%)	2.7%	1.1%	(0.7%)	2.2%	(0.1%)	(2.1%)	(3.7%)	(3.7%)
% State Expenditures	0.1%	(5.7%)	5.7%	(0.4%)	(2.4%)	4.5%	1.7%	(1.1%)	3.7%	(0.2%)	(3.4%)	(6.0%)	(6.1%)
% Total Revenues	0.1%	(4.4%)	4.0%	(0.3%)	(1.5%)	2.9%	1.1%	(0.7%)	2.4%	(0.1%)	(2.3%)	(4.0%)	(4.1%)
% State Revenues	0.1%	(6.9%)	6.8%	(0.5%)	(2.7%)	5.0%	1.9%	(1.3%)	4.1%	(0.3%)	(4.0%)	(7.2%)	(7.3%)

Notes: Scenario analysis represents an unaddressed stress on issuer finances. Fitch's downturn scenario assumes a -1.0% GDP decline in the first year, followed by 0.5% and 2.0% GDP growth in Years 2 and 3, respectively. Expenditures are assumed to grow at a 2.0% rate of inflation. For further details, please see Fitch's US Tax-Supported Rating Criteria.

Rating History (IDR)

Rating	Action	Outlook/ Watch	Date
AA	Affirmed	Stable	12/15/16
AA	Affirmed	Stable	7/18/11
AA	Revised	Negative	4/05/10
AA–	Affirmed	Negative	3/04/09
AA–	Downgraded	Stable	10/14/08
AA	Affirmed	Negative[a]	11/20/07
AA	Affirmed	Stable	4/13/06
AA	Upgraded	—	9/09/99
AA–	Assigned	—	7/02/93

[a]Rating Watch.

Related Research

Fitch Rates Rhode Island's $159MM GOs 'AA'; Outlook Stable (April 2017)

Related Criteria

U.S. Tax-Supported Rating Criteria (April 2016)

Rating Sensitivities

Fundamental Characteristics: The rating is sensitive to changes in the state's fundamental credit characteristics. Weakened fiscal discipline could negatively affect the rating, while materially improved economic growth prospects could positively affect the rating.

Moral Obligation Commitment: Rhode Island's IDR reflects Fitch's expectation that the state will sustain its full support through final maturity of state moral obligation debt previously issued for a now-bankrupt video game company. Failure to meet that commitment going forward would exert negative rating pressure.

Credit Profile

Revenue Framework

Rhode Island's personal income tax (PIT) and sales and use tax together account for approximately 60% of the state's general fund receipts. The PIT alone makes up approximately 40%. Both revenue sources are fairly economically sensitive and respond quickly to shifts in the state's economic trajectory.

Historical revenue growth, adjusted for the estimated impact of policy changes, has trailed both national economic growth and inflation over the last decade. Nominal growth has been more robust, but reflects tax policy changes including on capital gains and tobacco implemented during the height of the recession. Fitch anticipates the long-term trend for revenue growth will be in line with historical performance.

Rhode Island has no legal limitations on its independent ability to raise revenues through base broadenings, rate increases, or the assessment of new taxes or fees.

Expenditure Framework

As in most states, education and health and human services spending are Rhode Island's largest operating expenses. Steady recent increases in education spending relate to implementation of a new funding formula for K-12 education. Medicaid is the primary driver of health and human services spending.

Absent policy actions the pace of spending growth is likely to be above the relatively tepid pace of anticipated revenue growth in Rhode Island, requiring proactive budget management to ensure balance. Recent rapid growth in education spending will level off after fiscal 2018 once the state fully implements a new funding formula that increases overall K-12 spending.

Controlling Medicaid spending has been a priority for the current administration and early results indicate some success in flattening the rate of spending growth in the existing program. Fitch will continue to monitor the state's ability to sustain these cost improvements.

Federal action to revise Medicaid's programmatic and financial structure remains a possibility given previously stated support from Republican congressional leadership and the president for a basic restructuring of federal Medicaid funding to a capped amount. States generally have significant flexibility to deal with fiscal challenges, including shifts in federal funding, while maintaining fundamental credit quality. As Medicaid represents a sizable share of all states' budgets, significant changes could challenge that flexibility. Whether a change in Medicaid funding has consequences for Fitch's assessment of a state's credit quality would depend on the state's fiscal response to those changes. Responses that create long-term structural deficits or increased liability burdens could negatively affect both the expenditure framework assessment and the IDR.

Rhode Island retains substantial flexibility to cut spending as needed, with the broad expense-cutting authority common to most U.S. states. Fixed carrying costs for debt and retiree benefits are above average for a state, but represent a low budget burden. Unlike most state and local governments, Rhode Island contributes the full actuarially calculated contribution towards its other post-employment benefits (OPEB). The state is currently conducting a long-term liability burden study that will cover both debt and retiree liabilities and expects to conduct a new one biennially. Fitch anticipates that such a study, if regularly reviewed and accompanied by prudent management guidelines, would help the state maintain its expenditure flexibility.

Long-Term Liability Burden

Rhode Island's combined burden of debt and unfunded pension liabilities of approximately 10% is well above the states' median of 5.1% (both per Fitch's November 2016 State Pension Update report), but still only a moderate long-term pressure. The state's debt position has moderated, with more disciplined debt issuance policies and cash-funding of capital projects. The pension liability calculations include 100% of the liability for state employees in the employees' retirement system (ERS), approximately 40% of the teachers' liability in ERS (the state's GASB 68 proportionate share), and 100% of the liability for the judicial retirement benefit trusts and the state police retirement benefits trust. The ERS liabilities encompass over 95% of the net pension liabilities attributed to the state by Fitch.

Comprehensive 2011 pension reforms significantly reduced the unfunded liability and lowered annual employer contributions. The 2011 reforms included limiting annual benefit cost of living adjustments (COLA) and introducing hybrid defined benefit and defined contribution plans. Litigation settlements regarding these and earlier pension changes preserved nearly all of the originally expected savings and removed a negative credit risk.

Expectation of Commitment to Moral Obligation

The state's willingness to continue paying debt service on bonds issued in 2010, which carry a moral obligation commitment from the state, and were issued on behalf of a now bankrupt video game company, are an important credit consideration for Fitch. Despite significant public debate about the state's commitment, all enacted budgets since the state commitment was called on included the full debt service appropriations. Actual expenditures will be net of any proceeds the state receives from related litigation.

Failure to fully appropriate for debt service on moral obligation bonds that were originally issued by a state agency would lead Fitch to reassess the state's commitment to bondholders and likely trigger negative rating action on the state's IDR, GO and appropriation-backed debt ratings. Consistent with Fitch's criteria for moral obligation pledges, Fitch does not anticipate moving those ratings below investment-grade as these moral obligation bonds were a project-specific commitment with limited direct state involvement.

Operating Performance

Rhode Island retains significant flexibility to address cyclical economic and revenue downturns, and has repeatedly demonstrated its commitment to maintaining a solid financial position. For details, see Scenario Analysis, page 2.

Conservative budget management, even in times of relative economic expansion, reflects Rhode Island's ongoing commitment to fiscal prudence. Since fiscal 2011, the state has ended every fiscal year with revenues ahead of, and expenditures below, the originally enacted budget.

Rhode Island has also taken steps to improve its fiscal flexibility. In fall of 2011, while revenues were in the midst of a second year of growth after recessionary declines, the state enacted the structural changes to its pension systems that materially reduced the liability and annual funding requirements. For fiscal year 2016, the state implemented legislative and executive changes that resulted in essentially flat growth in Medicaid spending after two years of nearly double digit percentage growth. The Medicaid spending growth rate is likely to increase in fiscal years 2017 and 2018, but Fitch anticipates it will remain below prior levels.

Current Developments

The state is currently engaged in legislative deliberations over the fiscal 2018 budget. The governor's executive proposal includes relatively modest spending and revenue-raising proposals including two years of free college tuition for residents, and a change in the sales tax to encourage more online sellers to remit tax revenues to the state. Medicaid remains a focus, with the state's ongoing Reinventing Medicaid initiative anticipated to yield another $40 million in savings through administrative adjustments and provider rate freezes and cuts, among other changes. Through fiscal 2016, the administration reported $90 million in recurring savings attributable to the initiative. By next year, the administration anticipates annual recurring savings could reach $140 million versus the pre-reform cost trajectory.

Rhode Island's multiyear budget outlook shows challenges, but structural budgetary protections mitigate associated risks. In February the governor forecast current services general revenue fund deficits of $151 million and $184 million in fiscal years 2019 and 2020, respectively, based on the enactment of the fiscal 2018 executive budget proposals. In addition to modest economic growth, a key driver of the forecast shortfalls is a reduction in lottery and gaming-related revenues due to the anticipated opening of gaming facilities in adjacent southeastern Massachusetts.

The constitutional funding formula that calculates contributions to the budget reserve account (capped at 5% of general revenues) limits annual appropriations to 97% of estimated revenues, providing an important fiscal cushion. With the rainy day fund at its statutory cap, excess revenues flow to a capital projects fund, thereby reducing debt issuance.

Revenue collections fiscal year-to-date through February indicate the state is modestly behind the most recent official forecast. Cash collections in the general fund are up 1% from the prior year. But the state's monthly revenue assessment report indicates adjusted general fund revenues are trailing the November 2016 forecast by just over 1%, or $27 million. Despite this shortfall, the state still anticipates ending the year with an operating surplus, due to both the 97% of revenues appropriations limit and ongoing expenditure controls.

The ratings above were solicited by, or on behalf of, the issuer, and therefore, Fitch has been compensated for the provision of the ratings.

MOODY'S
INVESTORS SERVICE

CREDIT OPINION
30 May 2017

New Issue

Rate this Research

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Rhode Island (State of)

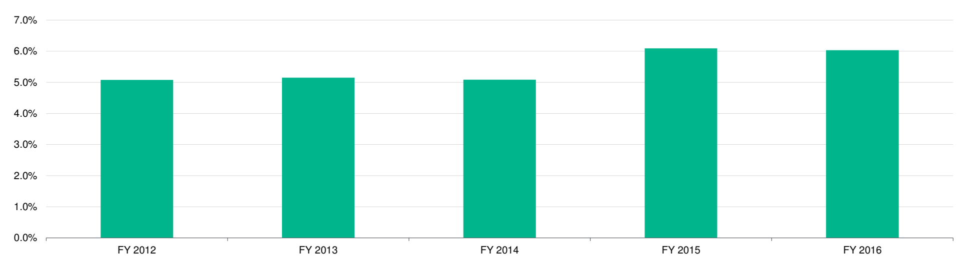
New Issue: Moody's Assigns Aa3 to Rhode Island's $49.4M Lease Certificates; Outlook Stable

Summary Rating Rationale

Moody's Investors Service has assigned a rating of Aa3 to approximately $49.4 million of Rhode Island's Lease Participation Certificates in the following estimated amounts: $9.2 million (Nursing Education Center Project - 2017 Series A); $6.9 million (URI Energy Conservation Project - 2017 Series B); $5.1 million (Energy Conservation Project - 2017 Refunding Series C); $20 million (School for the Deaf Project - 2017 Refunding Series D); and $8.2 million (Central Power Plant Project - 2017 Refunding Series E). The transaction is expected to occur in a negotiated sale on or about June 6.

The Aa3 rating is notched off the state's general obligation rating, reflecting the subject-to-appropriation nature of the state's pledge to pay debt service. Rhode Island's Aa2 rating incorporates the state's strong financial management practices, including multi-year financial planning, consensus revenue forecasting and consistent maintenance of reserves resulting in positive general fund balances; and its adequate liquidity. The rating also reflects an economy that has long lagged the nation's in tandem with weak demographics and high relative combined debt and pension liabilities.

Exhibit 1
Rhode Island Slowly Builds Available Balances
Available balances as % of operating revenues



Source: Rhode Island audited financial statements

Credit Strengths

- Unconditional obligation of the state to make lease rental payments subject only to annual appropriation
- Institutionalized governance practices such as semi-annual consensus revenue estimating conferences and out year budget planning
- Consistent funding of budget reserve leads to adequate rainy day fund balances
- Positive trends in liquidity management, eliminating need for short term borrowing in recent years

Credit Challenges

- Lease rental payments are subject to legislative appropriation
- Long-term economic underperformance with below-average long-term employment growth rates
- Above-average dependence on lottery and gaming revenues in saturated market
- Above average pension and debt liabilities even after significant reforms

Rating Outlook

The stable outlook reflects the state's success in shoring up its finances through maintenance of adequate available reserves, improved liquidity, stabilizing demographic and economic trends, and careful preparation for the impact on state revenues of gaming expansion in Massachusetts.

Factors that Could Lead to an Upgrade

- State rating upgrade

Factors that Could Lead to a Downgrade

- State rating downgrade

Key Indicators

Exhibit 2

Rhode Island	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Operating Fund Revenues (000s)	3,420,615	3,518,362	3,615,540	3,841,605	3,894,896
Balances as % of Operating Fund Revenues	5.1%	5.2%	5.1%	6.1%	6.0%
Net Tax-Supported Debt (000s)	2,189,339	2,170,484	2,088,715	1,961,450	2,250,938
Net Tax-Supported Debt/Personal Income	4.7%	4.5%	4.2%	3.7%	4.3%
Net Tax-Supported Debt/Personal Income 50 State Median	2.8%	2.6%	2.5%	2.5%	2.5%
ANPL/Own-Source Govt Funds Revenue	123.7%	175.2%	129.4%	120.6%	131.0%
ANPL/Own-Source Govt Funds Revenue Median	94.2%	91.8%	90.9%	84.9%	N/A
Total Non-Farm Employment Change (CY)	1.6%	-1.5%	-1.7%	-0.9%	-0.9%
Per Capita Income as a % of US (CY)	104.2%	104.1%	103.4%	103.9%	104.0%

Source: Moody's Investors Service; Rhode Island audited financial statements

Recent Developments

Recent developments are incorporated in the Detailed Rating Considerations.

Detailed Rating Considerations

Economy: Rhode Island Job Recovery Near Complete

Rhode Island's small and narrow economy has generally underperformed the nation as well as its New England neighbors for decades, as its manufacturing base eroded and the state has struggled to generate substitute sources of economic growth. In the most recent two years, the state's performance has reflected sustained growth: employment growth registered 0.9% in 2016 after growing slightly more than 1% in 2015, and the unemployment rate has fallen to 4.3% in April, compared to the national rate of 4.4%. While outperforming the weaker New England economies of Connecticut (A1 stable), Maine (Aa2 stable), and Vermont (Aaa stable), the state lagged Massachusetts (Aa1 stable) and New Hampshire (Aa1 stable) in the pace of job growth in 2016, a pattern continuing into the first few months of 2017. The state's 2016 job count fell just shy of its 2006 peak. The nation has regained more than 185% of lost jobs. The state has registered small but consistent population gains in recent years. Calendar 2012 was the first year population growth has been recorded for the state since 2004.

The state's total personal income growth has also lagged the US over the long term, although on a per capita basis, personal income in Rhode Island exceeds the nation ($51,576 vs $49,571 in 2016). The state's relatively high per capita personal income reflects its aging population, among other factors. From 2011 to 2016, total annual personal income growth averaged 3.2% compared to the nation's 4.3% pace.

Finances and Liquidity

Rhode Island maintained positive available fund balances (unassigned balances plus reserves) throughout the recent recession. Fund balances reached a low of 0.6% of revenues in 2009 but exceeded 6% in fiscal 2015 and 2016.

Rhode Island's constitution requires the state to appropriate less than projected revenues, using the balance to fund a budget reserve account (BRF), which we consider a credit strength for the state. This requirement was strengthened by a 2006 constitutional change increasing the BRF cap to 5% from 3% of revenues and lowering the state's appropriation cap to 97% from 98% of revenues. If the BRF is fully funded, excess revenues flow into a capital account (RICAP), the use of which is restricted to capital purposes. The BRF balance is projected to be fully funded at about $191 million as of June 30, 2017.

REVENUES DISAPPOINT IN FISCAL 2017

With softening revenue trends and certain expenses exceeding forecasts, the state expects to end the year with a $10.7 million surplus, down from the $78 million projection as of the governor's executive budget proposal. This is much less than the fiscal 2016 total ending general fund balance, which was $167.2 million after re-appropriations and deposits into the BRF. Moreover, revised revenue and spending trends result in a projected $131 million fiscal 2018 shortfall, compared to the very small surplus projected in the governor's proposed budget. The legislature is in session developing the budget for fiscal 2018.

The downward revenue estimates by the May Revenue Estimating Conference reduced fiscal 2017 roughly $60 million to $3.66 billion. This will swing this year's revenue expectations to a very small decline from fiscal 2016 levels. The revisions stem primarily from underperforming business taxes, although personal income and sales taxes were also revised downward. Downward revisions were carried into fiscal 2018.

LIQUIDITY

The state's liquidity position is on a generally positive trend. The state has not issued cash flow notes since 2012 and has no plans to do so in fiscal 2018. This contrasts with the state's history of regular borrowing for cash flow purposes: prior to 2013, the state issued tax anticipation notes in all but 6 of 23 years. As of the end of March, the state had about $170 million in available cash reserves, a slim but adequate margin.

Given that historically the need to issue cash notes was only relieved in years of robust economic growth (the late 1990s and the peak of the housing bubble), the recent liquidity improvement in a lackluster economy reflects the rebuilding of reserves and better management.

Debt and Pensions: Liabilities Higher Than State Medians

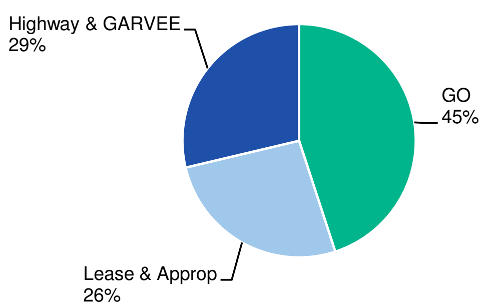
Rhode Island's debt burden has dropped considerably over the past 10 years, although the state's debt ratios remain above average. In our 2016 Debt Medians, the state's total tax-supported debt was $1.915 billion, ranking 15th highest as a percent of personal income (at 3.7%). While still notably higher than Moody's 2016 50-state median of 2.5%, Rhode Island's debt burden is well below the near-9% level the state experienced in the early 1990s. The long-run improvement in debt ratios reflects deliberate debt reduction policies, including increased pay-as-you-go capital funding through RICAP, as well as gains in personal income. In the short run, however, the state's debt metrics will reverse course reflecting significant capital borrowing for transportation initiatives during calendar year 2016, which added about $350 million (or roughly 18%) to the state's debt. For the year ending December 31, state debt outstanding, including the GARVEE borrowing, was about $2.25 billion, or 4.3% of personal income.

DEBT STRUCTURE

Of the state's outstanding net tax-supported debt, 45% is general obligation debt. About a quarter of the state's outstanding debt is secured by annual legislative appropriation and includes leases, certificates of participation, moral obligations, and a privately-placed bank loan of about $38 million. As of December 31, 2016 the state had nearly $650 million in highway bonds, including GARVEEs backed by federal highway grant payments and bonds backed by the state's motor fuels tax (see Exhibit 3).

Exhibit 3

GO Constitutes Less Than Half of State Debt Outstanding



Source: EMMA; Moody's Investor's Service

DEBT-RELATED DERIVATIVES

The state has no debt-related derivatives.

PENSIONS AND OPEB

In fiscal 2016, Rhode Island's adjusted net pension liability (ANPL) was $5.667 billion or 131% of own-source governmental revenues. This is an increase from 2015 when ANPL was 120.6% of revenues. Our adjustments to pension data include a market-based discount rate to value the liabilities, rather than the long-term assumed investment return used in reported figures.

In 2015, Rhode Island's ANPL as a share of revenues ranked 17th highest among the states. The state's position relative to others will improve over time because of extensive reforms enacted in 2011. The reforms created a hybrid defined benefit and defined contribution system, suspended automatic cost of living increases, and made other changes to eligibility rules. The changes significantly reduced the state's unfunded liability and its annual required contribution. Ensuing legal actions affecting the state have been settled, solidifying significant savings to the state from the reforms.

The pension liabilities for which the state has responsibility are those of the state employee portion of the Employees' Retirement System (ERS), two state police plans and three judicial plans. The state also supports 40% of the cost of the teacher's plan, which is administered by the ERS. In addition, the state makes payments to a defined contribution plan for which there is no liability because there are no guaranteed benefit payments. The reported net pension liability for the state's share of the defined benefit pension plans was $3.246 billion as of June 30, 2015.

The Employees Retirement System of Rhode Island (ERSRI) Board of Directors recently approved revised assumptions to be used in the 2017 actuarial valuation that resulted from the most recent actuarial experience study. The new assumptions include a lower investment rate of return, more moderate inflation, new mortality tables and other changes that are projected to increase the state's contributions to the system on a phased-in basis beginning with an additional $12 million in fiscal 2020 growing to $28 million by fiscal 2022.

OPEB REFORMS REDUCE LIABILITY

Rhode Island's unfunded liability for other post employment benefit costs (OPEB) is estimated at approximately $644 million as of June 30, 2015, which is the most recent published valuation. The unfunded liability is comprised primarily of $530 million for state employees and $56 million for state police. This represents a substantial reduction in OPEB liability since the June 30, 2011 valuation of $917 million, reflecting the impact of shifting Medicare-eligible retirees to Medicare exchanges and funding OPEB on an actuarial basis. The fiscal 2016 OPEB ARC payment for the state and other participating employers was a manageable $53 million, less than 2% of general fund revenues.

FIXED COSTS BOOSTED BY OPEB ARC PAYMENT

Rhode Island's fixed costs–consisting of debt service, pension contributions and OPEB payments–are higher than the 50-state median: 13.8% in fiscal 2015 vs. the median of 4.4%. While the state's high debt and pension liabilities contribute to the above-average fixed costs, the state's funding policies for both pensions and OPEB are more effective in amortizing unfunded liabilities than many other states. Rhode Island makes its full actuarially required contribution to retiree health plans while most other states typically fund OPEB on a pay-as-you go basis. In addition, the state's pension contributions are nearly sufficient to cover interest on the beginning of year net pension liability as well as the retirement benefits accrued by employees during the year, which would allow the state to “tread water” and prevent unfunded liabilities from growing. Many states' contributions are not near or above the tread water benchmark.

Governance

We consider Rhode Island's governance and financial management to be strong. The state follows a consensus revenue forecasting process, prepares multi-year spending and revenue forecasts, appropriates less than its expected revenue as a cushion, and is not subject to spending and revenue limitations or voter initiatives that can reduce flexibility.

Legal Security

The lease participation certificates are secured by lease rental payments from the state, pursuant to lease and sublease agreements. The projects are leased by the state to the Trustee, and subleased by the Trustee to the state. The state's obligation to pay rent under each lease is absolute and unconditional, but subject to annual legislative appropriation. Trust agreements, leases and subleases are substantially similar for all the series.

Non-appropriation, if uncured, would lead to termination of the lease. As is the case with other appropriation backed debt of the state, no reserve account has been established with regard to the certificates. Bondholders are not at significant risk in the event of delayed budget adoption, since the first debt service payment in each fiscal year is due October 1, well after the July 1 start date of the fiscal year.

The leases are renewable annually by the appropriation of funds sufficient to make lease payments due during the upcoming fiscal year. If there is a lapse of up to 60 days in appropriation, the sublease can be reinstated when funds are appropriated within the 60-day time frame.

In the event of default, the Trustee can accelerate payment on the outstanding certificates but payments are subject to appropriation by the state. The Trustee may also foreclose on the properties and sell or re-let them; however, due to their specialized nature it is unlikely that their value would be sufficient to compensate certificate holders for outstanding principal and interest.

Use of Proceeds

The proceeds of 2017 Series A and Series B Certificates will finance new projects associated with the University of Rhode Island, including a nursing education center (Series A) and various energy conservation projects (Series B). The proceeds of the 2017 Series C, D, and E certificates will refund outstanding certificates that financed previous projects related to various state facilities.

Obligor Profile

Rhode Island is a small state with a population of just 1.05 million, the 43rd largest. The economy is commensurately small, with total personal income of about $51.5 billion, also ranking 43rd nationally.

Methodology

The principal methodology used in this rating was Lease, Appropriation, Moral Obligation and Comparable Debt of US State and Local Governments published in July 2016. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

Ratings

Exhibit 4

Rhode Island (State of)

Issue	Rating
Lease Participation Certificates (Nursing Education Center Project - 2017 Series A)	Aa3
Rating Type	Underlying LT
Sale Amount	$9,200,000
Expected Sale Date	06/06/2017
Rating Description	Lease Rental: Appropriation
Lease Participation Certificates (URI Energy Conservation Project - 2017 Series B)	Aa3
Rating Type	Underlying LT
Sale Amount	$6,905,000
Expected Sale Date	06/06/2017
Rating Description	Lease Rental: Appropriation
Lease Participation Certificates (Energy Conservation Project - 2017 Refunding Series C)	Aa3
Rating Type	Underlying LT
Sale Amount	$5,115,000
Expected Sale Date	06/06/2017
Rating Description	Lease Rental: Appropriation
Lease Participation Certificates (School for the Deaf Project - 2017 Refunding Series D)	Aa3
Rating Type	Underlying LT
Sale Amount	$19,970,000
Expected Sale Date	06/06/2017
Rating Description	Lease Rental: Appropriation
Lease Participation Certificates (Central Power Plant - 2017 Refunding Series E)	Aa3
Rating Type	Underlying LT
Sale Amount	$8,240,000
Expected Sale Date	06/06/2017
Rating Description	Lease Rental: Appropriation

Source: Moody's Investors Service

REPORT NUMBER 1074121

MOODY'S INVESTORS SERVICE

MOODY'S INVESTORS SERVICE

CREDIT OPINION
20 April 2017

New Issue

Rate this Research

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Rhode Island (State of)

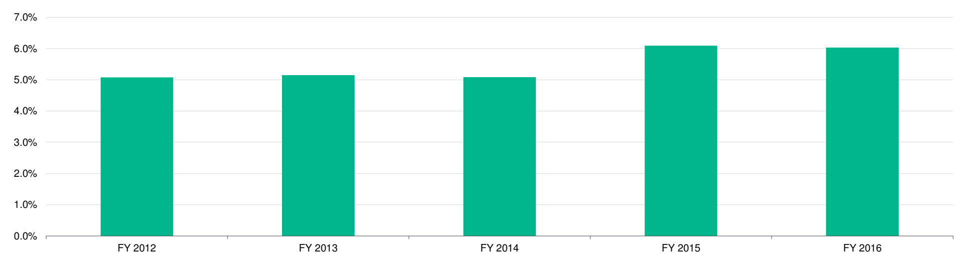
New Issue: Moody's Assigns Aa2 to Rhode Island's $159M GO Bonds; Outlook Stable

Summary Rating Rationale

Moody's Investors Service assigned a rating of Aa2 to $159 million of Rhode Island's General Obligations Bonds: $91 million Consolidated Capital Development Loan of 2017, Series A (Tax-Exempt) and $68 million Consolidated Capital Development Loan of 2017, Refunding Series B (Tax-Exempt). The bonds are expected to sell on April 25.

Rhode Island's Aa2 rating incorporates the state's strong financial management practices, including multi-year financial planning, consensus revenue forecasting and consistent maintenance of reserves resulting in positive general fund balances; and its improving liquidity. The rating also reflects an economy that has long lagged the nation's and is accompanied by weak demographics and high relative combined debt and pension liabilities.

Exhibit 1
Rhode Island Slowly Builds Available Balances
Available balances as % of operating revenues



Source: Rhode Island audited financial statements

Credit Strengths

- » Institutionalized governance practices such as semi-annual consensus revenue estimating conferences and out year budget planning
- » Consistent funding of budget reserve leads to adequate rainy day fund balances
- » Positive trends in liquidity management, eliminating need for short term borrowing in recent years

Credit Challenges

- » Long-term economic underperformance with below-average long-term employment growth rates
- » Above-average dependence on lottery and gaming revenues in saturated market
- » Above average pension and debt liabilities even after significant reforms

Rating Outlook

The stable outlook reflects the state's success in shoring up its finances through maintenance of adequate available reserves, improved liquidity, stabilizing demographic and economic trends; and careful preparation for the impact on state revenues of gaming expansion in Massachusetts.

Factors that Could Lead to an Upgrade

- » Further reducing overall liability levels
- » Sustained economic improvement at least in line with national average based on various metrics including diversification and job growth

Factors that Could Lead to a Downgrade

- » Deterioration of state's liquidity position accompanied by worsening reserve and balance sheet position
- » Return to budgeting practices that rely on significant nonrecurring resources

Key Indicators

Exhibit 2

Rhode Island	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Operating Fund Revenues (000s)	3,420,615	3,518,362	3,615,540	3,841,605	3,894,896
Balances as % of Operating Fund Revenues	5.1%	5.2%	5.1%	6.1%	6.0%
Net Tax-Supported Debt (000s)	2,189,339	2,170,484	2,094,732	1,915,306	2,250,938
Net Tax-Supported Debt/Personal Income	4.7%	4.5%	4.2%	3.7%	4.3%
Net Tax-Supported Debt/Personal Income 50 State Median	2.8%	2.6%	2.5%	2.5%	N/A
Debt/Own-Source Governmental Funds Revenue	57.7%	55.8%	52.6%	45.1%	52.0%
Debt/Own-Source Governmental Funds Revenue Median	37.4%	36.1%	35.8%	34.4%	N/A
ANPL/Own-Source Govt Funds Revenue	123.7%	175.2%	129.4%	120.6%	130.9%
ANPL/Own-Source Govt Funds Revenue Median	94.2%	91.8%	90.9%	84.9%	N/A
Total Non-Farm Employment Change (CY)	0.8%	1.4%	1.3%	1.3%	1.1%
Per Capita Income as a % of US (CY)	104.2%	104.1%	103.4%	103.9%	107.0%

Source: Moody's Investors Service; Rhode Island audited financial statements

Recent Developments

Recent developments are incorporated in the Detailed Rating Considerations.

Detailed Rating Considerations

Economy: Rhode Island Job Recovery Near Complete

Rhode Island's small and narrow economy has generally underperformed the nation as well as its New England neighbors for decades, as its manufacturing base eroded and the state has struggled to generate substitute sources of economic growth. In the most recent two years, the state's performance has reflected sustained growth: employment growth registered 1.1% in 2016 after growing 1.4% in 2015, and the unemployment rate has fallen to 4.5%, compared to the national rate of 4.7%. While outperforming the weaker New England economies of Connecticut (Aa3 negative) and Vermont (Aaa stable), the state lagged Massachusetts (Aa1 stable), New Hampshire (Aa1 stable), and Maine (Aa2 stable) in the pace of job growth in 2016. The state's 2016 job count fell just shy of its 2006 peak having regained about 98% of the jobs it lost during the recession. The nation has regained more than 185% of lost jobs. The state has registered small but consistent population gains in recent years. Calendar 2012 was the first year population growth has been recorded for the state since 2004.

The state's total personal income growth has also lagged the US over the long term, although on a per capita basis, personal income in Rhode Island exceeds the nation ($51,576 vs $49,571 in 2016). The state's relatively high per capita personal income reflects its aging population, among other factors. From 2011 to 2016, total annual personal income growth averaged 3.2% compared to the nation's 4.3% pace.

The November Revenue Estimating Conference forecast projects employment growth of 0.9% in fiscal 2017 and 0.5% in fiscal 2018, with growth tapering off thereafter. The unemployment rate is projected to decline gradually, falling from an average of 5.6% in fiscal 2017 to 5.3% by 2019. Given the current low unemployment rate, this is a conservative forecast. Personal income growth, however, picks up from 3% projected for fiscal 2017 to 4% in fiscal 2018 and 4.3% in fiscal 2019 and 2020.

Finances and Liquidity

Rhode Island maintained positive available fund balances (unassigned balances plus reserves) throughout the recent recession. Fund balances reached a low of 0.6% of revenues in 2009 but exceeded 6% in fiscal 2015 and 2016.

Rhode Island's constitution requires the state to appropriate less than projected revenues, using the balance to fund a budget reserve account (BRF), which we consider a credit strength for the state. This requirement was strengthened by a 2006 constitutional change increasing the BRF cap to 5% from 3% of revenues and lowering the state's appropriation cap to 97% from 98% of revenues. If the BRF is fully funded, excess revenues flow into a capital account (RICAP). The constitutional change also restricted the use of this fund to capital purposes. The state reports that based on the proposed budget the June 30, 2017 BRF balance is projected to be $194 million.

CONSERVATIVE FORECASTING, SPENDING CONTROL, YIELD SURPLUSES

On a budgetary basis, the state's fiscal 2016 total ending general fund balance was $167.2 million after re-appropriations and deposits into the BRF. As in recent years, the surplus was greater than had been anticipated in the enacted budget. The state's recent revenue forecasts have been conservative, resulting in cash surpluses that Rhode Island has used to help balance the subsequent year's budget. The state's projected fiscal 2017 ending balance is $78 million.

Year-to-date, revenues have underperformed estimates agreed upon at the November Revenue Estimating Conference (REC), with total revenues through February lagging projections by 1.3%. Weakness in personal income tax and sales tax collections account for most of the shortfall, although intrayear timing differences may explain some of the trend. Lottery revenues, which have been a weak spot as neighboring Massachusetts adds gaming facilities, are roughly on par with projections. The projected surplus is more than adequate to address any year-end shortfall.

Fiscal 2017 spending is projected at $3.75 billion, growth of about 4.9% from fiscal 2016. The governor's fiscal 2018 recommended budget would increase spending 1.1% and result in an ending balance of about $640 thousand. This slim projected margin is consistent with initial ending balance projections in recent years, while actual ending surpluses have been significantly greater than the enacted budget projection. The state's outyear estimates project manageable operating deficits of less than 5% of projected revenues.

PROPOSED BUDGET INCREASES EDUCATION FUNDING

Following a focus on new transportation and tax initiatives in last year's budget, the governor's proposed fiscal 2018 budget emphasizes education spending. The proposed budget continues to fund ramped-up K-12 education spending and offers a plan to provide free tuition to community college and reduced tuition to qualifying students at the state's public 4-year colleges. The budget also continues to channel funds to transportation programs initiated in the last two years. Savings from Medicaid reforms have made room for other spending priorities, which focus on an economic development agenda, as the state's spending on the program is projected to stay relatively flat in fiscal 2018.

Revenue changes include requiring enhanced reporting by remote sellers in an effort to collect more sales and use tax from internet transactions, which is projected to yield about $35 million in fiscal 2018. Other revenue proposals include $13 million in fund sweeps from quasi-public corporations, nearly $9 million from increasing the cigarette excise tax, and miscellaneous tax reductions of about $8 million.

LIQUIDITY

The state's liquidity position is on a generally positive trend. The state has not issued cash flow notes since 2012 and has no plans to do so in fiscal 2017 or fiscal 2018. This contrasts with the state's history of regular borrowing for cash flow purposes: prior to 2013, the state issued tax anticipation notes in all but 6 of 23 years.

Given that historically the need to issue cash notes was only relieved in years of robust economic growth (the late 1990s and the peak of the housing bubble), the recent liquidity improvement in a lackluster economy reflects the rebuilding of reserves and better management.

Debt and Pensions: Liabilities Higher Than State Medians

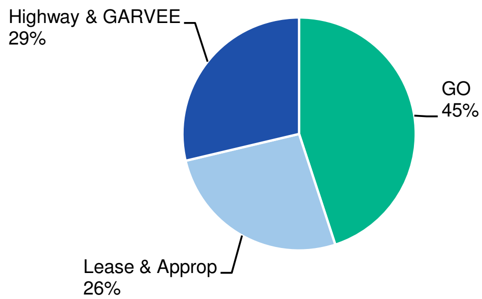
Rhode Island's debt burden has dropped considerably over the past 10 years, although the state's debt ratios remain above average. In our 2016 Debt Medians, the state's total tax-supported debt was $1.915 billion, ranking 15th highest as a percent of personal income (at 3.7%). While still notably higher than Moody's 2016 50-state median of 2.5%, Rhode Island's debt burden is well below the near-9% level the state experienced in the early 1990s. The long-run improvement in debt ratios reflects deliberate debt reduction policies, including increased pay-as-you-go capital funding through RICAP, as well as gains in personal income. In the short run, however, the state's debt metrics will reverse course reflecting significant capital borrowing for transportation initiatives during calendar year 2016, which added about $350 million (or roughly 18%) to the state's debt. For the year ending December 31, state debt outstanding, including the GARVEE borrowing, was about $2.25 billion, or 4.3% of personal income.

DEBT STRUCTURE

Of the state's outstanding net tax-supported debt, 45% is general obligation debt. About a quarter of the state's outstanding debt is secured by annual legislative appropriation and includes leases, certificates of participation, moral obligations, and a privately-placed bank loan of about $38 million. As of December 31, 2016 the state had nearly $650 million in highway bonds, including GARVEEs backed by federal highway grant payments and bonds backed by the state's motor fuels tax (see Exhibit 3).

Exhibit 3

GO Constitutes Less Than Half of State Debt Outstanding



Source: EMMA; Moody's Investor's Service

DEBT-RELATED DERIVATIVES

The state has no debt-related derivatives.

PENSIONS AND OPEB

In fiscal 2016, Rhode Island's adjusted net pension liability (ANPL) was $5.667 billion or 142% of own-source governmental revenues. This is an increase from 2015 when ANPL was 131% of revenues. Our adjustments to pension data include a market-based discount rate to value the liabilities, rather than the long-term assumed investment return used in reported figures.

In 2015, Rhode Island's ANPL as a share of revenues ranked 17th highest among the states. The state's position relative to others will improve over time because of extensive reforms enacted in 2011. The reforms created a hybrid defined benefit and defined contribution system, suspended automatic cost of living increases, and made other changes to eligibility rules. The changes significantly reduced the state's unfunded liability and its annual required contribution. Ensuing legal actions affecting the state have been settled, solidifying significant savings to the state from the reforms.

The pension liabilities for which the state has responsibility are those of the state employee portion of the Employees' Retirement System (ERS), two state police plans and three judicial plans. The state also supports 40% of the cost of the teacher's plan, which is administered by the ERS. In addition, the state makes payments to a defined contribution plan for which there is no liability because there are no guaranteed benefit payments. The reported net pension liability for the state's share of the defined benefit pension plans was $3.246 billion as of June 30, 2015.

OPEB REFORMS REDUCE LIABILITY

Rhode Island's unfunded liability for other post employment benefit costs (OPEB) is estimated at approximately $644 million as of June 30, 2015, which is the most recent published valuation. The unfunded liability is comprised primarily of $530 million for state employees and $56 million for state police. This represents a substantial reduction in OPEB liability since the June 30, 2011 valuation of $917 million, reflecting the impact of shifting Medicare-eligible retirees to Medicare exchanges and funding OPEB on an actuarial basis. The fiscal 2016 OPEB ARC payment for the state and other participating employers was a manageable $53 million, less than 2% of general fund revenues.

FIXED COSTS BOOSTED BY OPEB ARC PAYMENT

Rhode Island's fixed costs–consisting of debt service, pension contributions and OPEB payments–are higher than the 50-state median: 13.8% in fiscal 2015 vs. the median of 4.4%. While the state's high debt and pension liabilities contribute to the above-average fixed costs, the state's funding policies for both pensions and OPEB are more effective in amortizing unfunded liabilities than many other states. Rhode Island makes its full actuarially required contribution to retiree health plans while most other states typically fund OPEB on a pay-as-you go basis. In addition, the state's pension contributions are nearly sufficient to cover interest on the beginning of year net pension liability as well as the retirement benefits accrued by employees during the year, which would allow the state to "tread water" and prevent unfunded liabilities from growing. Many states' contributions are not near or above the tread water benchmark.

Governance

We consider Rhode Island's governance and financial management to be strong. The state follows a consensus revenue forecasting process, prepares multi-year spending and revenue forecasts, appropriates less than its expected revenue as a cushion, and is not subject to spending and revenue limitations or voter initiatives that can reduce flexibility.

Legal Security

The bonds are a general obligation of the state, backed by a pledge of its full faith and credit.

Use of Proceeds

The Series A bonds will be used to finance various capital purposes of the state. The proceeds from Series B will be used to refund certain outstanding bonds of the state.

Obligor Profile

Rhode Island is a small state with a population of just 1.05 million, the 43rd largest. The economy is commensurately small, with total personal income of about $51.5 billion, also ranking 43rd nationally.

Methodology

The principal methodology used in this rating was US States Rating Methodology published in April 2013. Please see the Ratings Methodologies page on www.moodys.com for a copy of this methodology.

Ratings

Exhibit 4

Rhode Island (State of)

Issue	Rating
Consolidated Capital Development Loan of 2017, Series A (Tax-Exempt)	Aa2
Rating Type	Underlying LT
Sale Amount	$91,000,000
Expected Sale Date	04/25/2017
Rating Description	General Obligation
Consolidated Capital Development Loan of 2017, Refunding Series B (Tax-Exempt)	Aa2
Rating Type	Underlying LT
Sale Amount	$67,945,000
Expected Sale Date	04/25/2017
Rating Description	General Obligation

Source: Moody's Investors Service

REPORT NUMBER 1068976

Moody's
INVESTORS SERVICE

S&P Global Ratings

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Summary:

Rhode Island & Providence Plantations; Appropriations

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Summary:

Rhode Island & Providence Plantations; Appropriations

Credit Profile		
US$20.3 mil lse part certs rfdg (School For The Deaf Proj) ser 2017D dtd 06/21/2017 due 04/01/2029		
Long Term Rating	AA-/Stable	New
US$9.21 mil lse part certs (Nursing Education Center Proj) ser 2017A dtd 06/21/2017 due 06/01/2027		
Long Term Rating	AA-/Stable	New
US$8.235 mil lse part certs rfdg (Central Power Plant Proj) ser 2017E dtd 07/06/2017 due 10/01/2020		
Long Term Rating	AA-/Stable	New
US$6.92 mil lse part certs (Uri Energy Conservation Proj) ser 2017B dtd 06/21/2017 due 06/01/2032		
Long Term Rating	AA-/Stable	New
US$5.145 mil lse part certs rfdg (Energy Conservation Proj) ser 2017C dtd 06/21/2017 due 05/01/2023		
Long Term Rating	AA-/Stable	New

Rationale

S&P Global Ratings assigned its 'AA-' long-term rating to Rhode Island's series 2017A and 2017B lease participation certificates and refunding series 2017C, 2017D, and 2017E lease participation certificates. The outlook is stable.

The 'AA-' rating reflects our assessment of:

- The general creditworthiness of Rhode Island as lessee;
- The contractual obligation's annual appropriation risk; and
- The state's demonstrated commitment to repaying its appropriations-backed obligations.

Proceeds of the 2017A certificates will be used to finance various equipment, furnishings, and related improvements at the Nursing Education Center in Providence. Proceeds of 2017B certificates will be used to acquire certain energy conservation equipment systems and make related improvements to energy conservation infrastructure at the University of Rhode Island.

Together with other available funds, the 2017C certificates (Energy Conservation Project) will be used to current refund the series 2007B certificates; the 2017D certificates (School for the Deaf Project) will be used to advance refund the series 2009C certificates maturing after April 1, 2019, and to pay maturing principal of and interest on the series 2009C certificates; and the 2017E certificates (Central Power Plant Project) will be used to current refund the series 2007D certificates.

The 2017 certificates are being issued pursuant to a Declaration of Trust, a lease and a sublease by and between Bank of NY Mellon Trust Co. N.A., as trustee, and the state, acting through its department of administration, as lessee. The state is entering into a lease-leaseback transaction in which it will lease the facilities to the Bank of NY Mellon Trust, who will, in turn, lease the facilities back to the state under a sublease. The series 2017A lease expires on June 1, 2027. The series 2017B lease expires on June 1, 2032. The series 2017C lease expires on May 1, 2023. The series 2017D lease expires on June 1, 2029, with a right to renew for an additional period ending April 1, 2029. The series 2017E lease expires on Oct. 1, 2020.

For each of the series, the trust estate securing the bonds is made up of all right, title, and interest in the lease, the sublease, and any funds in deposit in the trust fund. The state's department of administration will use its best efforts to appropriate funds for the sublease. Under the sublease, the state's basic rent payments are equal to or greater than the debt service payments on the bonds. The state's obligation to make payments under the sublease agreement is subject to, and dependent on, annual appropriations being made by the state. Once the appropriation has been made, the payment obligation is absolute and unconditional without any right of setoff or counterclaim. Termination of the lease agreement may not take place unless all bonds issued under that lease have been paid or otherwise defeased in accordance with their terms, or there is an event of non-appropriation. Sublease payments are due to the trustee five days before debt service on the bonds. Debt service payment dates are June 1 and Dec. 1 for the 2017A and 2017B certificates, May 1 and Nov. 1 for the 2017C certificates, and April 1 and Oct. 1 for the 2017D and 2017E certificates. There is no debt service reserve, but, in our view, there is sufficient time between the beginning of the fiscal year and the first payment due date to mitigate any late budget adoption risk.

May 2017 Revenue Estimating Conference

The Revenue Estimating Conference (REC) for May has revised fiscal 2017 projections down by $60.1 million and fiscal 2018 revenues down by $39.5 million. Based solely on the REC and the caseload estimating conference, the projected 2017 year-end free surplus declined from $78 million to $10.7 million (0.3% of expenditures).

The revenue declines are offset by a reduction in transfers to the rainy day fund, but also adjusted to account for certain revenues that were included in the governor's recommended budget. The largest of these relates to the remote seller proposal. Amazon has already begun collecting sales tax in the state; an estimated $15 million that was assumed in the governor's budget is accounted for in the May projections.

The revisions leaves the governor's proposed fiscal 2018 budget with a revised projected ending balance in deficit of $131.1 million (negative 3.5% of expenditures) form a projected surplus of $639,735. The state has a legal requirement to adopt a balanced budget. While the proposed budget is out of balance, there are no current plans for the governor to submit an official revised budget to address this new shortfall and deficit mitigation will likely result from budget negotiations.

The state's budget reserve and cash stabilization account or rainy day fund has increased annually and should remain funded at the constitutional level at 5% of revenues. The 2017 enacted budget projected an ending budget reserve fund balance of $189.9 million. As of the May REC, the ending balance is expected to be $191.4 million. Although this funding is available to help resolve the deficit, it has traditionally only been used in a current year when there was little to no time to resolve a revenue shortfall. It is unlikely the state would use the reserve to address the new shortfall. In our opinion, the state maintains adequate flexibility to address the budgetary shortfall through normal budget negotiations.

The state's rainy day fund should still remain fully funded (at 5% pursuant to a 2006 voter-approved constitutional amendment), but the required amount will be slightly lower due to the lower revenues (closer to $191.4 million).

(For more information on the state's creditworthiness, see the full analysis on Rhode Island, published April 21, 2017, on RatingsDirect.)

Outlook

The stable outlook reflects our view of Rhode Island's strong governmental framework and financial management procedures, which have produced budget adjustments to reduce large out-year budget gaps. In our opinion, the state has mechanisms in place and few limits that should allow it to enact revenue and expenditure amendments to maintain adequate budgetary performance.

Although we don't expect to change the rating within the next two years, significant improvement in the state's economy, coupled with improved pension funding, could translate into a positive rating action.

However, weak pension funding levels and an economy that significantly lags that of the nation will make future budgetary adjustments more difficult. These pressures will only be exacerbated should the country enter into a near-term economic slowdown. If pressures are left unaddressed, it could lead to deteriorating credit quality and a lower rating.

S&P Global
Ratings

RatingsDirect®

Rhode Island & Providence Plantations; Appropriations; General Obligation; Moral Obligation

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Rhode Island & Providence Plantations; Appropriations; General Obligation; Moral Obligation

Credit Profile		
US$91.0 mil consolidated cap development loan ser 2017A due 05/01/2037		
Long Term Rating	AA/Stable	New
US$67.945 mil consolidated cap development loan rfdg ser 2017B due 06/30/2030		
Long Term Rating	AA/Stable	New
Rhode Island & Providence Plantations GO		
Long Term Rating	AA/Stable	Affirmed

Rationale

S&P Global Ratings has assigned its 'AA' rating to Rhode Island & Providence Plantations' 2017A consolidated capital development loan general obligation (GO) bonds and 2017B capital development refunding GO bonds. At the same time, we affirmed our 'AA' rating on the state's GO bonds, our 'AA-' rating on its appropriation debt, and our 'A' rating on its moral obligation-backed bonds.

S&P Global Ratings also affirmed its 'BBB' rating on Rhode Island's 38 Studios bonds, also backed by the state's moral obligation. The lower rating on the 38 Studios debt reflects our view that there is a higher degree of risk relating to the repayment of these bonds, relative to the state's other outstanding debt. The outlook is stable.

The 'AA' rating on the series 2017 bonds reflects our view of Rhode Island's:

- Good incomes on par with the nation, with 2016 state per capita income of $51,576 and personal per capita income at 104% of that of the nation;
- Economic performance, which despite recent improvement, continues to lag the nation and is expected to continue to do so;
- Strong financial management and fully funded general fund reserves in recent fiscal years;
- Continued projected budget gaps for fiscal years 2019 through 2022, albeit declining, while compared to fiscal 2017 projections, the fiscal 2018 budget shrinks the projected fiscal 2019 deficit by 37%; and
- Significantly underfunded pension system, even after recently adopted reforms.

The series 2017A and B bonds are full faith and credit GOs of the state. The 2017A bonds are being issued for various capital projects, including higher education facilities, clean water initiatives, a cultural arts program, and a veterans' home. The 2017B refunding bonds are being issued for net present value savings estimated at $3.65 million by refunding series 2010B and 2011A bonds.

The state ended fiscal 2016 with a surplus of $167.8 million ($44.5 million better than expected) due to general revenue receipts $28.6 million (0.79%) more than estimated and spending $24.7 million (0.69%) less than budgeted. The budget reserve and cash stabilization account was fully funded at $191.6 million.

The fiscal 2017 revised budget, as recommended by the governor to the General Assembly on Jan. 19, 2017, increases general revenue expenditures by $16.7 million, including reappropriations of $7.8 million for total spending of $3.7 billion. The revised budget includes additional funding for increased Medicaid caseload projections of $4.7 million as estimated at the November 2016 Caseload Estimating Conference; additional funding for increased operational costs at the Departments of Children, Youth and Families; Corrections; and Behavioral Healthcare, Developmental Disabilities and Hospitals. In addition, fiscal 2017 revenues are estimated to exceed the enacted budget by $44.8 million (1.2%). Medicaid is projected to have increased costs of $88.4 million, comprised of $78.8 million in federal funds and $9.6 million in general revenue.

Based on year-to-date February revenues for fiscal 2017, some areas are not meeting estimates and will likely be revised down at the next Revenue Estimating Conference in May. The largest component of the variances are due to a $10.8 million (-1.3%) difference in personal income tax estimates and $9.2 million (-1.4%) difference in sales and use tax estimates. In addition, the state is reporting that it is ahead on personal income refunds and adjustments compared to last year, also affecting revenue estimates. The reduction in sales and use tax largely reflects some major retail closings and online sales. However, the state notes its will be able to recapture most of online sales with its remote sellers sales and use tax proposed in the 2018 budget. Given the importance of March and April income tax revenues, the negative trend in personal income tax may mediate, but it is too early to tell.

The governor's proposed 2018 budget closes an estimated deficit of $66.2 million, down from the projected fiscal 2018 deficit of $184.5 million. There is a net increase in expenditures over the revised 2017 budget of $92.3 million, primarily in the areas of K-12 education ($45.7 million), higher education ($15.8 million; net of debt service), and debt service ($33.6 million). This is offset by reductions in the areas of the Office of Health and Human Services ($6.7 million), children, youth and families ($6.4 million), and commerce ($3.9 million). The state is fully funding its moral obligation to 38 Studios' debt service from settlement proceeds and is contributing 100% of is actuarially determined contribution (ADC) to its pension and other postemployment benefit (OPEB) plans.

A significant inclusion in the budget is higher education spending (RI Promise Scholarship), which, if enacted, would cost $10 million in the fiscal year to cover the cost of tuition and fees for students who attend the Community College of Rhode Island for two years, or cover tuition and fees for the last two years of college for those students who attend the state's four-year public institutions. The projected annual cost to the state will be about $30 million by final year of phase-in (fiscal 2021). In addition, there is $40 million in additional K-12 state funding (the final year of seven).

Regarding revenue, there are no broad-based tax increases for the third consecutive year. However, through proposed enhanced reporting requirements for remote sellers that would increase online sales tax remittance, the state is estimating an additional $34.7 million in revenue. The budget does rely on nonrecurring revenues of $13.3 million in transfer of excess reserves from various public agencies and $78 million of free surplus. Compared to the governor's fiscal 2017 supplemental budget, the proposed 2018 net increase in total general revenues is $52.2 million (1.4%).

The state's updated five-year forecasts show significant improvement, but budget gaps persist. Fiscal 2018 shows a doubling of general revenue growth when compared to 2017 from 1.5% to 3%. Compared to fiscal 2017 projections, the fiscal 2018 budget shrinks the projected fiscal 2019 deficit by 37% to $148 million and the fiscal 2021 gap decreases by 42%. The revenue assumptions include less of an effect from the opening of Massachusetts-based gaming facilities and casino expansion in Tiverton. It also includes personal income growth at an average annual rate of 4.2% fiscal years 2018-2022.

Seven years into recovery, Rhode Island's economic indicators still lag the nation's recovery. Although its economy has improved, sizable out-year gaps remain. Rhode Island is betting on an improved economic and business environment to jumpstart the economy and to help close its long-term budgetary gaps. Rhode Island payrolls are projected to expand 0.5% per year on average between 2016 and 2021, which will rank as the 48th fastest in the U.S. Three of New England's six states have yet to fully recover from the Great Recession: Rhode Island, Maine, and Connecticut. Rhode Island is close to surpassing its pre-recession peak (late 2017), while Maine and Connecticut have much further to go before achieving full recovery. Rhode Island's December 2016 unemployment rate was 4.9%, somewhat higher than the nation's 4.7% rate. Between 2016 and 2021, payrolls will expand 0.5% per year on average and will rank as the third slowest in the nation, according to IHS Markit's projections.

Rhode Island also projects real personal income and real gross state product (GSP) growth to rank 37th (2.4%) and 38th (1.5%) over the next year, respectively.

In our opinion, the pension reform and resulting settlement are significant for the state's overall credit profile. The Rhode Island General Assembly passed the Rhode Island Retirement Security Act of 2011 (RIRSA) on Nov. 17, 2011, and the governor signed it on Nov. 18. The act made significant changes to substantially all of the plans the Employees' Retirement System (ERS) administers. The legislation underwent legal challenges, but most have subsequently been settled. The pension settlement, effective July 1, 2015, through the enactment of the new RIRSA, allows the 58,901 affected employees to receive increases in their benefits, while at the same time, preserving approximately 90% of the savings anticipated from the pension reforms. There is one pending case initiated by the Rhode Island State Trooper's Association and Rhode Island Troopers Association that has not been settled. While that lawsuit also only challenges the constitutionality of RIRSA (prior to the amendments), the benefits at issue are ones paid from and pertaining to SPRBT rather than benefits paid from any of the other plans.

Based on the analytic factors we evaluate for states, on a scale on which '1' is the strongest and '4' is the weakest, we have assigned Rhode Island a composite score of '1.9'. The change in the state's composite score is due to weakening of its debt and liability profile following application of our updated methodology for assessing pension liabilities.

Outlook

The stable outlook reflects our view of Rhode Island's strong governmental framework and financial management procedures, which have produced budget adjustments to reduce large out-year budget gaps. In our opinion, the state has mechanisms in place and few limits that should allow it to enact revenue and expenditure amendments to maintain adequate budgetary performance.

Although we don't expect to change the rating within the next two years, significant improvement in the state's economy, coupled with improved pension funding, could translate into a positive rating action.

However, weak pension funding levels and an economy that significantly lags that of the nation will make future budgetary adjustments more difficult. These pressures will only be augmented should the country enter into a near-term economic slowdown. If pressures are left unaddressed, it could lead to deteriorating credit quality and a lower rating.

Government Framework

In our view, the state has significant flexibility to increase the rate and base of its major revenues and also to decrease its expenditures. It can raise its income and sales tax rates and base with a simple majority vote of the legislature and without voter approval. The changes made to the state's tax structure in fiscal 2016 are a prime example of this. In our view, Rhode Island also has flexibility to reduce its major expenditures to local governments and in recent years has made significant midyear decreases in such funding, demonstrating a willingness to maintain its own financial position by cutting expenditures. Officials also have the ability to delay disbursements to later in a fiscal year, which provides some cash flow flexibility.

Rhode Island has a requirement that the governor and legislature prepare and enact balanced budgets, although this might include the use of nonrecurring free surplus and fund balance. There is no voter initiative process in the state. Debt service can be paid without an appropriation budget, but does not have a first claim on revenues.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a score of '1.2' to Rhode Island's government framework.

Financial Management

S&P Global Ratings considers Rhode Island's financial management practices "strong" under its Financial Management Assessment methodology, indicating practices are strong, well embedded, and likely sustainable. The state carries out revenue estimating conferences several times a year and uses the results as the basis for setting its budget. Once it has adopted the budget, the state monitors its revenues closely. Monthly monitoring and reporting of key revenues allow Rhode Island to make midyear financial adjustments if necessary to maintain balance. Furthermore, the state's use of a five-year financial plan, which it updates annually with the adopted budget, provides the basis for future fiscal decisions and recognizes out-year gaps. Rhode Island produces a five-year capital plan that outlines expected capital requirements and identifies funding sources. The state's investment management practices are conservative and actively adhered to. Although it does not have a formal debt-management policy, Rhode Island, through the Public Finance Management Board, monitors its debt issuance to ensure that debt levels stay within desired guidelines based on defined measurements, including debt as a percent of personal income. The board recently released a new debt affordability study, the first conducted since 1999. The state is funding its budget reserve and cash stabilization account at 5% pursuant to a 2006 voter-approved constitutional amendment.

We consider the state's budget management good, featuring a consensus revenue and caseload forecasting committee that meets at least twice a year and can be convened at the request of any member. The forecasting committee consists of the chief fiscal staff of the offices of the executive branch and the two houses of the legislature. Rhode Island's structural budget performance has been below average in recent years, in our opinion, and large out-year gaps remain. We consider the state's service levels somewhat flexible, and the state has made cuts in its local aid in recent years to balance the budget.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a score of '1.5' to Rhode Island's financial management.

Budgetary Performance

In November 2006, voters approved changes to the level and use of some of the state's reserve funds. Through fiscal 2008, the level of the budget reserve and stabilization account was set at 3% of resources. The account is funded by limiting appropriations to 98% of estimated revenues. Once the account is fully funded, excess contribution goes into the Rhode Island Capital Fund annually. The constitutional changes increased the level of the reserve account to 5% of resources, to be funded by limiting appropriations to 97% of estimated revenues. In our view, the state's liquidity needs are predictable, although the cash flow needs have required tax anticipation note (TANs) issuance in previous years. The notes have been issued around July and repaid at the end of the fiscal year. Rhode Island issued $350 million of TANs for fiscal 2011 and $200 million in fiscal 2012, but has not issued TANs since. The state does not intend to issue TANs in the future nor have they been included in the 2017 or 2018 budgets.

We consider Rhode Island's general revenue mix a strength, with no significant concentration in a single revenue source. The Revenue Conference held on Nov. 10 adopted new revenue estimates for fiscal 2017 and first official estimates for fiscal 2018. In the revised fiscal 2017 revenue estimates, personal income tax accounts for 34.1% of general revenue, sales tax 27.3%, and corporate income tax 4.5% and a similar revenue mix is assumed for fiscal 2018. At the time, fiscal 2017 revenues are expected to exceed the enacted amount by $44.8 million, or 1.2%. The state's revenue forecasts are done at least semiannually by a consensus committee of the chief finance officials from the offices of the governor, House of Representatives, and Senate. The forecasting committees can be convened at any other time at the request of one of the members. For fiscal 2016, the state outperformed its forecast, to end the year with $167.2 million in free surplus ($44.5 million greater than expected). The state continues to project out-year deficits, albeit declining annually. Compared to fiscal 2017 projections, the fiscal 2018 budget shrinks the projected fiscal 2019 deficit by 37% percent from $234 million to $148 million and the fiscal 2021 deficit is reduced by 42%. This reflects moderate economic growth, the opening of the Tiverton Casino and delays in Massachusetts gaming, and the addition of a remote seller sales tax. The latter is projected to result in an increase of $34.7 million in 2018 sales and use tax revenue, with further average annual growth likely over the next five years, revised from 1.9% to 2.3% as online transactions increase.

The state's budget reserve and cash stabilization account or rainy day fund has increased annually. Audited fiscal 2016 results show a balance of $191.6 million, increasing to $194.4 million in the revised 2017 budget, and the proposed 2018 budget with an ending balance of $195.5 million, a level consistent at slightly above 5% of expenditures.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a '1.8' score to Rhode Island's budgetary performance.

Economy

In our opinion, Rhode Island's economy is somewhat weak compared with that of many other states.

After a period of population declines from 2005 to 2011, Rhode Island returned to positive population growth in 2012. However, it trails the national average, with the U.S. registering a compound annual growth rate of 0.80% compared with Rhode Island at negative 0.06% in the past 10 years. Looking out over the next decade, IHS Markit forecasts population and labor-force growth to be among the slowest in the nation over the next decade. As of 2014, 29.2% of residents were aged 55 or older and 15.7% were at least age 65 compared with 27.1% and 14.5% at the national level, respectively. The state will require steady growth in the 20-29 year-old cohort. This juxtaposition could lead to growth challenges, considering the state's lack of high-skilled, high-wage jobs and proximity to a heavy knowledge-based economy in Massachusetts.

The state has experienced payroll growth recently, but at a time when the nation overall has recovered the jobs lost to the recession, but this is likely to decelerate based on IHS Markit projections. Rhode Island payrolls are projected to expand 0.5% per year on average between 2016 and 2021, ranking it as the 48th fastest in the U.S. Three of New England's six states have yet to fully recover from the Great Recession: Rhode Island, Maine, and Connecticut. Rhode Island is close to surpassing its pre-recession peak (late 2017), while Maine and Connecticut have much further to go before achieving full recovery. For 2015, the unemployment rate averaged 6.0%, down from 7.7% in 2014 and 9.3% in 2013 after peaking at 11.7% in 2010. Rhode Island's December 2016 unemployment rate was 4.9%, somewhat higher than the nation's 4.7% rate. Between 2016 and 2021, payrolls will expand 0.5% per year on average and will rank as the third slowest in the nation, according to IHS Markit's projections. The firm also projects the largest contributions to the state's employment gains will likely come from the professional and business services sector. However, a majority of these positions will be lower skilled and lower wage. The health care sector is expected to create jobs in the near term and will likely remain a stable source of jobs. Rhode Island's manufacturing sector was hit hard in the recession and further declines of 0.3% annually over the next five years are projected. Over the next decade, population labor growth will continue slowly, being among the slowest in the nation and limiting economic growth potential.

State income levels have been historically on par with the nation. State per capita income of $51,576 in 2016 was 104% of that of the nation. Over the next year, real personal income growth is projected to be what we consider moderate, at 2.4% or 37th-fastest in the nation, according to IHS Markit. We consider state GDP levels moderate with GDP per capita of $53,058, which is 96% of that of the nation. Over the next year, IHS Markit forecasts Rhode Island's real GSP growth at 1.5% or 38th fastest in the nation, a rate which we consider weak.

The state's gaming operations compete with nearby casinos in Connecticut and Massachusetts, both of which have approved or are considering gaming expansion. This added competition is expected to reduce lottery revenues in Rhode Island, and the state has factored this decline into its five-year forecast. However, recent performance suggests that the effects to date are not as significant as previously expected. Currently, lottery revenues are a modest source of income for the state and represent 10% of total general revenues, as of the November 2016 Revenue Estimating Conference. Referendums at the state level approved casino gaming expansion and voters in Tiverton authorized a new facility in their town. A new 85,000-square-foot casino with approximately 1,000 slot machines and 32 table games is expected to open in July 2018. The updated 2018 five-year forecast assumes flat lottery transfers to the general fund through 2022 and incorporates the opening of a new Tiverton facility in fiscal 2019. The forecast also incorporates other changes to projected lottery transfer revenues from increased gaming competition in the region, including a $50.5-million revenue loss in fiscal 2019 when Massachusetts' resort casinos are expected to open in

Springfield and Everett before stabilizing in the fiscal year 2020 to 2022 period. However, there is significant uncertainty as to the potential success of the casino expansion in Tiverton if it has to compete with two additional casinos in Massachusetts.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a '2.3' score to Rhode Island's economy.

Debt And Liability Profile

Tax-supported debt

As of June 30, 2016, the state's total net tax-supported debt burden was 3.5% of personal income and about $1,788 per capita, both of which we consider moderate. The fiscal 2016 carrying charge for tax-supported debt was about 4.4% of general governmental expenditures, which we consider moderately high. We do not expect that the state's debt burden will increase significantly in future years, based on its identified debt plans. Rhode Island improved its debt ratios in previous years by defeasing debt with the proceeds of a tobacco securitization. As of fiscal 2016, about $695 million of tobacco bonds were outstanding.

We note the state's improvement in its annual debt service carrying charge is due largely to restructuring maturities. The state's refunding series 2015A consolidated capital development loan was undertaken to provide savings in fiscal years 2016 and 2017 to provide resources for economic development initiatives, including approximately $20 million for school building construction and $64.5 million for a variety of programs under the Executive Office of Commerce, as well as approximately $15.7 million of additional savings in fiscal year 2017. In addition, the state undertook a refunding of GARVEE debt (RI Commerce Corp. series 2016A grant anticipation refunding bonds).

The state issued TANs annually through 2012, but none since then. It has no exposure to interest-rate swaps, and its variable-rate debt was fully retired in December 2010. Debt service can be paid in the absence of an appropriation budget, but there is no other priority for the payment of debt before other general state expenditures. The state's debt amortization is at a level we consider above average, and officials estimate that new debt issuance is not likely to significantly outpace amortization in future years. The state has one private placement related to the purchase of the I-195 surplus land. The direct purchase includes provisions that would trigger an event of default if the rating falls below 'A-'. Given the current rating on the state and the limited amount of debt outstanding under that loan ($38.4 million), we are not factoring this as a contingent liability.

38 Studios

The fiscal 2018 proposed budget incorporates full payment of its 38 Studios moral obligation debt with settlement proceeds. The General Assembly made appropriations for fiscal years 2015 and 2016 to restore the shortfall in the capital reserve fund. The fiscal year 2017 enacted budget includes an appropriation of approximately $2.5 million, which will be used to pay the principal and interest on the bonds. Over the past year, all pending litigation has been settled netting $49.7 million to the state for the benefit of bondholders. However, there is still about $12.5 million the state will need to appropriate before the final payment in 2020. Consistent with our criteria, if we believe that Rhode Island wavers in its commitment to supporting its debt, we could take a negative rating action, potentially lowering GO, appropriation, and moral obligation debt by multiple notches. If we come to view the state's willingness to back the obligation as questionable, we anticipate that downward pressure on the state rating could persist into future years to the extent the issue requires ongoing state support.

Pensions And OPEBs

The state, through the Employees' Retirement System of Rhode Island, administers and contributes to three defined-benefit retirement plans: the Employees' Retirement System (ERS), the Judicial Retirement Benefits Trust (JRBT), and the State Police Retirement Benefits Trust (SPRBT). The state is required by law to contribute 40% of the cost of providing retirement benefits for teachers covered by ERS. It also contributes to the Rhode Island Judicial Retirement Fund Trust (RIJRFT) on a pay-as-you-go basis which covers seven judges appointed prior to Jan. 1, 1990.

In our opinion, the pension reform and resulting settlement are significant for the state's overall credit profile. The Rhode Island General Assembly passed the Rhode Island Retirement Security Act of 2011 (RIRSA) on Nov. 17, 2011, and the governor signed it on Nov. 18. The act made significant changes to substantially all of the plans the ERSRI administers. The legislation underwent legal challenges, but most have subsequently been settled. The pension settlement, effective July 1, 2015 through the enactment of the new RIRSA, allows the 58,901 affected employees to receive increases in their benefits, while at the same time, preserving approximately 90% of the savings anticipated from the pension reforms. There is one pending case initiated by the Rhode Island State Trooper's Association and Rhode Island Troopers Association that has not been settled. While that lawsuit also only challenges the constitutionality of RIRSA (prior to the amendments), the benefits at issue are ones paid from and pertaining to SPRBT rather than ones paid from any of the other plans.

We consider the state's three-year average pension funded ratio weak at 54%. As of June 30, 2016, the ERS plan was using an entry age normal cost method and is using a closed amortization method based on a level percentage of payrolls, with 19 years remaining in the amortization period for ERS state employees and 21 years for ERS teachers. On a market value basis, the ERS teachers plan was funded at 54% and the ERS state employee plan was funded at 52% at the June 30, 2016 measurement date. For the fiscal year, the money-weighted rate of return for ERS, net of investment expense, was negative 0.78% compared to a 7.5% assumed rate of return.

The system does not project an asset depletion date under GASB 67, which we believe is reasonable. However, in our opinion some assumptions may be optimistic and combined with overall weak economic demographics, costs are likely to increase and may create future budgetary pressures. The plan's ratio of active members to beneficiaries equals 1.0 for state employees and 1.2 for teachers, which is significantly below the median national ratio of 1.5 and we believe is a weakness because of the plan's weak pension funded ratios. We believe the system incorporates experience trends and industry standards in its experience study and we favorably view its practice to produce an experience study every three years.

The funding policies, as set forth in Rhode Island General Law, Section 36-10-2 and 45-21-42 provide for ADCs. The state has funded 100% of the ADC for its plans (except for the RIJRFT plan, which is funded on a pay-as-you-go basis to the extent assets in the trust are insufficient to fund member benefits). The RIJRFT represents a de minimis portion of the state's net pension liability. Across these plans, we calculate that total annual plan contributions in fiscal 2016 did not cover levels equal to service cost and an interest cost component plus some amortization of the unfunded liability. The rates determined by the fiscal 2016 actuarial valuation will be used for fiscal 2019 budgeting.

For fiscal year ended June 30, 2016, the state's portion of the total net pension liability was $3.4 billion, or $3,270 on a per capita basis and 6.3% of personal income.

The unfunded liability for the state's OPEBs, as of June 30, 2013 (the reports are updated every other year), was $667.6 million, an approximate $150 million decrease from the 2011 valuation, and reflects OPEB reform efforts. Rhode Island's fiscal year 2011 through 2015 enacted budgets included full OPEB actuarially required contributions, and the state has been funding its OPEB trust fund since 2011. To date, the state has not released its 2015 OPEB valuation.

On a four-point scale on which '1' is the strongest, we have assigned a '2.6' score to Rhode Island's debt and liability profile. The score has weakened since our last review following application of our updated methodology for assessing pension liabilities.

Ratings Detail (As Of April 21, 2017)		
Rhode Island & Providence Plantations lse part certs (Sch for the Deaf Proj) ser 2009C dtd 06/25/2009 due 04/01/2010-2014 2016-2019 2021-2024 2026-202		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Rhode Island & Providence Plantations rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island & Providence Plantations rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island & Providence Plantations rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island & Providence Plantations rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island & Providence Plantations rev bnds		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island & Providence Plantations COPs (ASSURED GTY)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Rhode Island & Providence Plantations APPROP		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island & Providence Plantations APPROP		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island & Providence Plantations APPROP		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island & Providence Plantations GO		
Long Term Rating	AA/Stable	Affirmed
Rhode Island & Providence Plantations GO		
Long Term Rating	AA/Stable	Affirmed
Rhode Island & Providence Plantations (Energy Conservation Proj)		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island Convention Ctr Auth rev		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Rhode Island & Providence Plantations lse part certs (Shepard's Bldg) rfdg ser 2007F		

Ratings Detail (As Of April 21, 2017) (cont.)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Rhode Island & Providence Plantations lse part certs 2005 ser C (Training Sch Proj)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Rhode Island & Providence Plantations GO		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Rhode Island Convention Ctr Auth, Rhode Island		
Rhode Island & Providence Plantations, Rhode Island		
Rhode Island Convention Ctr Auth APPROP		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island Convention Ctr Auth (Rhode Island & Providence Plantations) rev rfdg bnds		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island Convention Ctr Auth (Rhode Island & Providence Plantations) (ASSURED GTY)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Rhode Island Econ Dev Corp, Rhode Island		
Rhode Island & Providence Plantations, Rhode Island		
Rhode Island Econ Dev Corp (Rhode Island & Providence Plantations)		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island Econ Dev Corp (Rhode Island & Providence Plantations) var rate loan (Rhode Island & Providence Plantations) (I-195) due 03/25/2023		
Long Term Rating	AA-/Stable	Affirmed
Rhode Island Econ Dev Corp (Rhode Island & Providence Plantations) MORALOBLIG		
Long Term Rating	A/Stable	Affirmed
Rhode Island Econ Dev Corp (Rhode Island & Providence Plantations) (38 Studios, Llc Proj) (AGM)		
Unenhanced Rating	BBB(SPUR)/Stable	Affirmed
Rhode Island Econ Dev Corp (Rhode Island & Providence Plantation) taxable econ dev rev (FMR Rhode Island Inc. Proj)		
Long Term Rating	A/Stable	Affirmed

Many issues are enhanced by bond insurance.

Appendix E: Rules, Regulations & Policies Adopted

120-RICR-50-1

TITLE 120 – Treasury Department

CHAPTER 50 – Public Finance Management Board

PART 1 – RULES AND REGULATIONS GOVERNING THE PUBLIC FINANCE MANAGEMENT BOARD

1.1 CREATION

The Public Finance Management Board (the "Board") is established under the provisions of § 42-10.1-1 of the Rhode Island General Laws, as enacted by Chapter 477 of the Public Laws of 1986, effective June 25, 1986, as amended (the "Act").

1.2 PURPOSE

The purpose and responsibilities of the Board are:

1. To allocate tax-exempt and taxable bond issuance capacity and/or federal tax credits among all bond issuers in the State of Rhode Island.

2. To advise and assist all state departments, municipal and regional authorities, agencies, boards, commissions, public and quasi-public corporations, and fire districts and other special districts having authority to issue revenue or general obligation bonds or GARVEE bonds or notes or other various types of conduit debt or enter into financing leases with respect to issuance of and financial planning related to all such bonds, leases, and notes.

3. To advise and/or assist any city or town and any municipal or regional agency, authority, board, commission, public or quasi-public corporations, or fire districts or other special districts having authority to issue revenue or general obligation bonds or GARVEE bonds or notes or other various types of conduit debt or enter into financing leases with respect to the issuance and financial planning related to such bonds, leases, and notes.

4. To collect, maintain, and provide information on all state, municipal and regional authority, agency, board, commission, public or quasi-public corporation, and fire district and other special district debt authorization, sold and outstanding, and serve as a statistical center for all state and municipal debt issues.

5. To maintain contact with state, municipal and regional authority, agency, board, commission, public or quasi-public corporation, fire district and other special district bond issuers, underwriters, credit rating agencies, investors, and others to improve the market for state and local government debt issues.

6. To undertake or commission studies on methods to reduce the costs and improve credit ratings of state and local debt issues.

7. To recommend changes in state laws and local practices to improve the sale and servicing of state and local debts.

8. To annually ascertain the total amount of state, regional, municipal, and public and quasi-public debt authorized, sold and unsold.

9. To oversee the undertaking of a debt affordability study no less frequently than every two (2) years, which shall include recommended limits for the debt capacity of each state, municipal and regional authority, agency, board, commission, public and quasi-public corporation and fire district and other special district having authority to issue revenue or general obligation bonds or GARVEE bonds or notes or other types of conduit debt or enter financing leases.

1.3 MEMBERSHIP

The Board shall consist of nine (9) Members, comprised as follows:

1. The General Treasurer or his or her designee.

2. The Director of the Department of Administration or his or her designee.

3. Three (3) Members of the general public to be appointed by the Governor, with the advice and consent of the Senate.

4. Two (2) representatives of the general public to be appointed by the General Treasurer, with the advice and consent of the Senate, from a list of five candidates submitted by the Rhode Island League of Cities and Towns.

5. Two (2) Members of the general public to be appointed by the General Treasurer, with the advice and consent of the Senate.

1.4 OFFICERS

A. The General Treasurer, or his or her designee, shall serve as Chairperson and shall preside at meetings of the Board

B. The Board shall annually elect, by majority vote, one of its Members as Vice-Chairperson and one of its Members as Secretary.

1.5 MEETINGS

A. The Board shall meet on the call of the Chairperson, at the request of the Governor, at the request of a majority of the Members of the Board, and/or upon a regular schedule established by the Board.

B. The Chairperson or other person(s) requesting a meeting shall give reasonable notice thereof to all members of the Board.

C. A record of all business transacted at each meeting shall be kept and shall be certified by the Secretary or the Chairperson.

D. All meetings shall be conducted pursuant to the provisions of Chapter 46 of Title 42 the Rhode Island General Laws, as the same may be amended from time to time.

1.6 QUORUM/MAJORITY

A. Four Members of the Board shall constitute a quorum for the transaction of business.

B. At any meeting, a majority vote of all Members of the Board shall be required for the election of officers and the enactment, material modification or repeal of any allocation or rule.

C. At any meeting, a majority of those Members present shall be sufficient to enact any other business.

1.7 DEBT CEILINGS

The Board shall, as soon as it is practicable after the effective date of these rules and thereafter in January of each calendar year, determine and announce the State tax-exempt and taxable bond issuance capacity for that calendar year as provided under the provisions of the Internal Revenue Code.

1.8 ALLOCATION

A. Purpose. One of the principal functions of the Board is to allocate private activity tax-exempt, taxable and/or federal tax-credit bond issuance capacity (“Cap”) among all bond issuers in the State.

Under the provisions of the Act and pursuant to Section 7 of these Rules and Regulations, the Board announces the Cap of the State in January of each year, pursuant to the provisions of the Internal Revenue Code. The Board has the authority to pass a resolution to establish the allocation of the Cap among bond issuers in the State of Rhode Island (the “Allocation Resolution”). Any Allocation Resolution may contain such conditions as the Board deems appropriate and any general allocation may provide for a reserve allocation to the Board of amounts within the aggregate State Cap limit not otherwise allocated to bond issuers. The Board may subsequently, after hearing and at its discretion, allocate part or all of such reserve amounts upon application of bond issuers. Any allocation made by the Board is irrevocable upon the issuance of bonds, except that any time prior to bond issuance, the Board may, after notice and hearing, alter, modify, amend or repeal any allocation.

B. Priorities. The Board determines the allocation of the Cap under the following priorities:

1. To coordinate, assist with and supplement state and local programs, projects, priorities and activities.

2. To consider issuers’ use and completion of past allocation awards, the impact of allocation on existing programs, and the availability of alternative sources of financing.

3. To give preference to issuers who can demonstrate the ability to issue private activity bonds for proposed projects by calendar year end.

4. View favorably other financing for all or part of a project from sources other than tax-exempt or taxable bonds.

5. Retain a 10% PFMB reserve allocation for contingencies.

C. Objectives. The objectives of the Board’s Cap allocation process are many. A few of the major objectives are identified below.

1. To establish an orderly and equitable process of allocating tax-exempt, taxable and/or federal tax credit private bond issuance capacity.

2. To encourage private investment in creating and sustaining jobs, economic development, housing, solid and hazardous waste management, water and sewer facilities, and higher education.

3. To encourage development in areas of the State where jobs, economic development, housing, certain infrastructure improvements and higher education are most needed.

4. To encourage the increase or maintenance of the tax base in the State.

5. To maximize the efficient use of the State's Cap over time through issuance of recycled or carryforward Cap, before issuance of new Cap.

D. Allocation Review Factors. The following guidelines are used by staff in evaluating and recommending Cap allocation proposals, factors that should be addressed in any Cap request submitted to the PFMB.

1. Project Impact and Feasibility

   a. If an issuer requests allocation for more than one financing, what is the order of priority for each?

   b. What is the availability of additional or alternative funding sources?

   c. What type of arrangements have been made for credit enhancement for the financing? Will some form of State credit enhancement be included in the financing?

   d. What analysis has been performed to determine the feasibility of the project?

   e. What is the firm schedule for debt financing sale and closing?

   f. Are there statutory or other legal considerations which may impact the viability of the project/program?

2. Housing Projects/Program

   a. What other financing programs in the community, in addition to private activity bonds, are available for use by the project?

   b. Will the project/program be utilizing Low Income Housing Tax Credits or financing other than bonds?

   c. What financial commitments are involved in the project/program (i.e. local, developer, HUD, credit enhancement)?

   d. Will this project/program improve or preserve the housing availability?

   e. Is the project located in an area which has been unserved by various governmental housing programs or by the private sector in the past?

   f. Will existing, vacant housing be acquired or renovated in this project (i.e. RTC-owned properties)?

g. Can prior Cap allocation be recycled or carryforward Cap allocation be used instead of new Cap allocation?

3. Economic Development Projects

a. Is the project part of an overall plan for economic development in the community or the region?

b. What is the background and experience of the individuals and companies involved in the project, including the developer?

c. What other financial commitments/agreements are involved with or necessary for the project?

d. What temporary and permanent jobs will be created or retained by this project?

4. Recovery Zone Facility Bond. In addition to the criteria and the guidelines set forth in subsection 1.8(D)(3) above pertaining to Economic Development Projects, for Recovery Zone Facility Bonds, the Board will also consider:

a. Has the Rhode Island Commerce Corporation and/or the Rhode Island Industrial Facilities Corporation recommended the project?

b. What are the types of employment, the amounts of new employment and the wages in connection with the employment created by the project?

c. What is the impact on the State's collection of income and payroll taxes?

d. What is the impact on the property tax base of the municipality in which the proposed project will be located?

e. What is the status of governmental approvals and permitting for the project?

f. What is the status of the infrastructure requirements for the project?

5. Student Loan Programs

a. What other programs in the community, in addition to private activity bonds, are available for use by the Student Loan Program?

b. Can prior Cap allocation be recycled or carryforward Cap allocation be used instead of new Cap allocation?

c. Can the economic benefits of tax-exempt financing be quantified relative to alternative financing methods?

6. Solid Waste Treatment, Waste Disposal, Water and Sewer Projects

a. Are all required permits in place?

b. Can this project be financed privately or with governmental purpose bonds?

c. Can the economic benefits of tax-exempt financing be qualified relative to alternative financing methods?

7. Qualified Energy Conservation Bonds

   a. What percentage of the project will be financed with private activity bonds?

   b. How will the project reduce energy consumption?

   c. Are all required permits in place?

8. Other Projects. In addition to the factors set forth above Applications will be considered in terms of the presentations offered to each of these review guideline factors.

   a. For each subsequent calendar year, the Board shall enact, after notice and opportunity for hearing thereon, an Allocation Resolution establishing a general allocation of tax-exempt bond issuance capacity among bond issuers in the State.

   b. Any allocation enacted by the Board may contain such conditions, as the Board may deem appropriate.

   c. Any general allocation may provide for a reserve allocation to the Board of amounts within the State tax-exempt debt issuance capacity not otherwise allocated to bond issuers.

   d. The Board may subsequently, after hearing and at its discretion, allocate part or all of such reserve amounts upon application(s) of bond issuer(s).

   e. Any allocation made by the Board shall be irrevocable upon issuance of bonds pursuant thereto at least to the extent of the principal amount of such bonds so issued.

   f. Except as provided in (e), above, upon request by any bond issuer, or upon its own initiative, the Board may at any time, after hearing, modify, amend or repeal any allocation.

1.9 REPORTING REQUIREMENTS

A. Each state, municipal and regional department, authority, agency, board, commission, public or quasi-public corporation, and fire district and other special district having authority to issue revenue or general obligation bonds or GARVEE bonds or notes or other various types of conduit debt shall, no later than thirty (30) days prior to the sale of any such debt issue at public or private sale, give written notice of the proposed sale to the Board. Said notice of proposed debt shall be made on a form approved by the Board and shall contain all of the information requested on said form which shall include one proposed sale date, the name of the issuer, the nature of the debt issue, and the estimated principal amount thereof, and such further information as may be required by rule of the board and shall be delivered in accordance with procedures to be established by rule of the board.

B. Each such issuer shall, within thirty (30) days after closing, submit to the Board a report of final sale on a form approved by the Board and the report shall contain all of the information requested on said form.

C. Any issuer which fails to submit the report of proposed debt or report of final sale by the appropriate deadline may be subject to a per diem fine of two hundred fifty dollars ($250), which shall be collected and enforced by the Office of the General Treasurer.

D. Each state, municipal and regional authority, agency, board, commission, public or quasi-public corporation, and fire district and other special district having authority to issue revenue or general obligation bonds or GARVEE bonds or notes or various types of conduit debt or enter into financing leases shall provide annually, within ninety (90) days after the end of each fiscal year, the following information for each outstanding debt incurred as of the end of such year:

1. the principal amount of the issue outstanding;

2. the amount of proceeds of the issue that remains unspent;

3. the amount of debt authorized by the bond act or other appropriate authorization relevant to the issue that remains authorized but unissued; and

4. a list of the purposes for which the debt has been issued and the amounts expended for each purpose in the prior fiscal year from the proceeds of the issue.

E. Failure of delivery of the above notice or of the time or efficiency thereof shall not affect the validity of the issuance of any debt, bonds, notes or leases.

F. The Board shall submit a report annually on or before September 30th of each year to the Director of Administration, the Speaker of the House, the Chairman of the House Finance Committee, the President of the Senate, the Chairman of the Senate Finance Committee, and the Auditor General on debt issues by cities and towns and other authorities, agencies, boards, commissions, public and quasi-public corporations, fire districts, and other special districts subject to the provision of Chapter 12 of Title 45 of the Rhode Island General Laws, which report shall include the information set forth in subsection (b) of the above and shall be for the notices of debt issues received during the state's fiscal year next preceding. An electronic transmission of the report shall be considered an acceptable submission.

1.10 FEES

A. The lead underwriter or purchaser of any taxable or tax exempt debt issue of the state, all state departments, any city or town, any state, municipal and regional authorities, agencies, boards, commissions, public or quasi-public corporations, and fire districts and other special districts shall pay to the Public Finance Management Board an amount equal to one-fortieth of one percent (1/40%) of the issued principal amount of the issue; provided, however, if a governmental entity is the purchaser of another governmental debt obligation which serves as underlying security for a related debt issuance, the governmental entity shall be exempt from the assessed fee on the purchase of the underlying obligation.

B. Amounts received under this Section shall be deposited in the Public Finance Management Board Fund (the "Fund") in the State Treasury.

C. The General Treasurer is authorized to draw upon the Fund, in accordance with applicable rules and procedures, to pay for the expenses incurred by the Board and by the General Treasurer's Office in carrying out the purposes of Chapter 10.1 of title 42 of the Rhode Island General Laws.

1.11 SUPPORT SERVICES

The Board may employ such staff, contract for such services and incur such expenses, as it may deem necessary and appropriate to carry out the purposes of Chapter 10.1 of Title 42 of the Rhode Island General Laws.

1.12 OPEN RECORDS

All records of the Board shall be subject to public access pursuant to the provisions of Chapter 2 of Title 38 of the Rhode Island General Laws.

1.13 COMPREHENSIVE REVIEW/BOARD REPORTS

A. The Board shall comprehensively review the financing of capital improvements by all state, municipal, and regional departments, authorities, agencies, boards, commissions, and public and quasi-public corporations and study the comparative debt of all state and local government units for capital improvements and the use of bond financing as a source of the indebtedness. The review shall include an analysis of all outstanding general obligation and revenue bonds.

B. Annually, on the thirtieth (30th) day of September, the Board shall submit to the Governor, the Speaker of the House of Representatives, the President of the Senate and the Secretary of State a report based upon information from the previous fiscal year ending in the prior calendar year of its findings and recommendations, if any, for revising the laws governing such financing devices. The report shall include all required information as prescribed in § 42-10.1-8(b) of the Rhode Island General Laws. An electronic submission of the report shall be considered an acceptable submission. The report shall be posted electronically on the general assembly and the secretary of state's website as prescribed in § 42-20-8.2 of the Rhode Island General Laws. The Director of the Department of Administration shall be responsible for the enforcement of this provision.

C. The Board shall compile and publish annually the total amount of public state, regional, municipal, and public and quasi-public corporation debt authorized, sold and unsold.

D. No less frequently than every two (2) years, the Board shall oversee the undertaking of a debt affordability study, which shall include recommended limits for the debt capacity of each state, municipal and regional authority, agency, board, commission, public and quasi-public corporation and fire district and other special district having authority to issue revenue or general obligation bonds or GARVEE bonds or notes or other various types of conduit debt or enter into financing leases.

E. Neither the Board nor its individual members shall have any liability as a result of the performance of the responsibilities or the exercise of the powers described herein. They shall not be deemed to have expressed an opinion regarding or deemed to have approved any aspect of any bonds or notes, including but not limited to, the proper authorization of any bonds or notes, the availability of funds for the repayment of any bonds or notes, the tax exempt status of any bonds or notes, or compliance by the issuer of any bonds or notes with any federal or state tax or securities law.

F. In the event that any liability shall accrue to the Board or its Members because of the performance of the responsibilities or exercise of the powers described herein, the issuer who issued the bonds or notes which cause the liability shall fully indemnify the Board and the Members.

1.14 ADVISORY OPINIONS

The Board shall have the authority to offer non-binding, advisory opinions on all aspects of debt management practices of state, municipal, and public and quasi-public corporations.

1.15 AMENDMENTS

A. Any interested person may petition the Board requesting the enactment, amendment or repeal of any rule.

B. When the petition requests the enactment of a rule, the proposed rule must be set out in full. The petition must also include all the reasons for the proposed rule together with briefs of any applicable law. Where a petition requests the amendment or repeal of a rule presently in effect, the rule or portion of the rule in question must be set out as well as the suggested amended form, if any. The petition must include all reasons for the requested amendment or repeal of the rule.

C. All petitions shall be considered by the Board and the Board may, at its discretion, order a hearing for the further consideration and discussion of the requested enactment, amendment or repeal of any rule.

1.16 EFFECTIVE DATE

These Rules and Regulations were approved by the PFMB on September 22, 2016 and shall take effect twenty (20) days after filing with the Department of the Secretary of State, amending and superseding the prior rules and regulations promulgated on October 13, 2010.

Notice Given on: July 29, 2016

Public Hearing Held: September 12, 2016

Filing Date: October 6, 2016

Effective Date: October 26, 2016

Appendix F: Studies Conducted

State of Rhode Island and Providence Plantations

Public Finance Management Board

Debt Affordability Study

May 3, 2017

Acknowledgments

It is no exaggeration to say that this is the most ambitious and comprehensive Debt Affordability Study ever to be undertaken by a state government.

While it is common for states to issue Debt Affordability Studies from time to time, this Study is different for two reasons:

- This is the first Debt Affordability Study to provide debt targets not only for a state but, for most governmental issuers within a state.
- This is the first Debt Affordability to formally incorporate pension liabilities into affordability targets.

The undertaking of this study has been a collaborative effort involving many smart, public-spirited individuals who believe in the importance of sound public finance.

This study would not have been possible without Governor Gina Raimondo, Speaker Nicholas Mattiello, former Senate President Teresa Paiva-Weed, current Senate President Dominick Ruggerio, House Finance Chair Marvin Abney, and former Senate Finance Chair Dan DaPonte, who saw fit to support the commissioning of this study in the FY 2017 state budget. Senator DaPonte previously sponsored several pieces of legislation aimed at helping Rhode Island policymakers better understand matters of public debt.

The Public Finance Management Board is a volunteer committee tasked with overseeing the preparation of this study. I want to thank Karl Landgraf, Patricia Anderson, Shawn Brown, Michael DiBiase, Doug Jacobs, Robert Mancini, Joe Reddish and Maribeth Williamson for their service to the state.

The expertise and tireless work of Public Resources Advisory Group was vital to the success of this undertaking, particularly the tremendous efforts of Tom Huestis, Janet Lee, Jessica Donnelly, and Christine Ilarina.

Dr. Alicia H. Munnell and Jean-Pierre Aubry of the Center for Retirement Research at Boston College provided critical data analysis that contributed to the 50-state comparison of pension liabilities found in Part I of this report.

The insights and collaboration of Mary Murphy and Adam Levin of the Pew Charitable Trusts, who provided comparative research on existing state debt affordability studies, were helpful in designing the scope and data sources used for this study.

A number of collaborators and thought leaders across government provided invaluable assistance to the preparation of this study, including Auditor General Dennis Hoyle, Director of Revenue Robert Hull, Division of Municipal Finance Director Susanne Greschner, State Budget Director Tom Mullaney, House Fiscal Advisor Sharon Reynolds Ferland, Senate Fiscal Advisor Steve Whitney, and the dozens of municipal and quasi-public agency leaders who supplied us with information and offered feedback on various drafts of the study.

Finally, none of the great achievements of the Rhode Island Treasury would be possible without the skill and commitment of our staff. Deputy Treasurer Kelly Rogers, Director of Debt Management Frank Quinn and Chief of Staff Patrick Marr worked diligently to create the best, most comprehensive Debt Affordability Study ever to be produced by a state government.

Seth Magaziner
General Treasurer
Chairman of the Public Finance Management Board

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Executive Summary

Introduction

There are more than 100 entities in Rhode Island with the authority to issue public debt. These issuing entities range from the State itself, to municipalities and school districts, water districts and fire districts, and quasi-public entities that manage important public infrastructure like TF Green airport and the Pell Bridge. Combined, these entities have accumulated approximately $10.5 billion of debt outstanding in various forms.

Maintaining an ability to borrow, often called "debt capacity," is critical for state and local governments. Without debt capacity the State may not be able to maintain aging infrastructure and invest in projects that support economic growth. Public capital investments attract private capital investments, which creates jobs and improves the quality of life for residents of the State.

While it is often useful and necessary for public entities to take on debt to spread the cost of large capital projects across multiple budget cycles, the power to issue public debt must be exercised with care. When a public entity issues long-term debt, it binds citizens to make debt service payments for many years in the future, through taxes, fees, tolls or utility rate charges. Sometimes even when public debt is not explicitly backed by taxpayer funds, taxpayers can find themselves liable for the cost of debt when the original revenue stream becomes insufficient to cover the cost of debt service. Therefore, it is important for each issuer of public debt to have a clear sense of how much debt it can prudently issue at any given time.

Scope of the Debt Affordability Study

The Public Finance Management Board (PFMB) was created during the 1986 Session of the General Assembly for the purpose of providing advice and assistance to issuers of tax-exempt debt in the State of Rhode Island. In 2016, at the request of the Office of the General Treasurer, the General Assembly enacted a series of measures to strengthen debt management in Rhode Island, including the requirement that the PFMB produce a debt affordability study every two years to recommend limits of indebtedness for all issuers of public debt in the state.

This study examines the levels of indebtedness of the state, its quasi-public agencies, municipalities and districts, and recommends debt affordability limits for each issuer. The study is premised on the concept that resources, not only needs, should guide debt issuance.

For the purposes of this study, debt affordability is defined as the issuer's ability to repay all of its obligations based on the strength of its revenue streams and the capacity of the underlying population to afford the cost of borrowing. Maintaining an appropriate level of debt affordability is crucial for ensuring long-term fiscal sustainability and economic competitiveness while investing in projects necessary to deliver essential public services.

Because of the diverse nature of Rhode Island's population, the PFMB does not recommend a single overall limit for public debt across all issuers. The public debt burden that is affordable for the population of one community might be higher or lower than the affordable level for a community located elsewhere in the State. Instead, this report recommends separate affordability limits for the State, the Quasi-Public agencies and each municipality.

Debt is not the only type of long-term liability that states, municipalities and other public entities incur. Most notably, pension liabilities that have been contractually or statutorily promised to public employees represent long-term liabilities of the entities responsible for debt repayment. In embarking on this study, the PFMB felt that the level of debt that is affordable for a public entity to issue cannot be measured in isolation, but must be viewed in the context of the amount of pension liability that the issuing entity has taken on. Therefore, where possible, this report will utilize affordability targets that include both debt and pension liabilities together.

This is the first time that Rhode Island has integrated pension liabilities into debt affordability targets. While this has not been done in past affordability studies, the PFMB believes that pension liabilities are significant enough that they must be considered together with traditional debt. The ratings agencies have recently begun to adopt methodologies that combine pension and debt into the same affordability measurements, and while no other state has formally adopted a debt affordability target that integrates pension liabilities, several have indicated that they will consider doing so in the future.

The PFMB also considered whether to integrate other post-employment benefits (OPEB), which primarily include retiree health care benefits, into the report's affordability targets. Several challenges to integrating OPEB into affordability targets emerged, including the lack of uniformity in reporting, the difficulty of accurately forecasting OPEB cost inflation, and legal uncertainty around the ease with which states and other public entities can change OPEB polices. As a result, the PFMB is not including OPEB liabilities in the current debt affordability study, but will revisit the feasibility of integrating OPEB when the next study is performed in 2019.

Summary of Debt Currently Outstanding

State Tax-Supported Debt. The first part of the study considers all tax-supported debt of the State. The State of Rhode Island raises revenue from a variety of sources including an income tax, sales tax, revenues from lottery and gambling activities, State-level tax-supported debt includes three different types of issuance:

(i) Direct debt or general obligation bonds – debt of the State for which the full faith and credit are pledged, usually through a referendum of the electorate

(ii) Appropriation debt – debt secured by contractual agreements which, while not considered General Obligations of the State, are still subject to annual appropriation by the General Assembly

(iii) Moral obligation debt – debt secured by a pledge that represents a promise by a government obligor to seek future appropriations for debt service payments, typically in order to make up deficits in a reserve fund should it fall below its required level.

As of June 30, 2016, the State had a total of $1.87 billion of tax-supported debt outstanding. In addition, as of June 30, 2016, the State had approximately $2.83 billion of unfunded actuarial accrued liability (UAAL) for its pensions.

Quasi-Public Agencies. The second part of the study evaluates the debt of the State's quasi-public agencies. Quasi-Public agencies are governmental agencies with tax-exempt bonding authority that are managed with a degree of independence from the legislative and executive branches of state government.

Quasi-Public agency debt falls into two general categories: (i) debt secured by revenues of the agency (Direct Borrowers) and (ii) conduit debt which is borrowed on behalf of another underlying entity, be it another government agency, a private corporation or nonprofit organization, in order to help the underlying borrower achieve tax-exempt status or a lower cost of financing (Conduit Issuers)[1].

The debt issued by the quasi-public agencies is usually in the form of revenue bonds, in which debt service is payable solely from the revenues derived (i) from a dedicated revenue source, (ii) from operating businesses or a facility (iii) under a loan or financing agreement with an underlying conduit borrower.

[1] This study does not recommend targets for non-profit and private entities that borrow conduit debt through quasi-public agencies, secure the debt with their own revenue sources, and do not have a moral obligation or any other connection with the State, an agency of the State or a municipality. Responsibility for repayment of these debts lie solely with the non-profit and private entities, the taxpayers bear no liability, and it is unlikely that a state or local government would ever assume these liabilities should the underlying borrower be unable to make debt service payments.

Table I – Quasi-Public Agency Issuers

Direct Borrower	Type/Purpose of Bonds
Narragansett Bay Commission	Wastewater System Revenue Bonds
Rhode Island Turnpike and Bridge Authority	Toll Revenue Bonds
Tobacco Settlement Financing Corporation	Tobacco Master Settlement Agreement Bonds
Rhode Island Resource Recovery Corporation	Resource Recovery System Revenue Bonds
Conduit Issuer	**Type/Purpose of Bonds**
Rhode Island Commerce Corporation	GARVEEs, Airport Revenue Bonds, Economic Development, Moral Obligation Bonds
Rhode Island Health and Educational Building Corporation (RIHEBC)	Public School, Higher Education, Other Education, Health Care Revenue Bonds (Includes Pooled Bonds)
Rhode Island Housing and Mortgage Finance Corporation	Single-Family and Multi-Family Housing Revenue Bonds, Moral Obligation Bonds
Rhode Island Infrastructure Bank (RIIB)	Water Pollution Control, Safe Drinking Water, Water, Sewer Revenue Bonds, Energy Efficiency Loans (Includes Pooled Bonds)
Rhode Island Student Loan Authority	Student Loan Revenue Bonds

As of June 30, 2016, Quasi-Public Agencies in the State had a total of almost $5.0 billion of debt outstanding, excluding debt held by non-profit and private conduit borrowers.

Municipalities and Special Districts. The third part of the study considers debt of the municipalities, fire districts, special districts and local authorities of the State. Rhode Island has 39 municipalities, 44 fire districts, and 17 special districts and local authorities that can issue debt. Most of the Rhode Island municipalities and local districts issue general obligation bonds directly and enter into capital leases supported by property tax revenue. Many also borrow through the Rhode Island Health and Educational Building Corporation ("RIHEBC") Public Schools Revenue Bonds Financing Program, a conduit bond program. In some cases, municipal entities issue revenue bonds secured by the revenues of public utilities like water and sewer systems.

Most municipalities and districts also have pension liabilities, which are accounted for in this study. There are 150 pension plans for municipal employees across Rhode Island, 116 of which are managed centrally by the State through the Municipal Employees Retirement System (MERS), 34 of which are managed independently by municipalities. Regardless of the management structure, the municipalities and district are fully responsible for the liabilities of these plans. In addition, school districts participate in the statewide Employees Retirement System (ERS), in which the State is responsible for 40% of the liability and the school district is responsible for 60% of the liability.

Pension liabilities are calculated through a series of assumptions, and thus can be difficult to estimate with precision. For the purposes of this study, municipal pension liabilities are derived from the financial statements of the municipalities, under rule 68 of the Governmental Accounting Standards Board (GASB) framework.

As of June 30, 2015, municipalities and special districts in the State had a total of $2.0 billion of debt and $3.69 billion of pension liabilities outstanding[2].

[2] At the time of publication of this study, debt and pension information for some special districts, particularly housing authorities, was not immediately available. The figures in this study represent only those districts whose financial information as available to the PFMB at the time of publication.

Table II – Aggregate Debt Outstanding

Outstanding Debt (FY2016)	General Obligation	Lease/ Appropriation	Revenue (Public)	Revenue (Private/ Non-Profit)	Total Debt Outstanding
State of Rhode Island	$1,051,810,000	$821,164,296	$ -	$ -	$1,872,974,296
Quasi-Public Agencies					
Narragansett Bay Commission			242,820,000		$242,820,000
Rhode Island Turnpike and Bridge Authority			56,160,000		$56,160,000
Tobacco Settlement Financing Corporation			604,785,000		$604,785,000
Rhode Island Resource Recovery Corporation			29,142,861		$29,142,861
Rhode Island Commerce Corporation					
GARVEEs			230,280,000		$230,280,000
Airport Revenue Bonds			356,096,991		$356,096,991
Other			-	92,764,023	$92,764,023
Rhode Island Health and Educational Building Corp.					
Education			229,255,000	1,498,476,283	$1,727,731,283
Healthcare			-	698,009,135	$698,009,135
Rhode Island Housing and Mortgage Finance Corp.			1,211,845,486		$1,211,845,486
Rhode Island Infrastructure Bank					
Water Pollution Control			522,700,000		$522,700,000
Safe Drinking Water			264,742,000		$264,742,000
Rhode Island Student Loan Authority			525,988,000		$525,988,000
Municipalities and Special Districts (FY 2015)	$1,322,423,557	$390,571,530	$334,271,474	$ -	$2,047,266,561
GRAND TOTAL	$2,374,233,557	$1,211,735,826	$4,608,086,812	$2,289,249,441	$10,483,305,636

Note: For this table, RIHEBC Public School Revenue Bonds and RIHEBC Providence Public Building Authority are not included in RIHEBC debt and are included in the General Obligation debt of Municipalities and Special Districts. RIIB Water Pollution Control and Safe Drinking Water debt shown as RIIB debt and not included in Revenue debt of Municipalities and Special Districts. Narragansett Bay Commission debt is shown as NBC debt and not included in Revenue debt of the participating municipalities. Information on the local housing authorities is not readily available at this time and will therefore, not be included in this iteration of the debt affordability study.

PFMB Recommendations and Rationale

The PFMB considered several factors in developing its debt affordability recommendations. For each issuer, the PFMB considered relevant peer comparisons, Ratings Agency guidance, and legal requirements contained in bond indentures. These affordability limits are purely advisory, and represent what the PFMB feels are prudent levels of indebtedness given the available information.

The PFMB recognizes that it may be appropriate for affordability targets to be temporarily exceeded if increased capital spending is needed to manage emergency situations or revenues are temporarily impaired by economic downturns, but issuers are recommended to endeavor to return to their target ratios in normal economic circumstances.

***State Net Tax Supported Debt and Pension Liability*.**

For the State, the PFMB recommends the following Debt and Pension Affordability Ratios. Generally speaking, the PFMB finds the level of State indebtedness to be manageable but recommends somewhat lower debt affordability targets than the State has used previously, reflecting the fact that Rhode Island's state-level debt and pension liabilities are at the high end relative to other states. At the same time, these new targets allow the state room to continue making important capital investments in projects to promote the economic health of the state and the well-being of its citizens.

Table III – State Debt and Pension Affordability Ratios (PFMB Recommended Targets)

Ratio	Current Level (FY2017)	Recommended Target
Debt Service on Tax-Supported Debt to General Revenues	6.1%	Not to exceed 7.5% within the next five years and 7.0% thereafter
Net Tax-Supported Debt as Percentage of Personal Income	3.4%	Not to exceed 4.0%
Rapidity of Repayment over 10 Years	76.1%	Amount of debt to be retired over the next ten years targeted at no less than 50%
Net Tax-Supported Debt Service + Pension ARC as a Percentage of General Revenues	13.07%	Not to exceed 16%
Net Tax-Supported Debt + Pension Liability (UAAL) as a Percentage of Personal Income	8.5%	Not to exceed 8% beginning in 2021
Pension ARC and OPEB ARC Funding Level	100%	100%

Based on these recommended debt affordability targets for State net tax-supported debt, the PFMB estimates that the State has available capacity to assume approximately $221.8 million of new debt in 2019, the first year in which any authorization from a 2018 voter referendum could be issued, and remaining capacity of approximately $1.25 billion over a ten-year period.

Quasi-Public Agencies. Each of the State's Quasi-Public agencies is unique, with different revenue streams and functions. After considering the unique considerations of each Quasi-Public agency, relevant ratings agency guidance and peer comparisons, the PFMB recommends the following individualized affordability ratios for each agency.

The table on the following page shows the recommended affordability metrics for each quasi-public agency, with green shaded levels indicating the quasi-public agency is within the recommended target and yellow shaded levels indicating current levels are slightly above recommended targets. In no case is a State Quasi-Public significantly above its recommended affordability level at the current time, though the PFMB notes that several Quasi-Public agencies are currently considering investing in large capital projects in the coming years, and will need to carefully evaluate the affordability of those projects should they move forward.

Table IV – Quasi-Public Agency Affordability Metrics (PFMB Recommended Targets)

Borrowers	Affordability Metric	Current Level
Narragansett Bay Commission	1.3x debt service coverage for both Commission debt and RIIB loans	Debt Service Coverage 1.4x
Rhode Island Turnpike and Bridge Authority	1.7x debt service coverage	Debt Service Coverage 1.68x
Rhode Island Resource Recovery Corporation	PFMB recommends the Corporation refrain from any issuance of long-term debt until the future of the facility is more certain.	Debt Service Coverage 4.00x
Rhode Island Department of Transportation Grant Anticipation Revenue Bonds (GARVEEs)	4.5x debt service coverage	Debt Service Coverage 4.5x
Rhode Island Airport Corporation	1.5x debt service coverage when including the Coverage Account Ending Balance, and $100 debt per enplaned passenger	Debt Service Coverage 1.76x $137 per enplaned passenger
Rhode Island Health and Educational Building Corporation – University of Rhode Island	Total Debt to Cash Flow of less than 11.0x as a factor required for Additional Bonds.	7.0x Debt to Cash Flow
Rhode Island Housing and Mortgage Finance Corporation	Target minimum Program Asset to Debt Ratio (PADR) of 1.10x based on Moody's rating criteria for Aaa rating.	PADR of 1.19x (Single Family) PADR of 1.12x (Multi-Family)
Rhode Island Infrastructure Bank (Clean Water and Drinking Water Programs)	Maintain a minimum of 1.2x debt service coverage and Maintain asset to liabilities ratios at a minimum of 1.3x.	Debt service coverages: 1.3x for Clean Water and 1.5x for Drinking Water Asset to liabilities ratios: 1.5x for Clean Water and 1.6x for Drinking Water.
Rhode Island Student Loan Authority	Target minimum Parity Ratio of 110%	Parity Ratio of 120.97%

Meets recommended target	Current level slightly above recommended target
Exceeds recommended target/Recommended no new debt	

Municipal/Local Debt and Pension Liability. Municipal governance in Rhode Island is comprised of a patchwork of overlapping authorities. In addition to the state's 39 cities and towns, local government includes dozens of regional and local districts, some contained entirely within a municipality and others across multiple municipalities. Some of these governmental entities raise revenue through property taxes, and others through charges such as utility fees.

In determining how to set targets for this complex patchwork of municipal issuers, the PFMB ultimately determined that the most important consideration is the ability of the underlying population of a municipality to afford the aggregate levels of debt their governmental agencies have taken on. Therefore, three of the four recommended affordability targets for debt incorporate the debt of municipalities and overlapping districts into combined ratios.

Table V – Local Debt and Pension Affordability Ratios (PFMB Recommended Targets)

Ratio	Ratio Components	Recommended Target
Net Direct Debt to Full Value	*Net Direct Debt* is only the tax-supported debt of a municipality, and does not include the debt of overlapping districts or enterprise debt that is funded by non-tax revenue such as utility charges. *Full value* represents the total assessed value of the municipality, including real property and tangible personal property less exemptions	Less than 3%
Overall Net Debt to Full Value	*Overall Net Debt* is tax-supported debt of a municipality AND tax supported debt of overlapping districts, but does not include enterprise debt that is funded by non-tax revenue such as utility charges. *Full value* represents the total assessed value of the municipality, including real property and tangible personal property less exemptions	Less than 4%
Overall Debt + Net Pension Liability to Full Value	*Overall Debt* includes all debt of a municipality and its overlapping districts, including tax-supported debt and debt supported by other revenues such as utility charges. *Full value* represents the total assessed value of the municipality, including real property and tangible personal property less exemptions	Less than 6.3%
Overall Debt + Net Pension Liability to Personal Income	*Overall Debt* includes all debt of a municipality and its overlapping districts, including tax-supported debt and debt supported by other revenues such as utility charges. *Personal Income* represent the average income of a resident of the municipality as calculated by applying the ratio of money income to per capita money income for the municipality to the city/town's money income and multiplying by population.	Less than 20%

The table below shows the current levels of these affordability ratios for each municipality with green shaded levels indicating the municipality is within the recommended limits, yellow shaded levels indicating current levels are slightly above the recommended limits and red shaded levels indicating the current levels significantly exceed the recommended limits.

Table VI – Debt and Pension Affordability Ratios for Municipalities

	Debt Ratios		Debt + Pension Ratios	
Obligor Name	**Net Direct Debt to Assessed Value Target < 3%**	**Overall Net Debt to Assessed Value Target < 4%**	**Overall Debt + Net Pension Liability to Assessed Value Target < 6.3%**	**Overall Debt + Net Pension Liability to Personal Income Target <20%**
Barrington	0.5%	0.5%	2.5%	4.6%
Bristol	1.1%	1.6%	3.0%	6.8%
Burrillville	1.2%	1.3%	3.1%	5.3%
Central Falls	3.7%	3.7%	19.2%	17.3%
Charlestown	0.2%	0.5%	0.6%	3.1%
Coventry	1.3%	1.4%	6.3%	11.5%
Cranston	1.1%	1.1%	6.8%	11.9%
Cumberland	1.4%	1.5%	4.6%	7.7%
East Greenwich	2.3%	2.3%	4.8%	9.8%
East Providence	1.1%	1.1%	4.6%	8.1%
Exeter	0.1%	0.1%	0.1%	0.3%
Foster	0.0%	2.7%	3.6%	N/A
Glocester	0.3%	3.2%	4.0%	6.9%
Hopkinton	0.2%	1.3%	1.6%	3.0%
Jamestown	0.4%	0.4%	1.1%	5.5%
Johnston	1.1%	1.1%	13.0%	19.2%
Lincoln	1.5%	1.6%	6.3%	10.0%
Little Compton	0.6%	0.6%	1.0%	N/A
Middletown	1.0%	1.0%	2.6%	8.0%
Narragansett	0.5%	0.5%	2.0%	8.6%
New Shoreham	1.1%	1.1%	1.5%	N/A
Newport	0.8%	0.8%	4.9%	19.5%
North Kingstown	1.1%	1.1%	3.3%	7.3%
North Providence	0.7%	0.7%	5.1%	6.8%
North Smithfield	2.0%	2.0%	3.7%	7.4%
Pawtucket	1.8%	1.8%	14.9%	20.1%
Portsmouth	0.4%	0.5%	2.7%	7.2%
Providence	4.4%	4.4%	17.8%	30.3%
Richmond	0.4%	1.4%	1.7%	3.2%
Scituate	0.4%	0.4%	0.6%	1.4%
Smithfield	0.5%	0.5%	3.1%	7.1%
South Kingstown	0.3%	0.3%	1.6%	4.2%
Tiverton	1.9%	2.2%	3.3%	7.2%
Warren	1.2%	1.9%	2.8%	5.3%
Warwick	0.5%	0.5%	6.0%	12.0%
West Greenwich	0.7%	1.1%	1.4%	3.4%
West Warwick	1.1%	1.1%	9.7%	16.4%
Westerly	1.4%	1.4%	2.4%	11.0%
Woonsocket	10.0%	10.0%	20.3%	22.3%

Meets recommended target

Exceeds recommended target slightly

Exceeds recommended target significantly

(Note: above ratios include allocation of Narragansett Bay Commission debt to municipalities in its service area.)

Analysis and Conclusions

This study represents the most comprehensive analysis of public debt in Rhode Island the state has ever undertaken. It reveals a complicated and nuanced picture, in which some arms of government in Rhode Island borrow well within their means and others struggle with significant liabilities that place great stress on government entities and the citizens they serve.

At the state level, the debt of Rhode Island and its quasi-public agencies is generally affordable and within acceptable levels as defined by ratings agencies. The debt and pension liabilities of the state of Rhode Island are somewhat higher than national medians, but have trended downward in recent decades and are currently manageable. Future decisions could alter the state's debt affordability considerably, for better or for worse, and debt affordability must remain a key consideration for state policymakers going forward.

At the municipal level, degrees of indebtedness vary greatly. Even when pension liabilities and overlapping debts from local districts are included, some municipalities enjoy very low liability burdens. The liabilities in some other municipalities are exceptionally high.

The purpose of this study is not to single out any particular public entity, and this report should not be read as a criticism of an entity that has a level of debt in excess of its recommended target. In most cases where an agency or municipality exceeds its target, it took on significant liabilities long before its current leadership was in place, and grappling with inherited legacy costs can be a tremendous challenge even for the most skilled management teams.

The authors of this study hope to provide a useful guide that policymakers in Rhode Island can refer to when making decisions in the future. Assuming new debt can be prudent and necessary to provide essential public services to citizens, but the decision to borrow with the public's dollars must always be made with care.

Debt Affordability Study

Part One: State tax-supported debt and long-term liabilities

Part One – State Tax-Supported Debt and Long-Term Liabilities

Part One of the debt affordability study focuses on the debt and long-term liabilities of the State and the obligations supported by the State's general operating budget. References to debt in this section refer to all tax-supported debt of the State. The study reviews various debt affordability measures to determine which would be appropriate measures to assess the State's debt affordability, and under these metrics, what the State's debt capacity is for future capital budget planning.

Outstanding Tax-Supported Debt

The State has several categories of outstanding tax-supported debt: (i) direct debt or general obligation bonds, (ii) appropriation debt, and (iii) moral obligation debt.

General Obligation Bonds

Under the State Constitution, the General Assembly cannot incur State debt in excess of $50,000 without the consent of the people, except in the case of war, insurrection or invasion. By judicial interpretation, this limitation has been judged to include all debts of the State for which the full faith and credit are pledged, including general obligation bonds and notes guaranteed by the State and debt or loans insured by agencies of the State. As of June 30, 2016, the State has a total of $1.05 billion of outstanding general obligation bonds.

Appropriation Debt and Moral Obligation Debt

The State has entered into certain contractual agreements which, while not considered general obligations of the state, are still subject to annual appropriation by the General Assembly. Certain of these obligations are contractual agreements with State agencies or authorities, including the Rhode Island Commerce Corporation and the Rhode Island Convention Center Authority and the Rhode Island Turnpike and Bridge Authority. In addition, the Rhode Island Commerce Corporation has entered into performance-based obligations for which the State has made partial payments for debt service.

The State also has moral obligation debt. Moral obligation debt differs from other debt obligations in that there is no legal requirement to make debt service payments. A moral obligation pledge represents a promise by a government obligor to seek future appropriations for debt service payments, typically in order to make up deficits in a reserve fund should it fall below its required level. While there is no legal requirement to appropriate funds sufficient to make the payment, rating agencies will view failure to do so unfavorably and likely take negative action on the state's rating. Certain agencies of the State have the ability to issue bonds which are also secured by a capital reserve fund. In accordance with enabling legislation, if at any time the capital reserve falls below its funding requirement, the agency is authorized to request the General Assembly to appropriate the amount of the agency. The following table summarizes the State's current outstanding moral obligation debt.

Issuer	Description	Outstanding as of June 30, 2016
Commerce Corporation	Job Creation Guaranty (38 Studios Bonds)	$53,965,000
Commerce Corporation	Fidelity Building Performance Agreement)	$10,043,400
Commerce Corporation	Fidelity Building II Performance Agreement	$7,150,896
Commerce Corporation	Fleet National Bank Performance Agreement	$6,950,000
RI Housing and Mortgage Finance Corporation	Multi-family Housing Bonds and Rental Housing Bonds	$65,669,132

Since the State has been meeting its obligation on the 38 Studios moral obligation bonds and the two Fidelity Management Resources projects and has been transferring sufficient funds to the Rhode Island

Commerce Corporation to satisfy the debt service obligations, this debt is included as tax-supported debt of the State. Other moral obligation bonds for the Fleet National Bank and Rhode Island Housing and Mortgage Finance Corporation, is not included as tax-supported debt for the purposes of this study since the State has never had to appropriate funds for debt service on these bonds.

Below is a summary of the debt subject to appropriation and moral obligation bonds and amounts outstanding as of June 30, 2016.

Debt Subject to Annual Appropriation	**Outstanding as of June 30, 2016**
Convention Center Authority	$203,880,000
Rhode Island Turnpike & Bridge Authority (Motor Fuel)	117,590,000
Commerce Corporation - Transportation (Motor Fuel)	53,965,000
Commerce Corporation - URI Power Plant	4,585,000
Commerce Corporation - Job Creation Guaranty	51,315,000
Projected Economic Development Corporation - I-195 Land Sale	38,400,000
Certificates of Participation, Series 2007A	1,565,000
Certificates of Participation, Series 2007B	6,485,000
Certificates of Participation, Series 2007D	10,145,000
Certificates of Participation, Series 2007E	930,000
Certificates of Participation, Series 2007F	2,940,000
Certificates of Participation, Series 2009B	6,485,000
Certificates of Participation, Series 2009C	22,775,000
Certificates of Participation, Series 2011A	18,555,000
Certificates of Participation, Series 2013A	30,515,000
Certificates of Participation, Series 2013B	30,655,000
Certificates of Participation, Series 2013C	12,945,000
Certificates of Participation, Series 2013D	6,700,000
Certificates of Participation, Series 2013E	12,510,000
Certificates of Participation, Series 2014A	10,700,000
Certificates of Participation, Series 2014B	7,465,000
Certificates of Participation, Series 2014C	27,930,000
Loan Agreement - Historic Structures Tax Credit Fund	106,995,000
Subtotal	$786,030,000
Performance Based Agreements	
Commerce Corporation- Fidelity Building	$10,043,400
Commerce Corporation- Fidelity Building II	7,150,896
Commerce Corporation- Providence Place Mall	17,940,000
Subtotal	$35,134,296
Total COPs + Other Tax-Supported Debt	$821,164,296

The table below summarizes the State's total outstanding tax-supported debt as of June 30, 2016 by type of debt.

Total Outstanding State Tax-Supported Debt
(as of June 30, 2016)

Fiscal Year	Outstanding General Obligation Bonds			Outstanding Lease Participation Certificates			Convention Center Authority + Commerce Corporation + RITBA Motor Fuel Tax Bonds + Other Tax-Supported Debt			Outstanding Tax-Supported Debt Service (as of June 30, 2016)		
	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Principal	Interest	Debt Service
2017	47,930,000	47,746,734	95,676,734	27,035,000	9,263,056	36,298,056	58,825,034	33,280,396	92,105,430	133,790,034	90,290,186	224,080,220
2018	79,995,000	45,916,491	125,911,491	22,975,000	8,145,125	31,120,125	62,090,675	29,168,585	91,259,260	165,060,675	83,230,201	248,290,876
2019	81,155,000	42,285,620	123,440,620	24,055,000	7,177,206	31,232,206	45,375,806	25,635,965	71,011,771	150,585,806	75,098,791	225,684,597
2020	85,865,000	38,411,227	124,276,227	25,250,000	6,102,594	31,352,594	47,835,838	23,121,004	70,956,842	158,950,838	67,634,825	226,585,663
2021	82,470,000	34,586,994	117,056,994	24,165,000	4,939,375	29,104,375	50,739,658	20,419,789	71,159,447	157,374,658	59,946,158	217,320,816
2022	81,520,000	30,724,126	112,244,126	19,795,000	3,813,413	23,608,413	38,283,928	18,049,900	56,333,828	139,598,928	52,587,439	192,186,367
2023	77,880,000	26,836,108	104,716,108	20,885,000	2,820,225	23,705,225	64,370,655	16,319,888	80,690,543	163,135,655	45,976,221	209,111,876
2024	78,185,000	23,116,083	101,301,083	17,865,000	1,814,913	19,679,913	35,810,827	22,559,282	58,370,109	131,860,827	47,490,278	179,351,105
2025	73,785,000	19,544,813	93,329,813	14,085,000	1,050,463	15,135,463	27,464,697	11,698,825	39,163,522	115,334,697	32,294,100	147,628,797
2026	76,740,000	15,887,573	92,627,573	3,395,000	621,819	4,016,819	28,937,537	10,275,064	39,212,601	109,072,537	26,784,455	135,856,992
2027	64,790,000	12,406,865	77,196,865	2,815,000	454,000	3,269,000	27,239,641	8,736,939	35,976,580	94,844,641	21,597,804	116,442,445
2028	50,890,000	9,532,571	60,422,571	2,980,000	315,925	3,295,925	8,590,000	6,342,327	14,932,327	62,460,000	16,190,823	78,650,823
2029	36,060,000	7,414,218	43,474,218	3,150,000	172,313	3,322,313	9,045,000	5,884,882	14,929,882	48,255,000	13,471,412	61,726,412
2030	37,685,000	5,523,162	43,208,162	850,000	13,813	863,813	9,550,000	5,378,387	14,928,387	48,085,000	10,915,362	59,000,362
2031	26,840,000	3,561,981	30,401,981				10,085,000	4,843,477	14,928,477	36,925,000	8,405,458	45,330,458
2032	28,105,000	2,302,037	30,407,037				10,605,000	4,331,015	14,936,015	38,710,000	6,633,052	45,343,052
2033	17,230,000	1,332,761	18,562,761				11,145,000	3,789,089	14,934,089	28,375,000	5,121,850	33,496,850
2034	11,770,000	753,466	12,523,466				11,770,000	3,163,590	14,933,590	23,540,000	3,917,056	27,457,056
2035	8,110,000	366,678	8,476,678				12,395,000	2,533,056	14,928,056	20,505,000	2,899,734	23,404,734
2036	4,805,000	144,150	4,949,150				6,160,000	1,866,850	8,026,850	10,965,000	2,011,000	12,976,000
2037							6,440,000	1,584,050	8,024,050	6,440,000	1,584,050	8,024,050
2038							6,740,000	1,286,750	8,026,750	6,740,000	1,286,750	8,026,750
2039							7,085,000	941,125	8,026,125	7,085,000	941,125	8,026,125
2040							7,450,000	577,750	8,027,750	7,450,000	577,750	8,027,750
2041							7,830,000	195,750	8,025,750	7,830,000	195,750	8,025,750
	1,051,810,000	368,393,657	1,420,203,657	209,300,000	46,704,238	256,004,238	611,864,296	261,983,733	873,848,029	1,872,974,296	677,081,628	2,550,055,924

Other Long-Term Liabilities

Pension liabilities

The Employees Retirement System of Rhode Island is a pooled defined benefit pension system that provides retirement income to nearly 60,000 public employees. The State is required by law to make budget appropriations to help fund the pension benefits of state employees, state police, and judges, while also splitting the cost of the pension system for teachers with the State's school districts.

The table below summarizes the projections of the unfunded actuarial accrued liability (UAAL) for State employees, the State share for teachers, State police and judges.

Projections for UAAL (State Employees, State Share for Teachers, State Police, Judges) ($ millions)					
	State Employees	**Teachers (State Share)**	**State Police**	**Judges**	**Total**
FY2016	$1,722.10	$1,093.51	$11.72	$0.89	$2,828.22
FY2017	$1,772.32	$1,129.73	$14.81	$2.01	$2,918.87
FY2018	$1,819.67	$1,163.28	$18.12	$3.24	$3,004.31
FY2019	$1,855.18	$1,192.29	$19.97	$4.20	$3,071.64
FY2020	$1,871.72	$1,210.11	$21.76	$5.15	$3,108.74
FY2021	$1,832.81	$1,189.46	$21.62	$5.08	$3,048.96
FY2022	$1,798.08	$1,172.13	$21.39	$4.98	$2,996.58
FY2023	$1,751.94	$1,148.32	$21.08	$4.87	$2,926.21
FY2024	$1,696.40	$1,120.48	$20.68	$4.72	$2,842.28
FY2025	$1,631.84	$1,088.99	$20.17	$4.55	$2,745.55
FY2026	$1,553.35	$1,049.77	$19.54	$4.35	$2,627.01
FY2027	$1,417.19	$975.99	$18.79	$4.12	$2,416.08
FY2028	$1,264.15	$893.28	$17.90	$3.84	$2,179.18
FY2029	$1,141.34	$830.75	$16.85	$3.53	$1,992.47
FY2030	$957.29	$732.57	$15.64	$3.17	$1,708.67
FY2031	$755.63	$626.05	$14.24	$2.76	$1,398.68
FY2032	$580.00	$507.80	$12.64	$2.30	$1,102.74
FY2033	$388.52	$408.97	$10.82	$1.78	$810.10
FY2034	$178.24	$301.38	$8.77	$1.20	$489.60
FY2035	$0.00	$184.60	$6.45	$0.55	$191.59
FY2036	$0.00	$115.20	$5.28	$0.77	$121.25

Projections assume all assumptions exactly met, including an annual 7.50% return on the current actuarial value of assets.
Source: Employees Retirement System of Rhode Island

The State has made its full Pension Annual Required Contribution (Pension ARC) for the last 19 years. In FY 2016, the state's Pension ARC totaled $256.32 million. The table below summarizes the actuarial projections for the Pension ARC for State employees, the State share for teachers, State police and judges.

Projections for Pension Contributions (State Employees, State Share for Teachers, State Police, Judges) ($ millions)					
	State Employees	Teachers (State Share)	State Police	Judges	Total
FY2016	$156.27	$94.82	$3.21	$2.02	$256.32
FY2017	$158.36	$97.66	$3.10	$2.01	$261.13
FY2018	$169.32	$102.22	$3.90	$1.98	$277.43
FY2019	$176.28	$107.58	$4.16	$2.01	$290.03
FY2020	$182.86	$112.66	$4.42	$2.04	$301.98
FY2021	$190.05	$117.66	$4.69	$2.16	$314.56
FY2022	$198.40	$122.48	$4.99	$2.31	$328.17
FY2023	$204.21	$124.65	$5.30	$2.46	$336.62
FY2024	$211.79	$127.87	$5.42	$2.59	$347.67
FY2025	$217.81	$131.12	$5.57	$2.73	$357.23
FY2026	$224.29	$134.25	$5.75	$2.74	$367.03
FY2027	$231.21	$137.75	$5.93	$2.70	$377.59
FY2028	$238.28	$141.25	$6.12	$2.68	$388.32
FY2029	$241.78	$142.39	$6.30	$2.65	$393.13
FY2030	$246.02	$143.62	$6.47	$2.54	$398.65
FY2031	$253.62	$147.48	$6.67	$2.48	$410.25
FY2032	$257.00	$148.72	$6.89	$2.40	$415.02
FY2033	$262.30	$150.12	$7.14	$2.27	$421.82
FY2034	$270.59	$151.53	$7.39	$2.34	$431.86
FY2035	$28.71	$97.69	$6.27	$1.56	$134.23
FY2036	$29.37	$100.43	$7.50	$2.11	$139.41

Source: The Pension ARC is based on projections provided by the Employee Retirement System of Rhode Island.
Projections assume all assumptions exactly met, including an annual 7.50% return on the current actuarial value of assets.

OPEB

Pursuant to legislation enacted by the General Assembly, the State established a trust in fiscal year 2011 to accumulate assets and pay benefits and costs associated with OPEB plans, and effective in fiscal year 2011, all participating employers were required by law to fully fund the actuarially determined OPEB annual required contribution (OPEB ARC). The most recent actuarial study completed as of June 30, 2015 estimates the OPEB unfunded liability at approximately $593 million for State employees, teachers, state police, legislators and board of education. The total OPEB ARC for the fiscal year beginning July 1, 2017 will be $60.7 million. Rhode Island is one of only a handful of states to consistently fund 100% of the OPEB ARC in recent years.

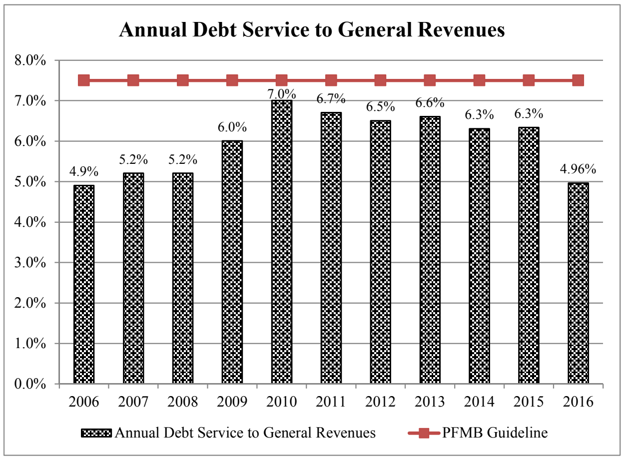
Common Debt Affordability Measures

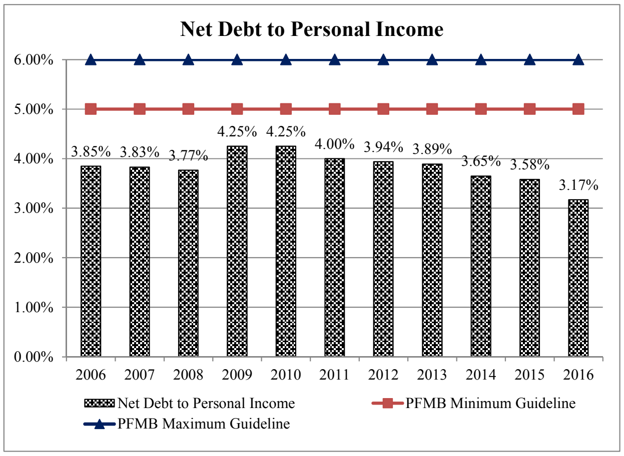
Prior PFMB Credit Guidelines

In 1999, the PFMB adopted guidelines for State tax-supported debt intended to be restrictive enough to maintain affordable debt levels, with enough flexibility to facilitate the funding of critical infrastructure needs. The 1999 guidelines were as follows:

- Tax-Supported Debt to not exceed the target range of 5.0% to 6.0% of personal income
- Debt Service on Tax-Supported Debt to not exceed 7.5% of General Revenues

Rhode Island has successfully remained within these targets in recent years.





Debt Ratios Used By Other States

There are a number of different ratios used by other issuers, state governments, and rating agencies to measure debt affordability, such as:

Debt Service as Percent of State Revenues =	<u>Annual Debt Service Requirement</u> General Revenues of the State
Debt per Capita =	<u>Net Tax-Supported Debt</u> State's Population
Debt as Percent of Personal Income =	<u>Net Tax Supported Debt</u> Total Personal Income of State's Population
Debt as Percent of State Revenues =	<u>Net Tax Supported Debt</u> General Revenues of the State
Debt as % of Full Valuation of Taxable Property =	<u>Net Tax Supported Debt</u> Full Valuation of All Taxable Property
Debt as % of Gross State Product =	<u>Net Tax Supported Debt</u> Gross State Product
Rapidity of Repayment =	<u>Total Net-Tax Supported Debt Retired in 10 Years</u> Total Net-Tax Supported Debt

The table below summarizes debt ratios used by states identified in previous PFMB reports as peer states to Rhode Island based on size and region. For additional comparisons, Appendix A provides debt capacity measures used by other states. While analyzing which ratios other states use is informative, Rhode Island must consider its own set of circumstances to determine which debt affordability measures are most suitable.

Debt Affordability Ratios Used by Peer States

State	Debt Service to Revenues	Debt to Personal Income	Debt to Revenues	Debt per Capita	Other
Rhode Island (Aa2/AA/AA)	7.5% of General Revenues	5.0% - 6.0%			
Delaware (Aaa/AAA/AAA)	MADS < 15% of General + Transportation Trust Fund Revenues		New debt ≤ 5% of Net Budgetary General Fund Revenue for Fiscal Year		G.O. MADS < Estimated Cash Balance for following fiscal year
Connecticut (Aa3/AA-/AA-)			Outstanding and Authorized but Unissued Debt ≤ 160% of General Fund Tax Receipts		
Maine (Aa2/AA/AA)	5.0% of General Revenues				
Massachusetts (Aa1/AA+/AA+)	8.0% of Annual Budgeted Revenues				
New Hampshire (Aa1/AA/AA+)	10% of Unrestricted General Fund Revenues in Prior Fiscal Year				
Vermont (Aaa/AA+/AAA)	6.0% of Annual Aggregate of General + Transportation Trust Fund Revenues	≤ 5-Year Average of the mean and median of a peer group of triple-A rated states		≤ 5-Year Average of the mean and median of a peer group of triple-A rated states	

MADS = maximum annual debt service.

Pension and OPEB Considerations

The municipal debt market has seen increasing attention on pension liabilities and OPEB liabilities over the years. Pension ARCs are long-term fixed costs, similar to debt service, both of which can impact expenditures and create structural imbalance if not managed prudently, and therefore, should be taken into consideration in assessing a government's long-term liability burden. While rating agencies have always taken pension funding into consideration, updated rating agency state ratings methodologies released in recent years have included increasing quantification of pension liabilities. Rating agencies have not viewed OPEB liabilities similar to debt since states generally have the legal flexibility to adjust OPEB liabilities. However, severely underfunded OPEB liabilities can influence the assessment of the long-term liability burden. Similar to the debt ratios above, the following ratios have been used to measure the burden of pension and OPEB liabilities, but with the pension liability or OPEB liability used in the numerator rather than debt and these ratios can also be calculated with just the pension or OPEB liability or added together with debt:

- Unfunded Liability per Capita
- Unfunded Liability as Percent of Personal Income
- Unfunded Liability as Percent of State Revenues
- Unfunded Liability as Percent of Gross State Product
- Pension/OPEB ARC as Percent of State Revenues

Debt Ratios Used by Rating Agencies

Debt and other long-term liabilities is one factor that the rating agencies consider in the assessment of a state's overall financial health. The rating agencies evaluate debt burden and debt affordability and also consider the state's capacity to meet its other long-term obligations, such as unfunded pension liabilities. Described below are the approaches of the three major rating agencies in assessing measuring debt and long-term liabilities.

<u>Fitch Ratings</u>: In Fitch's "U.S. Tax-Supported Rating Criteria" released April 18, 2016, one of the key rating drivers is long-term liability burden. Fitch uses the following metric to measure long-term liability burden:

Direct Debt + Fitch's Adjusted Direct Unfunded Pension Liability
Personal Income

The Fitch pension adjustment inflates the reported pension liability by 11% for every 1% by which the assumed investment return exceeds 7%. No adjustment is made if the pension's assumed return is already at or below 7.0%. As measured by Fitch, Rhode Island's long-term liability burden is 10.6% of personal income, which is above the state median of 5.8% (as reported in Fitch's 2015 pension update). The following table summarizes how Fitch views the long-term liability burden:

Liability Burden	Low	Moderate	Elevated but Still in Moderate Range	High	Very High
Rating Assessment	AAA	AA	A	BBB	BB
Ratio Level	Liabilities Less than 10% of Personal Income	Liabilities Less than 20% of Personal Income (RI = 10.6%)	Liabilities Less than 40% of Personal Income	Liabilities Less than 60% of Personal Income	Liabilities 60% or More of Personal Income

Rhode Island ratio as calculated by Fitch.

While Fitch does not include OPEB as part of the calculation of long-term liability burden, Fitch states that the liability assessment burden could be negatively affected by "exceptionally large" OPEB liability without the ability or willingness to make changes to the benefits.

Moody's Investors Service. In Moody's updated "US States Rating Methodology" published on April 13, 2013, Moody's introduced a new state methodology scorecard, which was intended to provide guidance for the factors that generally are the most important in determining the ratings for states. In this scorecard, debt is given a 20% weight with bonded debt comprising 10% and adjusted net pension liabilities providing the remaining 10%. The table below summarizes the debt factors used by Moody's and how the ratios are assessed by rating category. Moody's calculations of the ratios are also shown in the table.

Measurement	**Aaa**	**Aa1**	**Aa2**	**Aa3**	**A**	**Baa and below**
NTSD/Total Governmental Fund Revenues	Less than 15%	15% - 30%	30% - 50% (RI = 31.7%)	50% - 90%	90% - 130%	Greater than 130%
3-Yr Average ANPL/ Total Governmental Fund Revenues	Less than 25%	25% - 40%	40% - 80% (RI = 80%)	80% - 120%	120% - 180%	Greater than 180%

Rhode Island ratios as calculated by Moody's.
NTSD = Net Tax-Supported Debt. ANPL = Adjusted Net Pension Liability.

To calculate Moody's Adjusted Net Pension Liability (ANPL), Moody's adjusts the reported unfunded actuarial accrued liabilities to reflect their preference for a market discount rate and also assigns liabilities to other participating governments. Moody's then takes a three-year average to reduce year-to-year volatility.

While not part of the scorecard but reported in the annual State Debt Medians report, Moody's also considers debt to personal income, debt per capita, debt to gross state product and debt service as a percentage of revenue. Additionally, Moody's does not include OPEB liabilities in its scorecard, but in the case of severely underfunded OPEB liabilities the scoring for the debt factor could be adjusted lower.

Standard & Poor's. Standard & Poor's published its new rating methodology for states, "U.S. State Ratings Methodology," on October 17, 2016. Standard & Poor's states that its new methodology "better aligns our criteria with revised governmental pension reporting and disclosure standards." The five main factors in Standard & Poor's analytic framework are the same factors it has always reviewed: government framework, financial management, economy, budgetary performance and debt and liability profile. Under the debt and liability profile, Standard & Poor's evaluates three key metrics, which are scored individually and carry equal weight: debt burden, pension liabilities and OPEB. For each metric, there may be multiple indicators that are scored from 1 (strongest) to 4 (weakest) and then averaged to develop the overall score for the metric. These indicators are provided in the table below. Rhode Island has not been reviewed yet under this new methodology, but Standard & Poor's calculations of these ratios under the previous methodology are indicated in the table below. Standard & Poor's assigned a 2.3 score to Rhode Island's debt and liability profile in its April 2016 report, based on its previous criteria.

Indicator	Score:1	Score: 2	Score: 3	Score: 4
Debt Burden				
Debt per Capita	Below $500	$500 - $2,000 (RI = $1,672)	$2,000 - $3,500	Above $3,500
Debt to Personal Income	Below 2%	2% - 4% (RI – 3.3%)	4% - 7%	Above 7%
Debt Service to General Government Spending	Below 2%	2% - 6%	6% - 10% (RI = 7.2%)	Above 10%
Debt to Gross State Product	Below 2%	2% - 4% (RI = 3.2%)	4% - 7%	Above 7%
Debt Amortization (10 Years)	80% - 100%	60% - 80% (RI = 79%)	40% - 60%	Less than 40%
Pension Liabilities				
3-Year Avg Pension Funded Ratio	90% or above	80% - 90%	60% - 80%	60% or below (RI = 58.8%)
Pension Funding Discipline	Pension contribution is actuarially based and full funding of ARC. Total plan contributions > service cost + interest + amortization component (RI funding actuarial ARC for last 19 years)	Pension contribution is not actuarially based and ARC is not fully funded. Total plan contributions > service cost + interest + amortization component	Pension contribution is actuarially based and full funding of ARC. Total plan contributions <= service cost + interest + amortization component	Pension contribution is not actuarially based and ARC is not fully funded. Total plan contributions <= service cost + interest + amortization component
Unfunded Pension Liabilities per Capita	Positive Adjustment: At or Below $500 Negative Adjustment: At or Above $3,500 (RI = $2,623 – No adjustment to initial pension score)			
Unfunded Pension Liabilities to Personal Income	Positive Adjustment: At or Below 2% Negative Adjustment: At or Above 7% (RI = 5.2% - No adjustment to initial pension score)			
OPEB Risk Assessment				
OPEB Risk Assessment	Limited benefits, high level of discretion to change benefits, pay-go costs not significantly different from ARC	Average liability relative to other states, proactive management of liability, some flexibility to change benefit levels, contributions in excess of annual pay-go amount (RI = Moderate)	Above average liability relative to other states, options to address liability are being considered but plans not well-developed, limited flexibility to change benefits	High liability relative to other states, high level of benefits and inflexible to change, lack of action to address liability leading to accelerating pay-go amount

Rhode Island ratios and assessment as derived by Standard & Poor's.

Summary of Rating Agency Ratios. The table below summarizes the debt and pension ratios used by the three major rating agencies, including those used in the respective scoring and those that the rating agencies also take into consideration but not used in scoring.

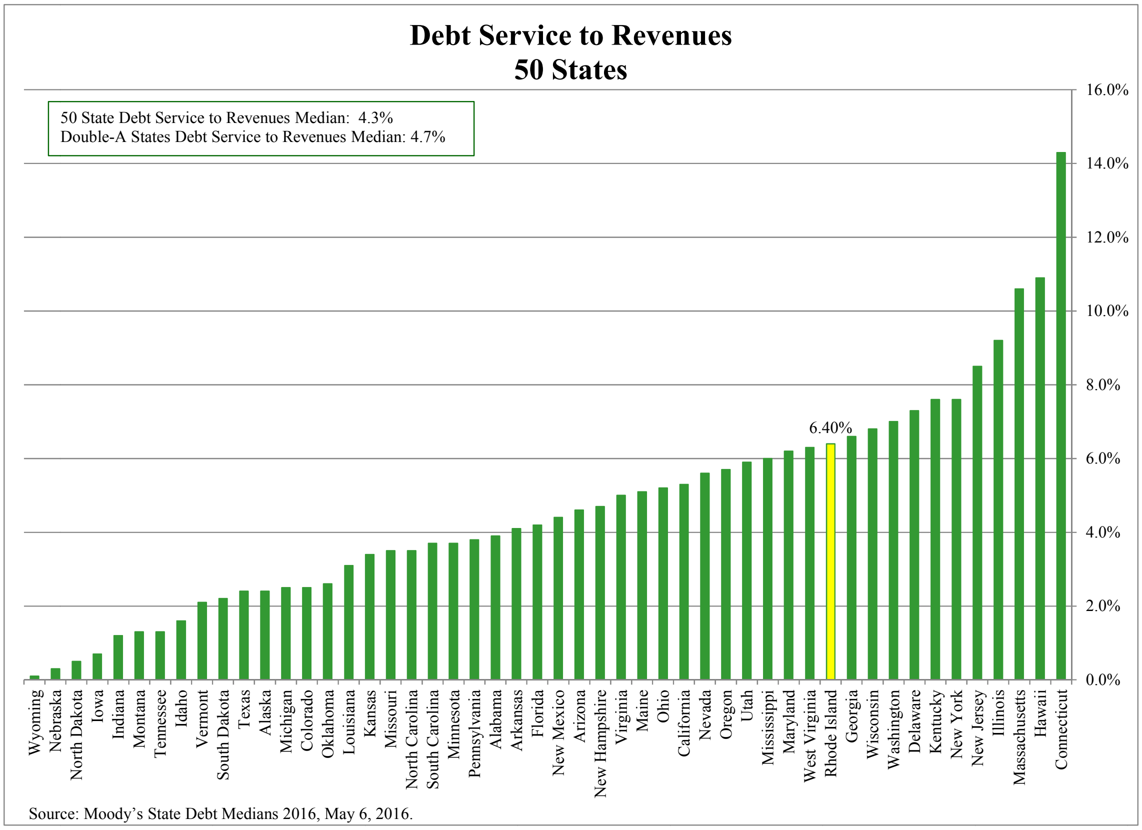
Debt Ratio	Fitch	Moody's	S&P
Debt to Personal Income	✓	✓	✓
Debt to Revenues		✓	
Debt Service to Revenues		✓	
Debt Service to Expenditures			✓
Debt Per Capita		✓	✓
Debt to Gross State Product		✓	✓
Rapidity of Repayment	✓		✓
Pension Ratio			
3-Year Average Pension Funded Ratio			✓
Pension Funding Levels	✓		✓
Unfunded Pension Liabilities Per Capita			✓
Pension Liabilities to Personal Income			✓
3-Year Average Pension Liability to Revenues		✓	
Debt + Unfunded Pension Liability to Personal Income	✓		

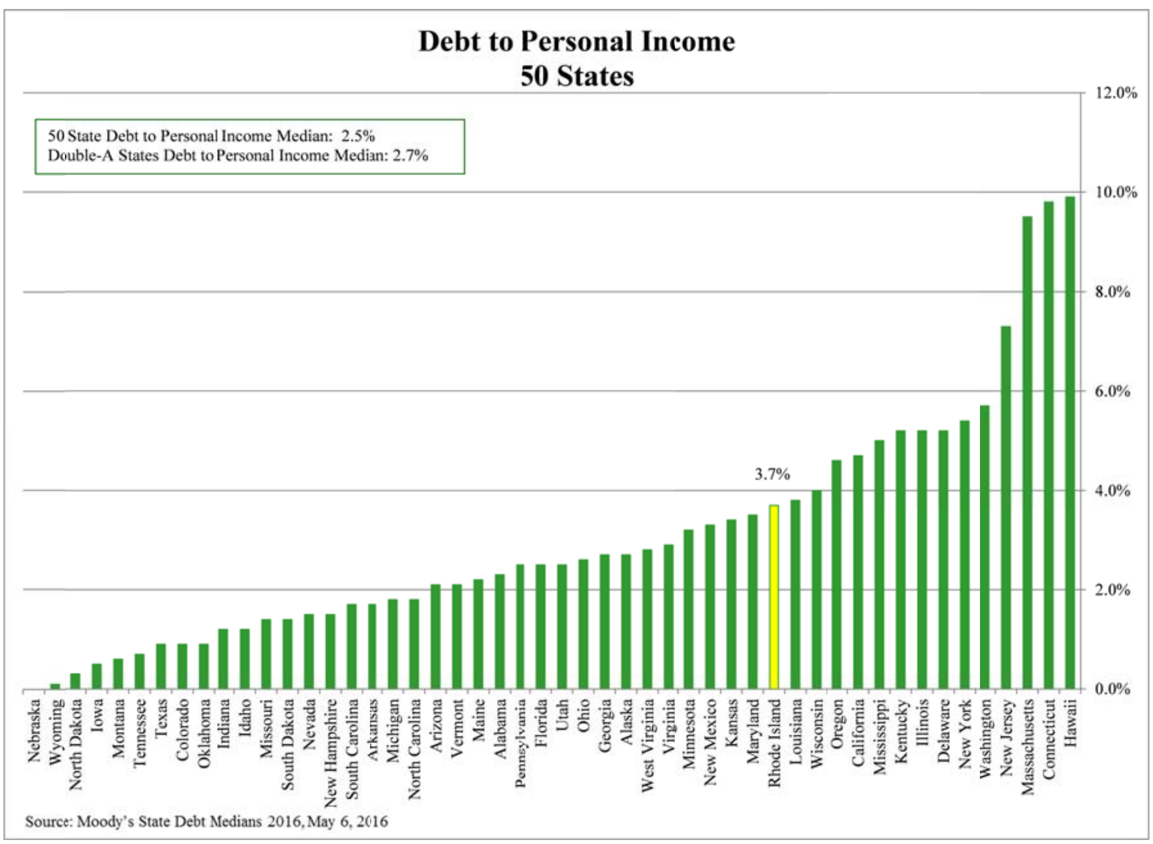
A full list of Rating Agency Debt and Liability Ratios and Medians, including a summary of each state's liability burden under the various Rating Agency criteria, can be found in the appendix.

Peer Comparisons

In addition to Rating Agency guidance, the PFMB found it useful to consider how Rhode Island's debt and pension liability burdens compare to peer states. While "following the herd" may not always yield the correct results, it can be helpful to understand the national context and the decision that other state-level policy makers have made.

The following graphs show how the states compare on two commonly used debt affordability ratios, Debt Service to Revenues, and Debt to Personal Income.

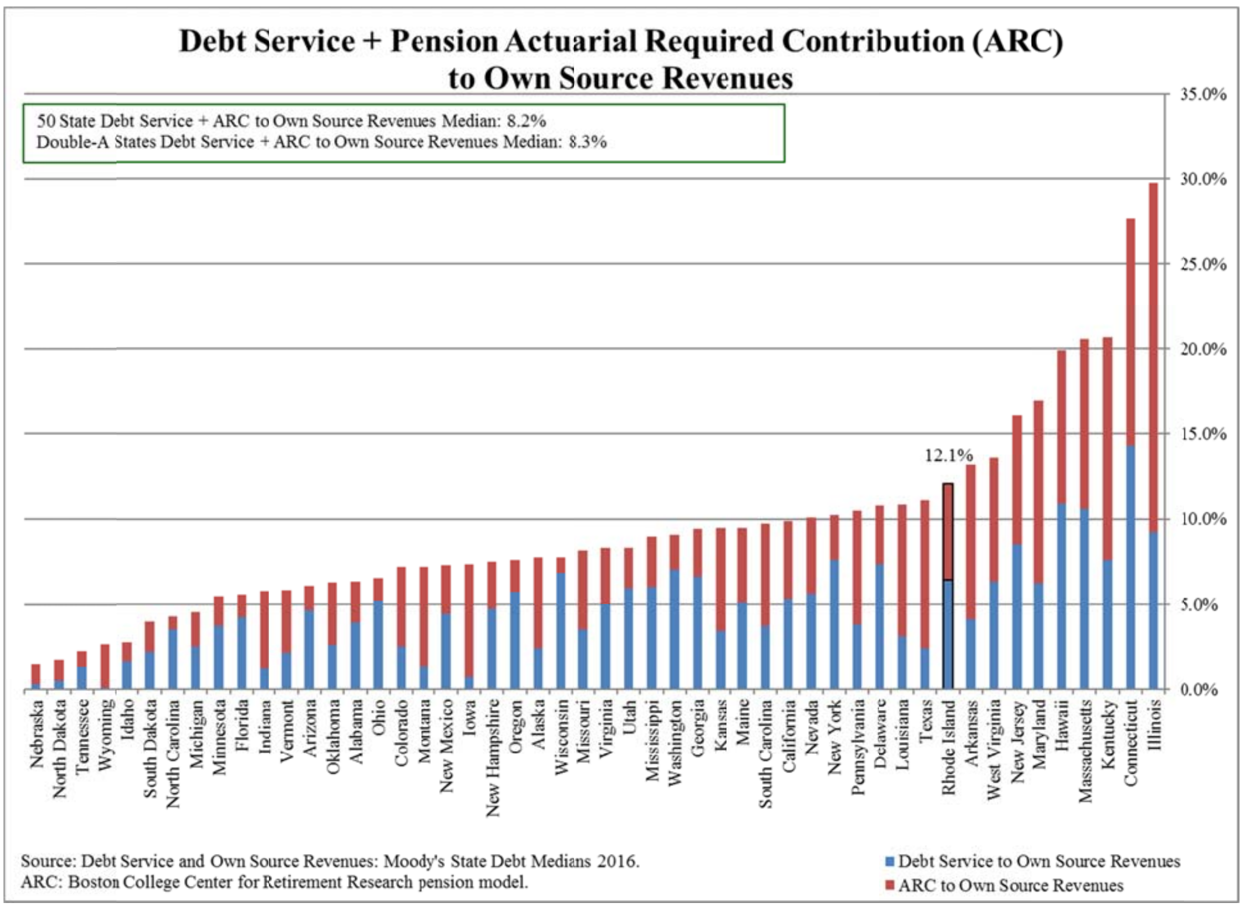

Debt Service to Revenues
50 States
50 State Debt Service to Revenues Median: 4.3%
Double-A States Debt Service to Revenues Median: 4.7%
6.40%
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
Wyoming
Nebraska
North Dakota
Iowa
Indiana
Montana
Tennessee
Idaho
Vermont
South Dakota
Texas
Alaska
Michigan
Colorado
Oklahoma
Louisiana
Kansas
Missouri
North Carolina
South Carolina
Minnesota
Pennsylvania
Alabama
Arkansas
Florida
New Mexico
Arizona
New Hampshire
Virginia
Maine
Ohio
California
Nevada
Oregon
Utah
Mississippi
Maryland
West Virginia
Rhode Island
Georgia
Wisconsin
Washington
Delaware
Kentucky
New York
New Jersey
Illinois
Massachusetts
Hawaii
Connecticut
Source: Moody's State Debt Medians 2016, May 6, 2016.

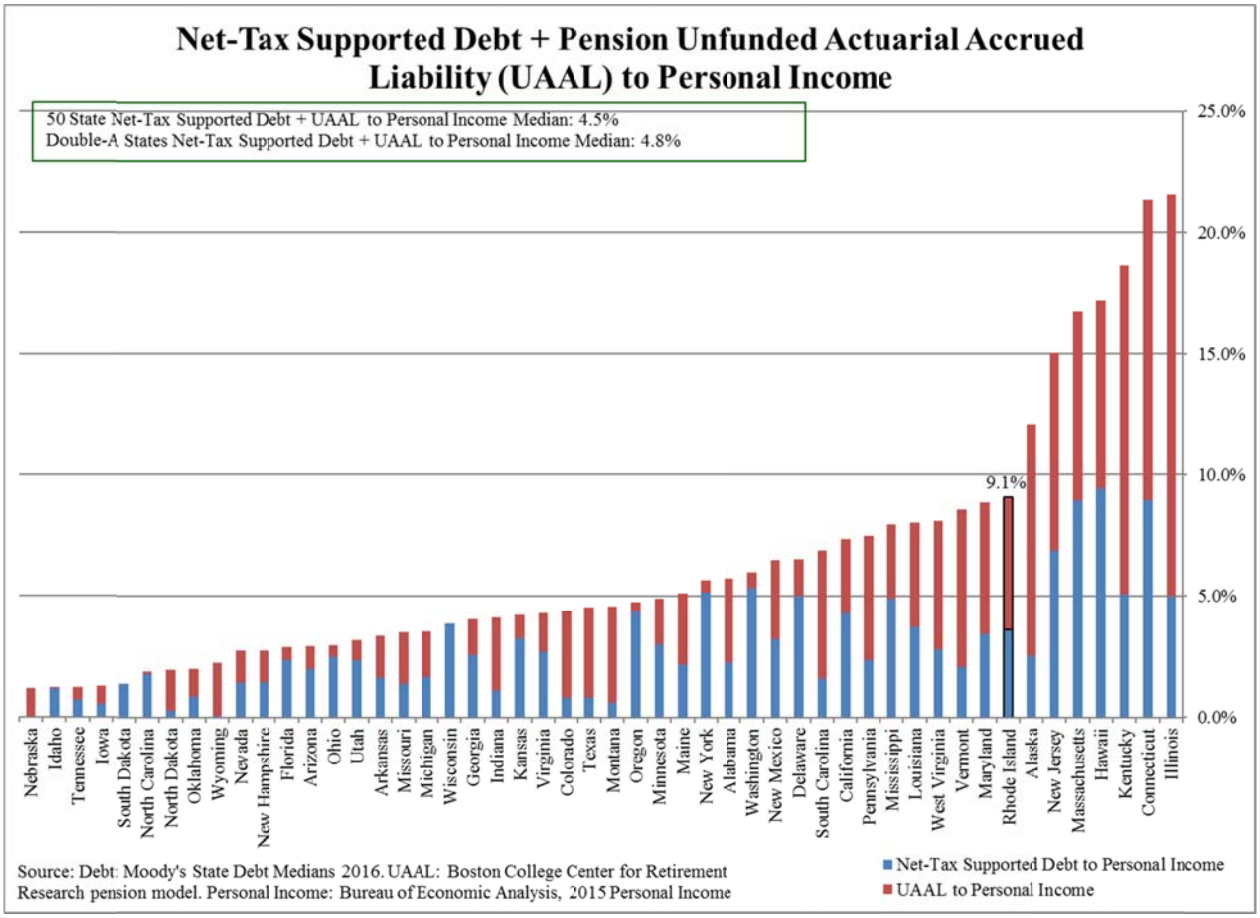

Debt to Personal Income
50 States
50 State Debt to Personal Income Median: 2.5%
Double-A States Debt to Personal Income Median: 2.7%
3.7%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
Nebraska
Wyoming
North Dakota
Iowa
Montana
Tennessee
Texas
Colorado
Oklahoma
Indiana
Idaho
Missouri
South Dakota
Nevada
New Hampshire
South Carolina
Arkansas
Michigan
North Carolina
Arizona
Vermont
Maine
Alabama
Pennsylvania
Florida
Utah
Ohio
Georgia
Alaska
West Virginia
Virginia
Minnesota
New Mexico
Kansas
Maryland
Rhode Island
Louisiana
Wisconsin
Oregon
California
Mississippi
Kentucky
Illinois
Delaware
New York
Washington
New Jersey
Massachusetts
Connecticut
Hawaii
Source: Moody's State Debt Medians 2016, May 6, 2016

Comparing pension liabilities across states can be challenging, as the pension liabilities and annual costs that states report can vary considerably based on the assumptions and policies that states use to govern their pension systems. For example, all else equal, a pension system that assumes an 8% assumed investment rate of return in calculating its liability will report a lower liability than a state assuming a 7% rate of return. A state that amortizes its pension payments over 25 years will have lower up-front costs than a state that amortized over 20 years. In order to draw a true comparison of pension liabilities across states, an attempt must be made to normalize the state pension liabilities across a common set of assumptions.

The PFMB partnered with the Center for Retirement Research at Boston College (CRR) to develop a model in which the pension liabilities of all 50 states were adjusted to conform to the assumptions that Rhode Island uses for its pension system. This normalization helps to provide a better "apples to apples" comparison of the relative pension liabilities of each state. More information on the CRR methodology can be found in the appendix.

The following graphs show the combined debt and pension liabilities of each state, utilizing the normalized pension liabilities produced by the CRR model.





Recommended Long-Term Liability Affordability Measures

Rhode Island can measure state debt affordability with a variety of ratios. No single gauge of debt affordability is perfect and the State should employ multiple debt and liability ratios that compare the State's debt burden with the resources available for meeting these obligations. The use of multiple debt and liability ratios will ensure both near-term affordability and long-term capacity to maintain financial health and flexibility. Additionally, with increasing focus on pension liabilities and the recognition that these are fixed costs similar to debt, the PFMB integrates pension liabilities in the assessment of affordability of long-term obligations.

After a review of the debt burden metrics, the PFMB has determined the ratios that best measure debt burden for the State and will establish a policy target to be used for planning purposes. In the event of an economic downtown or if increased capital spending is needed to manage emergency situations, the policy targets may be exceeded temporarily, but the expectation is to return to the level of the established targets. Each measure is discussed in more detail below.

- Debt Service on Net Tax-Supported Debt as a percentage of General Revenues;
- Net Tax-Supported Debt as percentage of Personal Income;
- Rapidity of Repayment or the amount of debt to be retired over the next ten years;
- Net Tax-Supported Debt Service + Pension ARC as a percentage of General Revenues;
- Net Tax-Supported Debt + Pension Liability (UAAL) as a percentage of Personal Income; and
- Pension ARC and OPEB ARC should be funded at 100%.

Debt Service to General Revenues.

The metric most frequently used by states to assess debt affordability is debt service as a percent of State revenues, comparing annual debt service to annual State revenues and providing an indicator of near-term affordability. This is a good measure because it provides a direct comparison of the state's debt obligations to the currently available resources to pay them. The target level for the debt service to revenues ratio should be set to ensure that annual debt service payments do not consume so much of the State's annual operating budget as to hinder the State's ability to provide core government services and provide flexibility to respond to economic downturns. This ratio is also appropriate because both components are within the control of the State.

The 1999 PFMB guidelines included a target debt service to revenues ratio of 7.5% and in review of other states that use this ratio for debt affordability, the target levels generally range from 5% to 10%. The median is 4.3% for all 50 states with a range of 0.5% (North Dakota) to 14.3% (Connecticut). Since 2000, the State has been below 7% in all years except in 2010 when the debt service to revenues ratio was at 7%.

The PFMB recommends that Debt Service to General Revenue not exceed 7.5% within the next 5 years and 7.0% thereafter.

Debt to Personal Income.

Debt to personal income represents a broader measure of a state's ability to pay its debts is needed. State personal income represents income received by residents of the state and is not directly dependent on policy choices, and it represents the base from which state revenues will be generated. All three rating agencies review debt to personal income ratio as part of the rating process, and the ratio is a good measure for long-term debt affordability.

The 1999 PFMB guidelines include the target range of tax-supported debt to personal income of 5.0% to 6.0%. In 2000, this ratio was 5.02%, but since then has been below 5.0% and since 2011 has been below 4.0%.

The PFMB recommends that State Tax-Supported Debt to Income not exceed 4.0%.

Rapidity of Debt Repayment.

The rapidity of debt repayment ratio measures how much of the State's total long-term debt is retired after 10 years. Credit analysts view rapid repayment more favorably than slower amortization with 50% retired in 10 years as average. The State typically structures its general obligation bonds with 20-year amortization to achieve level debt service, which on its own will permit the State to retire 50% or more of its debt within 10 years. This will ensure retirement of debt sufficiently fast enough to allow for additional capacity in future years. PFMB notes that the State's current debt structure results in rapidity of repayment of tax-supported debt in 10 years of over 70% which resulted from past general obligation debt restructuring.

The PFMB recommends that expected Rapidity of Debt Repayment equal at least 50% in 10 years.

Ratios with Pension Liabilities

States have begun to review their debt affordability criteria while also considering whether to include additional metrics to account for unfunded pension liabilities and OPEB liabilities. To date, no state has added a metric accounting for pension or OPEB liabilities in their debt affordability analysis. However, since rating agencies have incorporated pension ratios in the updated rating methodology for states, states will likely eventually incorporate a metric accounting for pension liabilities.

The funding of the pension annual required contribution (ARC) is a gauge of the effort states are making to fund their pension plans. A state that has paid the ARC in full has met its obligation to cover the pension benefits accrued that year and to pay down a portion of any liabilities that were not pre-funded in previous years. Assuming projections of actuarial experience hold true, a payment less than the full ARC means the unfunded liability will grow and require greater contributions in future years. The unfunded accrued actuarial liability (UAAL) is the appropriate pension liability measure since it the basis for determining a portion of the ARC.

- ***The PFMB recommends that Debt Service + Pension ARC to General Revenues not exceed 16%***
- ***The PFMB recommends that Debt + Pension Liability (UAAL) to Personal Income not exceed 8%, beginning in 2021.***
- ***PFMB recommends the state continue to fund 100% of its Pension ARC and OPEB ARC.***

Current Debt and Pension Projections

Based on currently outstanding State tax-supported debt and pension liabilities as of June 30, 2016, the table on the next page summarizes the maximum level of each target ratio.[3] While these numbers do not include new debt that may be added in the future, it is still useful to consider the projected cost of the State's existing liabilities relative to the recommended targets.

Debt and Pension Ratios
Based on Current Outstanding Net Tax-Supported Debt

Ratio	Maximum Level
Debt Service on Tax-Supported Debt to General Revenues	6.64% (FY2018)
Net Tax-Supported Debt as Percentage of Personal Income	3.40% (FY2017)
Rapidity of Repayment over 10 Years	76% (FY2017)
Net Tax-Supported Debt Service + Pension ARC as a Percentage of General Revenues	13.83% (FY2023)
Net Tax-Supported Debt + Pension Liability (UAAL) as a Percentage of Personal Income	8.52% (FY2017)
Pension ARC and OPEB ARC Funding Level	100%

Current and Authorized Debt and Pension Projections

Further, the State currently has authorized but unissued debt of $319.575 million for general obligation bonds and $219.210 million for debt subject to appropriation. An additional $227.5 million of debt was approved by referendum in November. With the passage of the referendum, the State has a total of approximately $766.285 million in authorized but unissued debt, as summarized below.

Current Authorized but Unissued GO Debt	$319,575,000*
November 2016 Referenda GO Debt	227,500,000
Total GO Authorized but Unissued Debt	$547,075,000
Current Authorized but Unissued Appropriation Debt	219,210,000**
Total Authorized but Unissued Debt	$766,285,000

* $60.5 million is not planned to be issued under the current 5-year capital plan.
** $81.7 million is not planned to be issued under the current 5-year capital plan.

[3] The pension liability is the State's projected UAAL as provided by the Employees Retirement System of Rhode Island. The General Revenues are based on the projected revenues for FY2017 through FY2021 that was incorporated into the FY2017 enacted budget, and after FY2021, annual growth in General Revenues is assumed to be 0.50%, based on guidance from the State Budget Office. The projected personal income for FY2017 through FY2021 is based on the forecast in the November 2016 Revenue Estimating Conference report, and after FY2022, annual growth is assumed to be 3.00%, based on guidance from the State Budget Office.

The table below shows the projected debt burden ratios with all currently outstanding State tax supported debt and the full issuance of the $766.285 million authorized but unissued debt in equal annual amounts over the period FY2017 through FY2021 at 5.00% interest and amortized over 20 years, structured as level debt service.

With the assumed issuance of all authorized but unissued debt over the next five years, the following summarizes the maximum of each ratio:

Debt and Pension Ratios
Based on Current Outstanding Net Tax-Supported Debt + Authorized and Unissued Debt

Ratio	Maximum Level (Year of Occurrence)
Debt Service on Tax-Supported Debt to General Revenues	6.97% (FY2018 and FY2023)
Net Tax-Supported Debt as Percentage of Personal Income	3.40% (FY2017)
Rapidity of Repayment over 10 Years	76% (FY2017)
Net Tax-Supported Debt Service + Pension ARC as a Percentage of General Revenues	15.42%% (FY2023)
Net Tax-Supported Debt + Pension Liability (UAAL) as a Percentage of Personal Income	8.52% (FY2017)
Pension ARC and OPEB ARC Funding Level	100%

Outstanding Tax- Supported Debt and Pension Liabilities
Debt and Pension Ratios

	Outstanding Tax-Supported Debt Service (as of June 30, 2016)			**Target PFMB Guidelines: Debt Service to General Revenues: Less Than 7.5% Within Next 5 Years and 7.0% Thereafter Tax-Supported Debt to Personal Income: 4.0%**				**Debt + Pension Ratios**			
Fiscal Year	Principal	Interest	Debt Service	General Revenues	Outstanding Tax-Supported DS to Revenues	Personal Income	Tax-Supported Debt to Personal Income	Pension ARC	Tax-Supported DS + Pension ARC to Revenues	Projected UAAL	Tax-Supported Debt + UAAL to Personal Income
2017	133,790,034	90,290,186	224,080,220	3,674,742,668	6.10%	55,167,600,000	3.40%	256,320,447	13.07%	2,828,215,805	8.52%
2018	165,060,675	83,230,201	248,290,876	3,737,237,978	6.64%	57,389,900,000	3.03%	261,126,905	13.63%	2,918,866,146	8.12%
2019	150,585,806	75,098,791	225,684,597	3,745,894,748	6.02%	59,859,200,000	2.63%	277,426,348	13.43%	3,004,305,781	7.65%
2020	158,950,838	67,634,825	226,585,663	3,794,833,717	5.97%	62,416,700,000	2.28%	290,025,315	13.61%	3,071,643,695	7.20%
2021	157,374,658	59,946,158	217,320,816	3,847,663,594	5.65%	64,965,900,000	1.95%	301,981,514	13.50%	3,108,735,096	6.73%
2022	139,598,928	52,587,439	192,186,367	3,866,901,912	4.97%	67,634,200,000	1.64%	314,563,239	13.10%	3,048,958,469	6.15%
2023	163,135,655	45,976,221	209,111,876	3,886,236,422	5.38%	69,663,000,000	1.39%	328,173,642	13.83%	2,996,583,946	5.69%
2024	131,860,827	47,490,278	179,351,105	3,905,667,604	4.59%	71,752,000,000	1.12%	336,619,084	13.21%	2,926,205,254	5.20%
2025	115,334,697	32,294,100	147,628,797	3,925,195,942	3.76%	73,904,000,000	0.91%	347,668,886	12.62%	2,842,280,241	4.76%
2026	109,072,537	26,784,455	135,856,992	3,944,821,921	3.44%	76,121,000,000	0.73%	357,229,504	12.50%	2,745,552,992	4.34%
2027	94,844,641	21,597,804	116,442,445	3,964,546,031	2.94%	78,404,000,000	0.57%	367,034,977	12.20%	2,627,011,783	3.92%
2028	62,460,000	16,190,823	78,650,823	3,984,368,761	1.97%	80,756,000,000	0.44%	377,587,891	11.45%	2,416,083,834	3.43%
2029	48,255,000	13,471,412	61,726,412	4,004,290,605	1.54%	83,178,000,000	0.35%	388,321,482	11.24%	2,179,178,470	2.97%
2030	48,085,000	10,915,362	59,000,362	4,024,312,058	1.47%	85,673,000,000	0.28%	393,125,091	11.23%	1,992,471,964	2.61%
2031	36,925,000	8,405,458	45,330,458	4,044,433,618	1.12%	88,243,000,000	0.22%	398,648,318	10.98%	1,708,668,534	2.16%
2032	38,710,000	6,633,052	45,343,052	4,064,655,786	1.12%	90,890,000,000	0.17%	410,250,226	11.21%	1,398,683,392	1.71%
2033	28,375,000	5,121,850	33,496,850	4,084,979,065	0.82%	93,616,000,000	0.13%	415,020,461	10.98%	1,102,739,500	1.30%
2034	23,540,000	3,917,056	27,457,056	4,105,403,961	0.67%	96,424,000,000	0.09%	421,819,279	10.94%	810,101,503	0.93%
2035	20,505,000	2,899,734	23,404,734	4,125,930,980	0.57%	99,316,000,000	0.07%	431,856,018	11.03%	489,595,532	0.56%
2036	10,965,000	2,011,000	12,976,000	4,146,560,635	0.31%	102,295,000,000	0.045%	134,231,144	3.55%	191,592,647	0.23%
2037	6,440,000	1,584,050	8,024,050								
2038	6,740,000	1,286,750	8,026,750								
2039	7,085,000	941,125	8,026,125								
2040	7,450,000	577,750	8,027,750								
2041	7,830,000	195,750	8,025,750								
	1,872,974,296	677,081,628	2,550,055,924								

Revenue Growth After 2021	0.50%
Personal Income Growth After 2023	3.00%
Population (2015)	1,056,298
Gross State Product (2016-1st Quarter) (000s)	58,295,000

Rapdity of Repayment	
5 Years	40.88%
10 Years	76.07%
20 Years	98.10%

Note: The UAAL and the Pension ARC are based on projections provided by the Employee Retirement System of Rhode Island. The General Revenues are based on the projected revenues for FY2017 through FY2021 and 0.50% annual growth thereafter. The projected personal income for FY2017 through FY2022 is based on the forecast in the November2016 Revenue Estimating Conference report, and after FY2022, annual growth is assumed to be 3.00%.

Outstanding Tax- Supported Debt
With Estimated Authorized But Unissued Debt
Debt and Pension Ratios

	Outstanding Tax-Supported Debt Service (as of June 30, 2016)			Estimated Authorized but Unissued @ 5.00% Interest ($766.285M Issued In Equal Amounts Over Next 5 Years)				Outstanding+Authorized but Unissued (Current Revenue Projections)		Debt + Pension Ratios	
Fiscal Year	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Total Outstanding + Projected Debt Service	Total Debt Service to Revenues	Total Debt to Personal Income	Tax-Supported DS + Pension ARC to Revenues	Tax-Supported Debt + UAAL to Personal Income
2017	133,790,034	90,290,186	224,080,220	0	0	0	224,080,220	6.10%	3.40%	13.07%	8.52%
2018	165,060,675	83,230,201	248,290,876	4,600,240	7,772,455	12,372,695	260,663,571	6.97%	3.30%	13.96%	8.38%
2019	150,585,806	75,098,791	225,684,597	9,433,719	15,311,670	24,745,389	250,429,986	6.69%	3.13%	14.09%	8.15%
2020	158,950,838	67,634,825	226,585,663	14,512,271	22,605,813	37,118,084	263,703,747	6.95%	2.99%	14.59%	7.92%
2021	157,374,658	59,946,158	217,320,816	19,848,326	29,642,453	49,490,779	266,811,595	6.93%	2.85%	14.78%	7.63%
2022	139,598,928	52,587,439	192,186,367	25,454,947	36,408,526	61,863,473	254,049,840	6.57%	2.70%	14.70%	7.21%
2023	163,135,655	45,976,221	209,111,876	26,745,621	35,117,852	61,863,473	270,975,349	6.97%	2.38%	15.42%	6.68%
2024	131,860,827	47,490,278	179,351,105	28,101,770	33,761,703	61,863,473	241,214,578	6.18%	2.05%	14.79%	6.13%
2025	115,334,697	32,294,100	147,628,797	29,526,717	32,336,757	61,863,473	209,492,270	5.34%	1.77%	14.19%	5.62%
2026	109,072,537	26,784,455	135,856,992	31,023,954	30,839,520	61,863,473	197,720,465	5.01%	1.53%	14.07%	5.14%
2027	94,844,641	21,597,804	116,442,445	32,597,150	29,266,324	61,863,473	178,305,918	4.50%	1.31%	13.76%	4.66%
2028	62,460,000	16,190,823	78,650,823	34,250,160	27,613,313	61,863,473	140,514,296	3.53%	1.11%	13.00%	4.10%
2029	48,255,000	13,471,412	61,726,412	35,987,037	25,876,436	61,863,473	123,589,886	3.09%	0.96%	12.78%	3.58%
2030	48,085,000	10,915,362	59,000,362	37,812,037	24,051,436	61,863,473	120,863,835	3.00%	0.84%	12.77%	3.16%
2031	36,925,000	8,405,458	45,330,458	39,729,633	22,133,840	61,863,473	107,193,932	2.65%	0.72%	12.51%	2.65%
2032	38,710,000	6,633,052	45,343,052	41,744,527	20,118,947	61,863,473	107,206,525	2.64%	0.61%	12.73%	2.15%
2033	28,375,000	5,121,850	33,496,850	43,861,657	18,001,817	61,863,473	95,360,324	2.33%	0.51%	12.49%	1.68%
2034	23,540,000	3,917,056	27,457,056	46,086,213	15,777,261	61,863,473	89,320,529	2.18%	0.42%	12.45%	1.26%
2035	20,505,000	2,899,734	23,404,734	48,423,649	13,439,824	61,863,473	85,268,207	2.07%	0.33%	12.53%	0.83%
2036	10,965,000	2,011,000	12,976,000	50,879,696	10,983,777	61,863,473	74,839,473	1.80%	0.26%	5.04%	0.44%
2037	6,440,000	1,584,050	8,024,050	53,460,376	8,403,097	61,863,473	69,887,523				
2038	6,740,000	1,286,750	8,026,750	43,799,322	5,691,456	49,490,779	57,517,529				
2039	7,085,000	941,125	8,026,125	33,648,261	3,469,823	37,118,084	45,144,209				
2040	7,450,000	577,750	8,027,750	22,982,326	1,763,063	24,745,389	32,773,139				
2041	7,830,000	195,750	8,025,750	11,775,391	597,304	12,372,695	20,398,445				
	1,872,974,296	677,081,628	2,550,055,924	766,285,000	470,984,468	1,237,269,468	3,787,325,392				

Note: Assumes the full $766.285 million of authorized but unissued debt is issued over the next five years. The UAAL and the Pension ARC are based on projections provided by the Employee Retirement System of Rhode Island. The General Revenues are based on the projected revenues for FY2017 through FY2021 and 0.50% annual growth thereafter. The projected personal income for FY2017 through FY2022 is based on the forecast in the November 2016 Revenue Estimating Conference report, and after FY2022, annual growth is assumed to be 3.00%.

Debt Capacity Based on Target Debt Affordability Ratios

Assumptions for Determining Debt Capacity

The following assumptions were applied to the issuance of the authorized but unissued debt and applied in determining the additional debt capacity that the State has for new State tax-supported debt over the next ten-year period.

1. All debt will be issued as 20-year debt.
2. Interest (coupon) rate is assumed to be 5.00%.
3. There are no refunding savings during the period.
4. Authorized but unissued debt (including the $227.5 million in the November 2016 referendum) is issued from FY2017 through FY2021 in equal amounts.
5. General revenue projections through 2021 are from the enacted 2017 budget and growth after 2021 is assumed to be 0.50%.
6. Personal income projections through 2022 are from the November 2016 Revenue Estimating Conference and growth after 2023 is assumed to be 3.00%.

Debt Capacity for Next Voter Referendum and Future Capacity

The PFMB, based on peer comparisons, rating agency methodologies, and capital needs, is recommending a set of debt affordability targets. Given the State's current debt profile, the Debt Service to General Revenues ratio is the most constraining target. If the 7.0% target is to be strictly enforced right away, the State would not have the capacity to add new debt in the 2018 referendum. However, the PFMB notes that the heightened debt service costs in the next several years are in part due to a one-time event - the 2015 general obligation bond restructuring - which allowed policymakers to raise funding for economic development incentives to help boost the State's sluggish economic recovery. Therefore, due to the one-time nature of the 2015 restructuring, the PFMB feels comfortable recommending that $221.8 million be included in the next referendum, and that the Debt Service to General Revenues target be set at 7.5% for the next five to six years before reverting to a long-term 7.0% target level.

The table on the following page, shows available capacity of approximately $221.8 million in 2019, the first year in which any authorization from the 2018 referendum could be issued, and remaining capacity of approximately $1.25 billion over the ten-year period. Based on these assumptions, the Debt Service to General Revenues ratio peaks at 7.46% in FY 2023 (below the 7.50% first five-year target). The Debt Service + Pension ARC to General Revenues is the other constraining ratio with a target of 16.0% during the ten-year measurement period; the Debt Service + Pension ARC to General Revenues ratio peaks at 15.91%. Based on current assumptions, the additional debt capacity is estimated such that all the debt affordability ratios stay within the PFMB recommended ratios. The table below summarizes the debt affordability ratios with the additional capacity estimated to stay within the PFMB recommended ratios.

Debt and Pension Ratios
With Additional Debt Capacity Constrained to Target Ratios

Ratio	Ratio Level (Year of Occurrence)
Debt Service on Tax-Supported Debt to General Revenues	7.46% Maximum (FY2023)
Net Tax-Supported Debt as Percentage of Personal Income	3.40% Maximum (FY2017) 2.46% (FY2027)
Rapidity of Repayment over 10 Years	76% (FY2017) 65% (FY2027)
Net Tax-Supported Debt Service + Pension ARC as a Percentage of General Revenues	15.91%% (FY2023) 15.76% (FY2027)
Net Tax-Supported Debt + Pension Liability (UAAL) as a Percentage of Personal Income	8.52% Maximum (FY2017) 5.81% (FY2027)

Net Tax-Supported Debt Capacity with Debt Service to Revenues Assumed Target of 7.5% Within Next 5 Years and Constrained to Target Ratios

	Outstanding Tax-Supported Debt Service (as of June 30, 2016)			Estimated Authorized but Unissued @ 5.00% Interest ($766.285M Issued In Equal Amounts Over Next 5 Years)				Additional Debt Capacity @ 5.00% Interest Debt and Pension Ratios						
Fiscal Year	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Total Outstanding + Projected Debt Service	Additional Debt Over Next 10 Years	Additional Debt Service	Total Debt Service to Revenues	Total Debt to Personal Income	10-Year Payout	Tax-Supported DS + Pension ARC to Revenues	Tax-Supported Debt + UAAL to Personal Income
2017	133,790,034	90,290,186	224,080,220	0	0	0	224,080,220	0		6.10%	3.40%	76%	13.07%	8.52%
2018	165,060,675	83,230,201	248,290,876	4,600,240	7,772,455	12,372,695	260,663,571	0	0	6.97%	3.30%	76%	13.96%	8.38%
2019	150,585,806	75,098,791	225,684,597	9,433,719	15,311,670	24,745,389	250,429,986	221,840,000	0	6.69%	3.13%	75%	14.09%	8.15%
2020	158,950,838	67,634,825	226,585,663	14,512,271	22,605,813	37,118,084	263,703,747	0	17,801,016	7.42%	3.35%	69%	15.06%	8.27%
2021	157,374,658	59,946,158	217,320,816	19,848,326	29,642,453	49,490,779	266,811,595	15,470,000	17,801,016	7.40%	3.18%	68%	15.25%	7.96%
2022	139,598,928	52,587,439	192,186,367	25,454,947	36,408,526	61,863,473	254,049,840	0	19,042,368	7.06%	3.03%	67%	15.20%	7.54%
2023	163,135,655	45,976,221	209,111,876	26,745,621	35,117,852	61,863,473	270,975,349	0	19,042,368	7.46%	2.69%	69%	15.91%	6.99%
2024	131,860,827	47,490,278	179,351,105	28,101,770	33,761,703	61,863,473	241,214,578	331,535,000	19,042,368	6.66%	2.34%	70%	15.28%	6.42%
2025	115,334,697	32,294,100	147,628,797	29,526,717	32,336,757	61,863,473	209,492,270	162,600,000	45,645,595	6.50%	2.49%	66%	15.36%	6.34%
2026	109,072,537	26,784,455	135,856,992	31,023,954	30,839,520	61,863,473	197,720,465	257,925,000	58,693,039	6.50%	2.42%	66%	15.56%	6.02%
2027	94,844,641	21,597,804	116,442,445	32,597,150	29,266,324	61,863,473	178,305,918	487,025,000	79,389,608	6.50%	2.46%	65%	15.76%	5.81%
2028	62,460,000	16,190,823	78,650,823	34,250,160	27,613,313	61,863,473	140,514,296		118,469,755	6.50%	2.80%		15.98%	5.79%
2029	48,255,000	13,471,412	61,726,412	35,987,037	25,876,436	61,863,473	123,589,886		118,469,755	6.05%	2.54%		15.74%	5.16%
2030	48,085,000	10,915,362	59,000,362	37,812,037	24,051,436	61,863,473	120,863,835		118,469,755	5.95%	2.30%		15.72%	4.63%
2031	36,925,000	8,405,458	45,330,458	39,729,633	22,133,840	61,863,473	107,193,932		118,469,755	5.58%	2.08%		15.44%	4.01%
2032	38,710,000	6,633,052	45,343,052	41,744,527	20,118,947	61,863,473	107,206,525		118,469,755	5.55%	1.87%		15.65%	3.41%
2033	28,375,000	5,121,850	33,496,850	43,861,657	18,001,817	61,863,473	95,360,324		118,469,755	5.23%	1.66%		15.39%	2.84%
2034	23,540,000	3,917,056	27,457,056	46,086,213	15,777,261	61,863,473	89,320,529		118,469,755	5.06%	1.47%		15.34%	2.31%
2035	20,505,000	2,899,734	23,404,734	48,423,649	13,439,824	61,863,473	85,268,207		118,469,755	4.94%	1.29%		15.40%	1.78%
2036	10,965,000	2,011,000	12,976,000	50,879,696	10,983,777	61,863,473	74,839,473		118,469,755	4.66%	1.12%		7.90%	1.30%
2037	6,440,000	1,584,050	8,024,050	53,460,376	8,403,097	61,863,473	69,887,523	1,476,395,000	1,342,685,169					
2038	6,740,000	1,286,750	8,026,750	43,799,322	5,691,456	49,490,779	57,517,529							
2039	7,085,000	941,125	8,026,125	33,648,261	3,469,823	37,118,084	45,144,209							
2040	7,450,000	577,750	8,027,750	22,982,326	1,763,063	24,745,389	32,773,139							
2041	7,830,000	195,750	8,025,750	11,775,391	597,304	12,372,695	20,398,445							
	1,872,974,296	677,081,628	2,550,055,924	766,285,000	470,984,468	1,237,269,468	3,787,325,392							

Total through 2022	237,310,000
Total through 2023-2027	1,239,085,000

Note: Assumes the full $766.285 million of authorized but unissued debt is issued over the next five years. The UAAL and the Pension ARC through 2025 is based on projections provided by the Employee Retirement System of Rhode Island and after 2025 reflects an annual increase based on the growth rate in 2025 of 2.59%. The General Revenues are based on the projected revenues for FY2017 through FY2021 and 0.50% annual growth thereafter. The projected personal income for FY2017 through FY2022 is based on the forecast in the November 2016 Revenue Estimating Conference report, and after FY2022, annual growth is assumed to be 3.00%.

Sensitivity Cases for Debt Capacity

Revenue Sensitivity

If revenue projections are different, there will be different levels of additional capacity – all other factors staying constant. The effect on debt capacity resulting from projected revenue changes is summarized in the table below. With revenues at 90% of projections, the Debt Service + Pension ARC to General Revenues ratio will exceed the 16% target with the current outstanding tax-supported debt and assuming all the authorized but unissued debt is issued over the next five years, and there is no additional capacity until FY2025 if the 16% target is maintained.

Additional Debt Capacity Under Different Revenue Assumptions*

Fiscal Year	General Revenues @ 90% of Projections	General Revenues @ 95% of Projections	General Revenues @ 100% of Projections
2017	$ 0	$ 0	$ 0
2018	0	0	0
2019	0	44,495,000	221,840,000
2020	0	0	0
2021	0	12,100,000	15,470,000
2022	0	0	0
2023	0	0	0
2024	0	237,090,000	331,535,000
2025	57,935,000	161,225,000	162,600,000
2026	254,560,000	256,545,000	257,925,000
2027	483,640,000	485,635,000	487,025,000
Total Additional Capacity	**$796,135,000**	**$1,197,090,000**	**$1,476,395,000**

** Assumed 5.00% interest rate.*

Interest Rate Sensitivity

For the debt capacity analysis, a 5.00% interest rate was assumed for the issuance of all future debt. The table below summarizes the debt capacity based on 4.00% and 6.00% interest rates.

Additional Debt Capacity Under Different Interest Rates
(Assuming Debt Service to Revenues Ratio Capped at 7.5% for Next 5 Years and Constrained Targets Thereafter)

Fiscal Year	Interest Rate at 4.00%	Interest Rate at 5.00%	Interest Rate at 6.00%
2017	$ 0	$ 0	$ 0
2018	0	0	0
2019	297,585,000	221,840,000	155,225,000
2020	11,175,000	0	0
2021	19,610,000	15,470,000	2,005,000
2022	0	0	0
2023	0	0	0
2024	361,545,000	331,535,000	305,135,000
2025	177,320,000	162,600,000	149,655,000
2026	281,275,000	257,925,000	237,385,000
2027	531,110,000	487,025,000	448,245,000
Total Additional Capacity	**$1,679,620,000**	**$1,476,395,000**	**$1,297,650,000**

Debt Affordability Study

Part Two: State-level agencies, public and quasi-public corporations debt and long-term liabilities

Part Two – State of Rhode Island Quasi-Public Agencies

The second part of the debt affordability study focuses on the long-term liabilities of the quasi-public corporations and agencies in the State. These liabilities do not include any quasi-public agency debt that is included as tax-supported debt of the State, which is accounted for in Part One of the study. There is a wide variety of issuers in this category with different bonding programs, as listed below. Appendix B provides a list of quasi-public agencies with debt outstanding and the bonding programs under each with a description of the security and the current additional bonds test legally required under each bonding program.

None of the debt issued by the quasi-public agencies is a direct obligation of the State, and the State does not provide any backstop or guarantee for the repayment of the debt, except for certain debt issued by the Rhode Island Commerce Corporation and the Rhode Island Housing and Mortgage Finance Corporation. However, the quasi-public bond issuing agencies perform important functions for the State, and thus, the State maintains a strong interest in the viability and sustainability of the quasi-public agencies' finances.

Overview of Quasi-Public Agencies

The quasi-public agencies in this part of the debt affordability study fall into two general categories: (i) those that issue debt secured by their own revenues and (ii) those that act as a conduit for debt secured by the revenues of separate underlying borrower(s) through loan or financing agreements. In addition, some quasi-public conduit issuers may have bonding programs that pool a group of underlying borrowers into a single debt issue. The table below summarizes the quasi-public agencies in these two categories.

Direct Borrower	Type/Purpose of Bonds
Narragansett Bay Commission	Wastewater System Revenue Bonds
Rhode Island Turnpike and Bridge Authority	Toll Revenue Bonds
Tobacco Settlement Financing Corporation	Tobacco Master Settlement Agreement Bonds
Rhode Island Resource Recovery Corporation	Resource Recovery System Revenue Bonds
Conduit Issuer	**Type/Purpose of Bonds**
Rhode Island Commerce Corporation	GARVEEs, Airport Revenue Bonds, Economic Development, Moral Obligation Bonds
Rhode Island Health and Educational Building Corporation	Public School, Higher Education, Other Education, Health Care Revenue Bonds (Includes Pooled Bonds)
Rhode Island Housing and Mortgage Finance Corporation	Single-Family and Multi-Family Housing Revenue Bonds, Moral Obligation Bonds
Rhode Island Infrastructure Bank	Water Pollution Control, Safe Drinking Water, Water, Sewer Revenue Bonds, Energy Efficiency Loans (Includes Pooled Bonds)
Rhode Island Student Loan Authority	Student Loan Revenue Bonds

In addition to the quasi-public agencies above, the State also has other quasi-public agencies that do not have any bonds currently outstanding, including the Rhode Island Public Transit Authority and the Rhode Island Water Resources Board.

Further, as covered in Part One of this debt affordability study, the Rhode Island Convention Center Authority bonds and the Rhode Island Turnpike and Bridge Authority's Motor Fuel Tax Revenue Bonds are included in Part One of this study as tax-supported debt of the State. The Rhode Island Commerce Corporation also has a portion of its debt that is treated as the tax-supported debt of the State, including the Transportation Motor Fuel Tax Bonds, URI Power Plant, Job Creation Guaranty, I-195 Land Sale, Historic Structures Tax Credit and various Performance Based Agreements. This debt is included in the debt analysis of Part One of the study, and will generally not be included in this section of the study, to avoid double-counting.

Framework for Considering Debt Affordability Guidelines for Quasi-Public Agencies of the State

The debt issued by the quasi-public agencies are usually revenue bonds, in which debt service is payable solely from the revenues derived (i) from a dedicated revenue source, (ii) from operating businesses or the facilities acquired or constructed with proceeds of the bonds or (iii) under a loan or financing agreement.

Among the quasi-public agencies in Rhode Island, there are a variety of revenue bonds, including utilities, toll revenue, GARVEEs, airport, housing, student loan, healthcare, higher education, secondary education and other not-for-profits. The appropriate debt affordability measure for each must be considered. Since revenues are the source of repayment for the debt, the PFMB believes the focus of debt affordability should generally be based on some type of debt service coverage ratio, which may come in the form of an additional bonds test and/or an annual rate covenant requiring a minimum debt service coverage level.

Revenue bonds are issued pursuant to a trust indenture or a bond resolution, which are types of legal documents describing in specific detail the terms and conditions of a bond offering, the rights of the bondholder to receive revenue repayment, and the obligations of the issuer to the bondholder. These documents describe the revenues that are pledged for the repayment of debt and may incorporate a rate covenant and provisions for the issuance of additional debt, as described further below.

A rate covenant is a legal commitment by a revenue bond borrower to maintain rates, fees, charges, etc. at levels necessary to generate sufficient revenues to provide specified debt service coverage. With revenue bonds, the most frequently used measure of financial health is debt service coverage or the margin of safety for payment of debt service on a revenue bond which reflects the number of times the net revenues (generally total revenues less operation and maintenance expenses) exceed the debt service that is payable for a 12-month period of time. The trust indentures may also include an additional bonds test (ABT), which specifies a certain debt service coverage level must be met, including the proposed new debt, before new (additional) bonds can be issued. The legal requirements established in the indenture are reviewed by the rating agencies and are key factors in determining the rating. In addition, while the rate covenant provides the minimum acceptable debt service coverage, credit analysts will generally want to see higher levels of debt service coverage than what is legally required for highly rated entities.

Because an issuer's ability to meet the rate covenant and/or ABT specified in a trust indenture is a legal commitment, any debt affordability target cannot be weaker than the ABT in the covenant.

There are different considerations in the application of debt affordability guidelines to the two categories – direct borrowers and conduit issuers of quasi-public agencies in Rhode Island. The discussion below describes the debt programs for each of the quasi-public agencies and a proposed debt affordability measure for each quasi-public agency.

Direct Borrowers

This category includes the Narragansett Bay Commission, the Rhode Island Turnpike and Bridge Authority, the Tobacco Settlement Financing Corporation and the Rhode Island Resource Recovery Corporation. With these borrowers, debt is secured by the entity's own revenues and the State does not provide any backstop or guarantee for the repayment of the debt. Debt is issued pursuant to the respective trust indentures. For the Tobacco Settlement Financing Corporation, under its master indenture only refunding bonds can be issued; no new debt can be issued. This analysis will focus on the Narragansett Bay Commission, the Rhode Island Turnpike and Bridge Authority and the Rhode Island Resource Recovery Corporation.

The debt service coverage ratio provides a measure by which we can assess the quasi-public agencies' ability to repay their debt and is a key statistic used by rating agencies in their review of the credit of revenue bonds. In cases where the quasi-public agencies' debt is secured by loans, asset-liability ratio provides a useful measure to assess the quasi-public agencies' ability to repay their debt and is a key statistic used by rating agencies in their review of certain types of revenue bonds.

Narragansett Bay Commission

The Narragansett Bay Commission (NBC) issues debt on its own and also borrowers through the Rhode Island Infrastructure Bank (RIIB). As of June 30, 2016, NBC had approximately $242.82 million of NBC issued bonded debt outstanding under the trust indenture and approximately $385.09 million in subsidized loans from the Rhode Island Infrastructure Bank's clean water state revolving loan fund. For NBC's bonded debt, the trust indenture requires an ABT of 1.25x and 1.35x for its RIIB loans. In its criteria for utilities, Standard & Poor's assesses coverage in the 1.25x to 1.40x range as "strong"; NBC's ABT of 1.25x/1.35x is in this range. Standard & Poor's confirmed its 'AA-' rating with a stable outlook for the NBC in July 2016. Based on the Standard & Poor's report, for 2009 through 2015, net revenues covered debt service by at least 1.25x with debt service coverage for 2015 at 1.4x. NBC has been able to maintain its high "AA-" rating and maintain debt service coverage at or above the required level. The following is an excerpt from the July 2016 S&P report:

"The strong financial risk score reflects DSC being no less than about 1.25x and unrestricted liquidity ranging between about 130-150 days' cash equivalent. The commission's financial performance remains strong, in our opinion. For audited years 2009-2015, net revenues covered debt service by at least 1.25x; for the fiscal year ended June 30, 2015, coverage was 1.4x. Also, unrestricted cash has not dropped below a level representing 134 days' operating expenses since 2009, and it was at 157 days in 2015 (equivalent to $16.0 million). For fiscal 2016, management does not anticipate major deviations from these trends. Also, supporting the financial risk profile is the "strong" financial management assessment, indicating that, in our view, financial practices are strong, well embedded, and likely sustainable. Examples include the existence of long-term capital planning, formal investment and debt policies, and monthly review of budget performance by the commission."

At this time, the PFMB recommends NBC target debt service coverage of at least 1.3x for both debt issued directly by NBC and debt issued through RIIB. Based on S&P criteria, the 1.3x is in the mid-range of what S&P considers 'strong' and consistent with NBC's AA- rating. Additionally, the 1.3x guideline is within the range of coverage levels (1.3x-3.3x) of NBC's peer group. NBC's current debt service coverage of 1.4x meets the recommended target.

Quasi-Public Agency	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current Debt Level
Narragansett Bay Commission (--/AA-/--)	Requires estimated net revenues (gross revenues less operating and maintenance expenses) for the three years following the issuance of bonds to be at least 1.25x the debt service requirement for revenue bonds and 1.35x[1] the debt service requirement for RIIB loans	1.3x debt service coverage for both Commission debt and RIIB loans Provide notice to PFMB of any rating action	1.4x

(1) Higher coverage on the Commission's RIIB Loans relate to the subsidized nature of the obligation.

The following table summarizes S&P rating considerations for debt service coverage for water and sewer utility systems and a comparison of the ABT and rate covenant and debt service coverage levels of peer utility systems.

Rating Agency Criteria for Utilities

Standard & Poor's — As part of the Financial Risk Profile, S&P reviews and scores the following factors:

Score	Debt Service Coverage	Days' Cash	Actual Cash	Debt to Capitalization[1]
1	1.60x or Above	> than 150	> than $75 MM	Up to 20%
2	1.40x to 1.60x	90 to 150	$20 MM to $75 MM	20% to 35%
3	1.20x to 1.40x	60 to 90	$5 MM to $20 MM	35% to 50%
4	1.10x to 1.20x	30 to 60	$1 MM to $5 MM	50% to 65%
5	1.00x to 1.10x	15 to 30	$500,000 to $1 MM	65% to 80%
6	Below 1.00x	< than 15	< than $500,000	Greater than 80%

Issuer	Ratings (M/S/F)	ABT/Rate Covenant	Debt Service Coverage (2015)	Cash on Hand (2015)	Debt to Capitalization
Narragansett Bay Commission	**--/AA-/--**	**NBC: 1.25x RIIB: 1.35x[2]**	**1.4x**	**157 days**	**59%**
Massachusetts Water Resources Authority	Aa1/AA+/AA+	Senior: 1.20x Sub.: 1.10x	Senior: 2.10x Sub.: 1.20x	138 days	25.4%
Boston Water and Sewer Commission	Aa1/AA+/AA+	1.25x	1.76x	161 days	57.9%
City of Philadelphia Water and Sewer Bonds	A1/A+/A+	Senior: 1.20x Sub.: 1.00x (includes RSF)	1.33x	292 days	73.9%
St. Louis Metropolitan Sewer District	Aa1/AAA/AA+	Senior: 1.25x Sub.: 1.15x	Senior: 3.30x Sub.: 2.10x	297 days	31.7%
City of Baltimore Water and Wastewater Bonds	Sen: Aa2/AA/-- Sub: Aa3/AA-/-	Senior: 1.15x Sub.: 1.10x	1.30x	205 days	40.3%

Source: Rating reports and annual reports for each issuer.

(1) Standard and Poor's uses the Debt to Capitalization metric to measure the relative leverage of the utility by comparing the total of all long and short term debt outstanding (numerator) to the utility's Net Position (denominator).

(2) Higher coverage on the Commission's RIIB Loans relate to the subsidized nature of the obligation.

The Narragansett Bay Commission's debt and other financial statistics presented above represent the recent, point-in-time numbers. Both the fiscal year 2016 and budgeted fiscal year 2017 results reflect a slight improvement in Net Position, resulting in coverage levels at or above 1.40x.

While NBC's current level of indebtedness is within the recommended limit, the PFMB notes that NBC is in the evaluation stages of a large capital program (over $700 million), to construct Phase III of the Combined Sewer Overflow Control Facilities program (CSO III). The final scope and specific financing sources of CSO III are still to be determined, and the PFMB intends to study the plan closely before the NBC goes to market for financing in order to ascertain the affordability of the CSO III proposal.

Rhode Island Turnpike and Bridge Authority

The Rhode Island Turnpike and Bridge Authority (RITBA) issues toll revenue bonds with an ABT and rate covenant that, once the outstanding 2003 bonds are retired on December 1, 2017, requires net revenues (after payment of operating and maintenance expenses) plus Dedicated Payments (which are described in the bond indenture as *without limitation, any gifts, grants, or other payments to the Authority from the United States government, the State or any public or private instrumentality*) pledged to the bonds to be at least 1.20x[1]. As of June 30, 2016, RITBA had $53.2 million of toll revenue bonds outstanding. As specified in Standard & Poor's toll road criteria, the most common ratio used in a toll covenant is 1.25x. Based on the Standard & Poor's RITBA report dated April 1, 2016, annual debt service coverage has ranged from 1.6x to 2.1x from fiscal years 2011 through 2015, with debt service coverage at its low point of 1.6x in fiscal year 2015, which Standard & Poor's still considered strong. RITBA's 1.20x covenant requirement is on the low side; however, actual debt service coverage has been healthy. In 2016, S&P and Fitch revised the RITBA rating outlook from Negative to Stable.

At this time, the PFMB recommends RITBA target debt service coverage of at least 1.7x for its toll revenue bonds. Based on Fitch criteria for small networks and stand-alone toll facilities, average debt service coverage of 1.7x and above is consistent with an 'A' rating category, and the 1.7x guidance is in the middle of the range for debt service coverage for existing toll facilities based on S&P methodology. RITBA's 10-year average debt service coverage of 1.78x meets the recommended target and the debt service coverage of maximum annual debt service is just below 1.7x.

Quasi-Public Agency	Indenture Required Additional Bonds Test	Recommendation for Debt Affordability Measure	Current Debt Level
Rhode Island Turnpike and Bridge Authority (--/A-/A)	After retirement of 2003A Bonds, Net Revenues (gross revenues less operating and maintenance expenses) plus Dedicated Payments in most recent fiscal year or projected for each of the next 5 fiscal years must be at least 1.20x[1] Maximum Annual Debt Service.	1.7x Debt Service Coverage	1.68x Debt Service Coverage

(1) On April 1, 2010, the Authority amended and restated its Master Trust Indenture which included a revised ABT (from 1.25x to 1.20x). The 1.2x ABT referenced will take effect upon the maturity of the outstanding Series 2003 Bonds (December 1, 2017).

The table below summarizes Fitch and S&P rating considerations for debt service coverage for toll revenue bonds and a comparison of the ABT and rate covenant and debt service coverage levels of peer toll facilities (small expressway or stand-alone toll facilities).

Rating Agency Criteria for Toll Revenue Bonds				
Fitch Ratings	For small networks and stand-alone toll road: "A" Rating Category: Average debt service coverage of 1.7x and above "BBB" Rating Category: Average debt service coverage of 1.4x and above *AA rating category is unlikely based on asset size/geographical concentration.*			
Standard & Poor's	Rating for toll revenue bonds above 'A' category is unlikely. Typical rate covenant is 1.25x. Does not provide indicative rating levels for different debt service coverage levels. Typical coverage for existing toll facilities is in the 1.5x-2.0x range.			
Issuer	**Ratings (M/S/F)**	**ABT/ Rate Covenant**	**Debt Service Coverage of Maximum Annual Debt Service**	**10-Year Average Debt Service Coverage (Senior Debt)***
RITBA	**--/A-/A**	**1.20x**	**1.68x**	**1.78x**
Richmond Metropolitan Authority (VA)	A2/--/A	1.25x (1.0x on all obligations)	1.77x	2.00x
Buffalo & Fort Erie Public Bridge Authority (NY)	--/A+/A	1.25x (1.0x on all obligations)	4.16x	2.05x
Lee County (FL) Toll Bridges	A3/A/--	1.20x (1.0x on all obligations)	2.25x	N.A.
Greater New Orleans Expressway Commission	--A/--	1.20x (1.0x on all obligations)	2.18x	N.A.
Niagara Falls Bridge Commission (NY)	--A+/--	1.30x	1.74x	N.A.

** Ten-year Average Coverage levels from Fitch Ratings, "Peer Review of U.S. Toll Roads," December 2016.*

The RITBA's debt and other financial statistics presented above represent the recent, point-in-time numbers. Net Revenues for fiscal year 2016 represent a 28% increase over fiscal year 2015 thereby generating coverage in excess of 2.00x.

Rhode Island Resource Recovery Corporation

The Rhode Island Resource Recovery Corporation (RIRRC) is responsible for managing Rhode Island's solid waste and recyclables. RIRRC is a landfill management and recycling organization, committed to providing economically sound and environmentally safe solid waste management services to all communities in Rhode Island. RIRRC provides several distinct onsite processing and disposal services to its customers: sanitary landfilling, commercial composting, recyclables sorting and processing and small vehicle waste sorting. RIRRC's central landfill, located in Johnston, is currently projected to reach the end of its useful life in 2038, however, because of recent high usage, it is likely that the end of its actual useful life may occur several years earlier. PFMB recommends that RIRRC refrain from the issuance of additional long-term debt until the future of the facility is more certain.

The Rhode Island Resource Recovery Corporation issued revenue bonds through a private placement with an ABT and rate covenant that requires net revenues (after payment of operating and maintenance expenses) plus State Subsidy, and Assets Held in Trust to be at least 1.25x debt service. As of June 30, 2016, the Rhode Island Resource Recovery Corporation had $29.1 million of debt outstanding. Generally, for utilities, Standard & Poor's assesses coverage in the 1.25x to 1.40x range as "strong".

Quasi-Public Agency	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current Debt Level
Rhode Island Resource Recovery Corporation (Not Rated)	For any 12-month period out of the last 18 months, Net Revenues (gross revenues less operating and maintenance expenses) plus State Subsidy plus Assets Held in Trust must be at least 1.25x Maximum Annual Debt Service	PFMB recommends the Corporation refrain from any issuance of long-term debt until the future of the facility is more certain.	4.00x Debt Service Coverage

The Rhode Island Resource Recovery Corporation's debt is not rated, however general rating agency criteria for utilities can be reviewed and the peer comparison for the Rhode Island Resource Recovery Corporation, as summarized above can be used as a reference.

Rating Agency Criteria for Utilities

Standard & Poor's — As part of the Financial Risk Profile, S&P reviews and scores the following factors:

Score	Debt Service Coverage	Days' Cash	Actual Cash	Debt to Capitalization
1	1.60x or Above	> than 150	> than $75 MM	Up to 20%
2	1.40x to 1.60x	90 to 150	$20 MM to $75 MM	20% to 35%
3	1.20x to 1.40x	60 to 90	$5 MM to $20 MM	35% to 50%
4	1.10x to 1.20x	30 to 60	$1 MM to $5 MM	50% to 65%
5	1.00x to 1.10x	15 to 30	$500,000 to $1 MM	65% to 80%
6	Below 1.00x	< than 15	< than $500,000	Greater than 80%

Issuer	Ratings (M/S/F)	ABT/Rate Covenant	Debt Service Coverage (2015)	Cash on Hand (2015)	Debt Ratio
Rhode Island Resource Recovery Corporation	**Not Rated**	**1.25x**	**4.00x**	**330 Days**	**32%**
Delaware Solid Waste Authority	Aa3/AA+/--	1.10x	2.08x	658 days	33%

The Rhode Island Resource Recovery Corporation's debt and other financial statistics presented above represent the recent, point-in-time numbers. Preliminary results show an improved Net Position in fiscal year 2016. This is the direct result of a 7.4% increase in revenues over those generated in fiscal year 2015 and a nearly 15% decrease in expenses over those incurred in fiscal year 2015.

Conduit Issuers

Most state quasi-public agencies issue conduit debt on behalf of other underlying borrowers. In these issues the key to affordability is the credit worthiness of the underlying borrower(s). There are two categories of underlying borrowers: (i) single entity and (ii) multiple entities under a pooled bond program.

1. Conduit Issuers -- Single Entity Borrowers

With the single-entity underlying borrower, the PFMB considered debt affordability targets for each underlying entity. For example, the Rhode Island Health and Educational Building Corporation, based on its FY2015 annual report, had 50 different single-entities as underlying borrowers; the Rhode Island Commerce Corporation has seven single-entity underlying borrowers; and the Rhode Island Industrial Facilities Corporation has six single-entity underlying borrowers.

The underlying borrowers can be categorized into different groups:

(i) State agency[4] (e.g. Rhode Island Department of Transportation, University of Rhode Island);
(ii) Political subdivision of the State (e.g. City of Pawtucket, City of Providence);
(iii) Non-profit entity (e.g. Lifespan Obligated Group, Brown University, Providence College); or
(iv) Private for-profit entity (e.g. CAPCO Steel, Bullard Abrasives).

For the non-profit and private entities that secure the debt with their own revenue sources and those revenues are not subject to a moral obligation or any other connection with the State, an agency of the State or a municipality, PFMB does not recommend any debt targets. Responsibility for repayment of these debts lie solely with the non-profit and private entities, the taxpayers bear no liability, and it is unlikely that a state or local government would ever assume these liabilities should the underlying borrower be unable to make debt service payments.

Rhode Island Department of Transportation

The Rhode Island Department of Transportation (RIDOT) issues Grant Anticipation Revenue Vehicles (GARVEEs) through the Rhode Island Commerce Corporation. GARVEEs are bonds secured by future Federal-aid highway funds received by the State and provide a mechanism for accelerating construction projects that would otherwise be funded on a pay-go basis. GARVEEs enable the State to fund essential transportation projects without impacting the State's borrowing capacity and reduce use of tax supported debt. GARVEEs do not include any federal guarantee of repayment however the market views these credits favorably as they are structured with short maturities, high ABTs and high debt service coverage.

With debt service coverage currently at 4.5x, Rhode Island's level of coverage is among the lowest of GARVEE programs of other states, but still well within coverage levels viewed favorably by the ratings agencies. PFMB recommends using the current coverage level of 4.5x as a debt limit going forward.

Underlying Borrower	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current Debt Level
Rhode Island Department of Transportation Grant Anticipation Revenue Bonds (GARVEEs) (A3/AA/--)	Federal Transportation Funds must be 3.00x maximum bond payments in any federal fiscal year	Coverage Level of 4.5x. Provide notice to PFMB of any rating action	4.5x Coverage

[4] State agencies includes State Boards and State Chartered Institutions, such as the University of Rhode Island.

The table below summarizes Moody's and Standard & Poor's rating considerations for the additional bonds test and debt service coverage for GARVEEs and a comparison of the ABT and debt service coverage levels of GARVEE programs of other states, which, like Rhode Island GARVEEs, are secured solely by Federal highway reimbursements and have no back-up security.

<table>
<tr><th colspan="4">Rating Agency Criteria for GARVEEs</th></tr>
<tr><td>Moody's</td><td colspan="3">Rating methodology for GARVEEs is based on Moody's Special Tax Methodology. ABT of 3.00x and higher are scored 'Aaa'. Moody's assessment of the revenue outlook and trend limit the rating from reaching the 'Aaa' or 'Aa' levels. Furthermore, a below the line adjustment attributable to Federal reauthorization risk results in primarily 'A' rating level.</td></tr>
<tr><td>Standard & Poor's</td><td colspan="3">AA Rating Category: Additional bonds test of at least 2.0x, coverage levels of at least 3.0x
A Rating Category: Additional bonds test of at least 1.5x, coverage levels of at least 1.5x</td></tr>
<tr><th>Issuer</th><th>Ratings (M/S/F)</th><th>Additional Bonds Test</th><th>MADS Debt Service Coverage*</th></tr>
<tr><td>Rhode Island</td><td>A2/AA-/--</td><td>3.0x</td><td>4.5x</td></tr>
<tr><td>Delaware</td><td>A1/AA/--</td><td>3.0x</td><td>13.3x</td></tr>
<tr><td>District of Columbia</td><td>A2/AA/--</td><td>3.0x</td><td>12.8x</td></tr>
<tr><td>Georgia</td><td>A2/AA-/A+</td><td>3.0x</td><td>6.6x</td></tr>
<tr><td>Idaho</td><td>A2/--/A+</td><td>3.33x</td><td>4.5x</td></tr>
<tr><td>Kentucky</td><td>A2/AA/A+</td><td>4.0x</td><td>6.5x</td></tr>
<tr><td>Maine</td><td>A2/--/A+</td><td>3.0x</td><td>8.5x</td></tr>
<tr><td>Michigan</td><td>A2/AA/--</td><td>3.0x</td><td>7.7x</td></tr>
<tr><td>Mississippi</td><td>Aa3/AA-/--</td><td>$375mm**</td><td>6.6x</td></tr>
<tr><td>Montana</td><td>A2/AA/--</td><td>3.0x</td><td>24.6x</td></tr>
<tr><td>New Hampshire</td><td>A2/AA/--</td><td>3.0x</td><td>8.2x</td></tr>
<tr><td>North Carolina</td><td>A2/AA/A+</td><td>3.0x</td><td>9.9x</td></tr>
<tr><td>Ohio</td><td>Aa2/AA/--</td><td>5.0x</td><td>7.9x</td></tr>
<tr><td>Oklahoma</td><td>A2/--/A+</td><td>3.0x</td><td>21.6x</td></tr>
<tr><td>Washington</td><td>A2/AA/--</td><td>3.5x</td><td>6.3x</td></tr>
<tr><td>West Virginia</td><td>A2/AA/--</td><td>3.0x</td><td>41.4x</td></tr>
</table>

** Coverage levels based on Federal-Aid Highway Program Obligation Limitation for FY2016. Pro Forma Coverage calculated by dividing Obligation Limitation by MADS as displayed in latest Official Statement; note that mismatch may occur between FFY and individual state FY. Source for FFY 2016 OA:*
https://www.fhwa.dot.gov/legsregs/directives/notices/n4520240/n4520240_t1.cfm

***The State of Mississippi's GARVEE bond program has an aggregate debt limitation rather than one based on coverage.*

Rhode Island Airport Corporation

The Rhode Island Airport Corporation (RIAC) is a semi-autonomous subsidiary of the Rhode Island Commerce Corporation. RIAC is responsible for the operation of six state-owned airports, the largest of which is T. F. Green Airport. T.F. Green airport is located 8 miles south of Providence in Warwick and is the third largest airport in New England. Green is currently served by five U.S. flag carriers and two international airlines. In February 2017, RIAC announced that Norwegian Airlines, a low-cost, long-haul carrier, will begin service this summer from T. F. Green to six European destinations.

At this time, the PFMB recommends RIAC target debt service coverage of 1.5x for its general airport revenue bonds, which is the middle range for an A rating category based on Moody's methodology and in the middle of the range of debt service coverage levels (1.42x-1.96x) of peer airports. RIAC's current coverage of 1.76x when including the rolling coverage account, is well within this target. Further, the PFMB recommends RIAC target debt per enplaned passenger of $100. This target is at the bottom of the 'Baa' rating category based on Moody's methodology and on the higher end when compared to most of its peers. Although RIAC is currently above the recommended target for debt per enplaned passenger ($137) an increase in the number of passengers could help RIAC meet its target of $100 per enplaned passenger. The above noted announcement regarding Norwegian Airlines launch of discounted international fares may enhance the enplaned passenger counts for the airport.

Underlying Borrower	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current Debt Levels
Rhode Island Airport Corporation	<u>Airport Revenues Bonds</u>: RIAC's net revenues (include rentals, fees, and other charges) and certain Passenger Facility Charge revenues must be 1.25x debt service (Baa1/BBB+/BBB+) <u>Special Facility Revenue Bonds</u>: Revenues generated by the operation of the Intermodal Facility, including Customer Facility Charges, Rental Car Companies fees and Parking Revenues must be 1.25x debt service (Baa1/BBB+/--)	1.5x coverage when including the Coverage Account Ending Balance and debt per enplaned passenger to $100.	1.76x coverage and $137 per enplaned passenger

The following table summarizes Fitch, Moody's and S&P rating considerations for debt ratios for airport revenue bonds and a comparison of the ABT and rate covenant and debt ratios of peer airport facilities (regional origination and destination airports).

<table>
<tr><th colspan="6">Rating Agency Criteria for Airports</th></tr>
<tr><td>Fitch Ratings</td><td colspan="5">Fitch considers metrics for liquidity, debt service coverage and leverage in the context of the overall risk profile of the airport. Fitch assesses RIAC's resiliency of the passenger volume as weaker and the strength and competitiveness of RIAC's contractual framework with its airline partners and other commercial operators (price) as mid-range. Given this risk profile (weaker volume risk and midrange price risk), Fitch's rating guidance has RIAC ratings capped at the BBB level with ultimate rating factoring in liquidity, coverage and leverage:
BBB: Net Debt to Cash Flow Available for Debt Service (CFADS)): ≤ 4x
BB: Net Debt to Cash Flow Available for Debt Service (CFADS)): ≥ 4x</td></tr>
<tr><td rowspan="4">Moody's Investors Service</td><td colspan="5">Moody's employs a scoring methodology with two factors, market position and service offering, having a combined weight of 85%. The remaining 15% of the scoring is based on leverage and coverage using the following subfactors:</td></tr>
<tr><td>Rating Category</td><td>Aaa</td><td>Aa</td><td>A</td><td>Baa</td></tr>
<tr><td>Debt Service Coverage</td><td>≥ 2.5x</td><td>1.75x – 2.5x</td><td>1.3x – 1.75x</td><td>1.1x – 1.3x</td></tr>
<tr><td>Debt per O&D Enplaned Passenger</td><td>< $25</td><td>$25 - $50</td><td>$50 - $75</td><td>$75 - $100</td></tr>
<tr><td>Standard & Poor's</td><td colspan="5">S&P does not use scoring in its methodology and does not have a percentage score for debt. In reviewing the credit, S&P's analysis begins with the service area characteristics and air traffic demand and then factors in the legal provisions:
<u>Rate covenant:</u> S&P states that most senior lien airport revenue bonds have a 1.25x rate covenant. S&P views meeting the rate covenant from operating cash flow with no addition to revenues from other sources is stronger.
<u>Additional bonds test</u>: S&P states that most ABTs in the airport sector allow for the use of projected revenues in meeting the typical 1.25x existing and future debt service obligations.</td></tr>
</table>

Issuer	Ratings (M/S/F)	ABT/ Rate Covenant	Debt Service Coverage (2015)	Cash on Hand (2015)	Net Debt to Cash Flow Available for D/S	Debt per Enplaned Passenger
Rhode Island Airport Corporation	**Airport Revenue** **Baa1/BBB+/BBB+** **Special Facility** **Baa1/BBB+/--**	**1.25x**	**1.76x (including rolling coverage account)** **1.47x (without coverage account)**	**397 days**	**6.10x**	**$137**
Hartford-Springfield (Bradley Airport)	--/A/A	N.A.	1.76x (including rolling coverage account) 1.29x (without coverage account)	489 days	2.38x	$43
Manchester, NH	Baa1/BBB+/--	1.25x	1.96x (including rolling coverage account) 1.02x (without coverage account)	567 days	N.A.	$143
Dayton, OH	--/AA/BBB+	1.25x	1.42x (including subsidies) 1.30x (projected)	421 days	2.42x	$74
Long Beach, CA	A3/--/A-	1.25x	1.42x (without transfers)	603 days	4.53x	$86

Source: Rating reports and annual reports for each issuer.

The RIAC's debt and other financial statistics presented above represent the recent, point-in-time numbers. RIAC's fiscal year 2016 results are generally consistent with, to slightly weaker than, fiscal year 2015 results. Despite an improvement in operating revenues, expenses increased by a greater amount putting pressure on Net Revenues.

2. Conduit Issuers – Pooled Bond Programs

The Rhode Island Health and Educational Building Corporation (RIHEBC), the Rhode Island Infrastructure Bank (RIIB), the Rhode Island Housing and Mortgage Finance Corporation (RI Housing) and the Rhode Island Student Loan Authority (RISLA) are conduit issuers that issue pooled bonds for various purposes.

For conduit bond issues with municipalities as the underlying borrower, the general obligation of the municipality or specified revenues secures the debt and debt affordability measures for these municipalities is considered in Part Three of this debt affordability, as debt of the municipalities.

Given the uniqueness of each of these quasi-public agencies, there are some different considerations for determining appropriate debt affordability measures. To assist in determining appropriate debt affordability measures, rating agency criteria have been compiled along with a review of peer agencies and current procedures and policies of the quasi-public agencies and debt management practices of selected New England states. Appendix C contains:

- Rating agency criteria for pooled loan programs and state revolving funds, which can be applied to the RIHEBC pooled programs and the RIIB pooled programs.
- Debt management practices of selected New England states with respect to quasi-public agencies.

Rhode Island Health and Educational Building Corporation

The Rhode Island Health and Educational Building Corporation (RIHEBC) runs financing programs designed to aid educational and health care institutions gain access to tax-exempt capital through conduit debt or lease structures and a community loan program. RIHEBC is the designated issuer of tax-exempt bonds for school projects for cities and towns eligible for state school construction aid. It also issues taxable and tax exempt bonds to provide conduit financing for public, non-profit, and private hospitals, universities, and other community education and health facilities. The debt RIHEBC issues on behalf of municipalities for the school construction projects will be reflected in Part Three of this study, while the debt RIHEBC issues on behalf of the state's higher education institutions is reflected herein. Given the stand-alone non-recourse nature of the debt of the conduit debt RIHEBC issues on behalf of non-profit or private institutions, this study does not include any analysis or consideration of those entities. Only RIHEBC conduit debt issued on behalf of municipalities (Part Three) and public higher education institutions (Part Two) is being evaluated for affordability by PFMB.

There is one active pooled bond program under RIHEBC for public schools and two RIHEBC programs for higher education with the Board of Education, Counsel of Post-Secondary Education as the borrower.

With the RIHEBC Public Schools Revenue Bond Financing Program, the underlying borrowers are Rhode Island municipalities, and these participating borrowers are ultimately responsible for the payment of the debt service. Prior to submitting an application to RIHEBC, these municipalities have received city or town council authorization and/or voter approval for the issuance of the debt. Public School revenue bond debt is addressed in Part Three of this study.

Through the two higher education programs, RIHEBC also issues bonds for the benefit of University of Rhode Island ("URI"), Rhode Island College ("RIC") and the Community College of Rhode Island ("CCRI", and collectively the "State Colleges") RIHEBC's Higher Education Facility Revenue Bond programs consist of (i) the Educational and General Revenue Bond program and (ii) the Auxiliary Enterprise Revenue Bond program. For the Educational and General Revenue Bond pool program debt service is paid from revenues of the Rhode Island Board of Education and from educational and general revenues derived from, or appropriated by the State for, the State Colleges. RIHEBC also issues Educational and General Revenue Bonds on a stand-alone basis for the University of Rhode Island.

For the Auxiliary Enterprise Revenue Bond pool program debt service is paid from Auxiliary Enterprise Revenues derived from the State Colleges. RIHEBC also issues Auxiliary Enterprise Revenue Bonds on a stand-alone basis for the University of Rhode Island.

RIHEBC Issuance for Pubic Higher Education Debt

As noted above, RIHEBC issues debt for public universities either in a pooled program or on a stand-alone basis for the University of Rhode Island. In both categories, RIHEBC separately secures its Educational and General Revenue Bonds and its Auxiliary Enterprise Revenue Bonds. Educational and General Revenue Bonds are paid for through the collection of tuition and student fees, together with other available moneys (which could include State appropriations). To service the Auxiliary Enterprise Revenue Bonds, requires the Rhode Island Council for Postsecondary Education collects fees and charges for housing and dining.

As of June 30, 2016, RIHEBC reported the following amounts outstanding:

- $51.8 million of URI Educational and General Revenue Bonds
- $25 million of State Colleges Educational and General Revenue Bonds
- $136.9 million of URI Auxiliary Enterprise Revenue Bonds
- $6.1 million of State Colleges Auxiliary Enterprise Revenue Bonds

Both Moody's and Standard & Poor's use scorecards for rating higher education pool programs and specific institutions. Both agencies focus on fundamentals that drive financial performance including Market Position, Management, Operating Performance and Debt Affordability. While historically, annual maintenance targets (rate covenant) and ABT have driven ratings, higher education issuers have moved away from including those covenants in their security packages. As such, the rating agencies now use more holistic statistics to capture all leverage, (using maximum annual debt service (MADS) and total debt as measurement tools. RIHEBC's Educational and General Revenue Bonds ABT of 1.00x and Auxiliary Enterprise Revenue Bond ABT of 1.20x are on the low side compared to peer states.

The following table summarizes Moody's and S&P's key statistics for Higher Education bonds, and a comparison of the current debt service coverage ratio, operating margin, MADS burden and Total Debt to Cash Flow of peer large State Flagship Universities in the New England States.

Rating Agency Criteria for Higher Education Issuers	
Moody's Investors Service	Scorecard includes four broad factors: Market Profile, Operating Performance, Wealth and Liquidity and Leverage Several of the factors measure how the University and System are positioned as it relates to size, attendance and revenue diversity. Operating Margin and Total Debt to Cash Flow serve as two primary statistics for measuring annual performance and debt affordability.

Rating Category	**Aaa**	**Aa**	**A**	**Baa**
Operating Margin (%)	≥ 20	11 – 20	4.5 – 11	1 – 4.5
Total Debt to Cash Flow	0 < 4	> 4 - 10	>10 - 16	>16 - 22

Standard & Poor's	Considers the Enterprise (Market Position and Governance) Profile and Financial Profile of the institution equally. MADS Burden is one primary factor in assessing debt affordability:

Score	Burden
1	2% or less
2	2% to 4%
3	4% to 6%
4	6% to 8%
5	8% to 10%
6	Greater than 10%

	Ratings (M/S/F)	**ABT/ Rate Covenant**	**Debt Service Coverage (FY 2015)**	**Operating Margin (FY 2015)**	**MADS Burden**	**Total Debt to Cash Flow (FY 2015)**
University of Rhode Island – Educational and General Revenue Bonds[5]	**Aa3/A+/--**	**1.00x**	**N/A**	**7.5%**	**3.9%**	**7.0x**
University of Rhode Island – Auxiliary Enterprise Revenue Bonds	**A1/A+/--**	**1.20x**	**1.5x**	**7.5%**	**3.9%**	**7.0x**
University of Connecticut	Aa2/AA-/--	1.25x	7.3x	14.9%	12.54%	7.2x
University System of New Hampshire	Aa3/AA-/--	N/A	3.5x	12.7%	8.66%	4.5x
University of Massachusetts	Aa2/AA-/AA	N/A	1.7x	11.0%	7.23%	9.4x
University of Vermont & State Agricultural College	Aa3/A+/--	N/A	2.8x	12.7%	5.10%	5.5x

** Statistics provided from recent rating reports published.*

[5] State College and University of Rhode Island credit statistics reflect all debt obligations which may include portions of certain general obligation and certificate of participations issued by the State.

URI's debt and other financial statistics presented above represent the recent, point-in-time numbers. Fiscal year 2016 results are not yet publicly available. URI is reportedly considering a new student housing projects that may include future borrowing. PFMB will continue to monitor URI's borrowing plans.

Quasi-Public Agency	Recommendations for Debt Affordability Measure	Current Level of Debt
University of Rhode Island	Total Debt to Cash Flow of less than 11.0x as a factor required for Additional Bonds. Provide notice to PFMB of any rating action	7.0x Debt to Cash Flow

Rhode Island Infrastructure Bank

The Rhode Island Infrastructure Bank currently administers four core pooled loan programs and a number of smaller programs. The four core programs include: (i) clean water state revolving loan fund, (ii) drinking water state revolving loan fund, (iii) municipal road and bridge revolving loan fund and (iv) the efficient buildings fund.

Loan Programs	Debt Outstanding (FY 2016)
Water Pollution Control Revenue Bonds	$522,700,000
Safe Drinking Water	$264,742,000
Municipal Road and Bridge Revolving Loan Fund	Newly Established
Efficient Buildings Fund	Newly Established

The focus for this study will be on the Water Pollution Control Revenue Bonds and Safe Drinking Water bond programs, which provide subsidized financing to governmental entities and water suppliers throughout the State for eligible wastewater and drinking water projects, respectively. Bond proceeds are combined with other sources of funding to provide subsidized loans to underlying borrowers, primarily municipalities, sewer and water utilities. The Municipal Road and Bridge Fund and the Efficient Buildings Fund are new programs that are in early stages of development and have not issued a significant amount of debt. The PFMB will not provide targets for these programs until they are more fully developed, and the recommended targets for the Water Pollution Control and Safe Drinking Water programs should not be considered applicable to the Municipal Road and Bridge Fund or Efficient Buildings Fund.

Fitch and Standard & Poor's calculate the program's asset strength ratio or asset liability ratio, which includes the sum of the total scheduled pledged loan repayments, account interest earnings and reserves divided by total scheduled bond debt service. Rating agency criteria provides a limit on the number of borrowers at certain rating levels that can be included in the overall weighted pool rating. RIIB has an agreement with the Narragansett Bay Commission, its largest borrower, to reserve 50% of its annual Clean Water SRF funding capacity for the Narragansett Bay Commission through 2021 to help meet the capital needs of the Narragansett Bay Commission. Both Fitch and S&P conduct cash flow modeling analyses to demonstrate that the programs can continue to pay debt service even with loan defaults in excess of the agencies' "AAA" rating stress default levels.

The following table summarizes Fitch and S&P rating key statistics for State Revolving Loan Fund bonds and other leveraged municipal pools revenue bonds, and a comparison of the asset/liability ratio, projected debt service coverage levels, largest borrower percentage and the rating of the largest borrower of peer State revolving loan fund borrowers. See Exhibit B for a more detailed summary of the rating agencies' criteria for evaluating state revolving pooled loan programs and other municipal pool programs.

Rating Agency Criteria for State Revolving Loan Bonds and Similar Municipal Loan Pools	
Fitch Ratings	Fitch's key rating drivers include: Portfolio Credit Risk, Strength of Financial Structure, Legal Risk, Adequacy of Program Management and Counterparty Risk.
Standard & Poor's	Indicative rating is determined from a combination of the Financial Risk Score and Enterprise Risk Scores. Financial Risk Score includes a Primary Loss Coverage Score (calculated by S&P), with an adjustment for a Least Favorable Largest Obligor Test result, and an Adjusted Loss Coverage Score with an adjustment for Financial Polices and Operating Performance Scores. Enterprise Score is calculated based on a Market Position Score and an Industry Risk Score. S&P considers the Market Position Score and an Industry Risk Score for municipal utility borrower to be in the low risk category.

Issuer	Ratings (M/S/F)	Asset / Liability Ratio	Projected Minimum Debt Service Coverage	Largest Borrower (%)	Rating of Largest Borrower
RIIB	**- /AAA/AAA**	**1.5(CW)/ 1.6(DW)**	**1.3x(CW)/ 1.5x(DW)**	**47.0%(CW)/ 30.6%(DW)**	**AA-/AA-**
Connecticut SRF	Aaa/AAA/AAA	1.3	1.0	21.5%	AA+
Florida Water Pollution Control Corporation	Aaa/AAA/AAA	2.0	1.7	51.9%	A
Maryland Water Quality Financing Administration	Aaa/AAA/AAA	9.4	5.3	12.9%	AAA
Maine Bond Bank (SRF Program)	Aaa/ AAA /-	20.1	N.A.	8.0%	AA
Arizona Water Infrastructure Finance Authority	Aaa/AAA/AAA	46.6	3.7	18.1%	AA

Source: Fitch State Revolving Fund and Municipal Loan Pool Peer Review: 2016, October 31, 2016

The RIIB's debt and other financial statistics presented above represent the recent, point-in-time numbers. The RIIB's fiscal year 2016 results are stronger when compared with fiscal year 2015 results. The Bank's operating revenues increased by nearly 15% while expenses remained flat to slightly lower. The strong fiscal year 2016 results provide ample cushion for the Bank's various loan programs.

At this time, the PFMB recommends RIIB target debt service coverage of at least 1.2x and a minimum asset to liability ratio of 1.3x for the Water Pollution Control and Safe Drinking Water bond programs, which would be on the low end of the levels required to maintain RIIB's triple-A ratings based on rating agency criteria and in comparison to its peers. While RIIB's current debt service coverage levels and asset to liabilities ratios for these two programs are well within the recommended ratios and RIIB maintains triple-A ratings from Fitch and Standard & Poor's, the PFMB recognizes that these levels may not be able to be maintained if there are critical infrastructure needs for the State. However, the triple-A ratings are a significant strength, and any decision that could lead to the ratings for these programs to be lowered should be made with careful consideration of the pros and cons.

Quasi-Public Agency	Recommendations for Debt Affordability Measure	Current Debt Levels
Rhode Island Infrastructure Bank	Maintain a minimum of 1.2x debt service coverage and maintain RIIB's asset to liabilities ratios at a minimum of 1.3x. Provide notice to PFMB of any rating action	Debt service coverage of 1.3x for Clean Water and 1.5x for Safe Drinking Water Asset to liabilities ratio of 1.5x for Clean Water and 1.6x for Safe Drinking Water.

Rhode Island Housing and Mortgage Finance Corporation

Rhode Island Housing and Mortgage Finance Corporation ("Rhode Island Housing) provides loans, grants, education, advocacy, and counseling to customers to rent, buy and retain homes. The agency also provides builders and developers loans, tax credits, and other forms of assistance to attract development. This study focuses on debt issued by the agency to fund its single, multi-family, and rental assistance lending—namely its Homeownership Opportunity Bonds and Multi-Family Development Bonds.[6] Like many Housing Finance Agencies (HFAs), Rhode Island Housing uses these tax-exempt bonds to finance low-interest mortgages for low- and moderate-income home buyers, and in the case of multi-family homebuyers, the properties financed with these proceeds are then rented to low-income renters. The underlying mortgage loans and revenues in Rhode Island Housing's portfolio serve as the security for these bonds, which are often securitized and purchased by Freddie Mac or Ginnie Mae.

Rhode Island Housing's Financing Programs	Debt Outstanding (FY 2016)
Homeownership Opportunity Bonds	$611,704,448
Home Funding Bonds and Notes	$130,262,468
Multi-Family Housing Bonds	$630,000
Rental Housing Bonds	$65,039,132
Multi-Family Funding Bonds	$88,760,000
Multi-Family Development Bonds	$214,758,428
Multi-Family Mortgage Rev Bonds	$100,691,010

There are several pooled loan programs under the Rhode Island Housing and Mortgage Finance Corporation for single-family and multi-family housing. Two of the programs, Multi-family Housing Bonds and the Rental Housing Bonds have the moral obligation of the State, in which the State agrees to make up any shortfalls in the Capital Reserve Fund. RI Housing indicated that they do not plan to issue any additional bonds under these two programs and anticipate all of the outstanding moral obligation debt to be retired in four to five years. If this plan changes, it may be prudent to limit the issuance of additional debt under these two programs, applying any new issuance to the state's tax-supported debt affordability limits reflected in Part One.

A key ratio that is assessed by rating agencies is the program asset-to-debt ratio (PADR) with 1.00 required for investment grade ratings. Moody's rates most of the State's housing bonds at the Aa2 level and based on its criteria, requires a 1.04 to 1.02 level to be maintained for both single and multi-family housing. Moody's reports a PADR of 1.19x as of June 30, 2015 for RI Housing's single-family Homeownership Opportunity Bonds, and a PADR of 1.12x as of June 30, 2015 for the Multi-Family Development Bonds. PFMB recommends the RI Housing allow for a minimum PADR level to ensure debt affordability measures. Additionally, PFMB requires notice of any rating agency action, including confirmation of ratings, outlook changes, or any upgrade/downgrade of the rating.

The following table summarizes the key rating considerations for assessing financial position of housing revenue bonds by Moody's, which rates the RI Housing's currently active housing bonds, and a comparison of the key financial ratios of peer state housing agencies.

[6] The agency has also previously issued Home Funding Bonds and Notes, Multi-Family Housing Bonds, Rental Housing Bonds, and Multi-Family Mortgage Revenue Bonds, all of which are outlined in greater detail on page B-4 of the Appendix.

Rating Agency Criteria for Single Family and Multi-Family Housing Bonds	
Moody's Investors Service	Program Asset to Debt Ratio (Program Assets to Total Bonds Outstanding Plus Accrued Interest): Aaa: 1.10x Aa1: 1.04x Aa2: 1.02x Aa3: 1.00x
	Cash Flow Projections: Aaa: Meets cash flow stress tests under all scenarios. Robust ability to absorb future financial stress. Aa: Meets cash flow stress tests under all scenarios. Strong ability to absorb future financial stress. A: Meets cash flow stress tests under all scenarios except for most stressful scenarios. Moderate ability to absorb future financial stress.
	Historical Financial Performance: Aaa: Fund balance % of bonds outstanding on average over 3 years above 15%; profitability (net operating revenue as % of total operating revenue) above 15% on average. Aa: Fund balance % of bonds outstanding on average 8% - 15%; profitability above 10% - 15% on average. A: Fund balance % of bonds outstanding on average 3% - 8%; profitability above 3% - 8% on average.

	Single-Family			Multi-Family		
Issuer	**Ratings (M/S/F)**	**PADR (2015)**	**Profitability (2015)**	**Ratings (M/S/F)**	**PADR (2015)**	**Profitability (2015)**
Rhode Island Housing	**Aa2/AA+/--** (Homeownership Opportunity Bonds)	**1.19x**	**17.7%**	**Aa2/--/--** (Multi-Family Development Bonds)	**1.12x**	**42.1%**
Connecticut	Aaa/AAA/-- (Housing Mortgage Finance Program)	1.28x	5.86%	Aaa/AAA	1.29x (2014)	11.5% (2014)
Maine	Aa1/AA+/--	1.22x	7.20%	Aa1/AA+/--	1.22x	7.2%
Massachusetts	Aa1/AA/-- (Single Family Housing)	1.15x	6.03%	Aa2/AA/-- (Housing Bonds)	1.14x	18.7%
New Hampshire	Aa2/--/-- (Single Family Mtg Acq)	1.04x	6%	Aa2/--/-- (2000-2013 Indenture)	1.13x	18.3%
Vermont	Aa3/--/AA (Multi-Purpose Bonds)	1.22x	15.39%	Aa3/A+/-- (Multi-Family Mortgage)	1.22x	38.3%

**Source: Moody's rating reports for each issuer. Moody's Multi-Family Medians, April 2016.*

The RI Housing's debt and other financial statistics presented above represent the recent, point-in-time numbers. The RI Housing's fiscal year 2016 operating income is up approximately 55% year over year. Further, RI Housing reports increases in assets and decreases in bonds and note payable thereby enhancing the overall program asset-to-debt ratio. At this time, the PFMB recommends RI Housing target a PADR of not less than 1.10x.

Quasi-Public Agency	Recommendations for Debt Affordability Measure	Current Debt Level
Rhode Island Housing	Target minimum PADR of 1.10x Provide notice to PFMB of any rating action	PADR of 1.19x (Single-Family) and PADR of 1.12x (Multi-Family)

Rhode Island Student Loan Authority

The Rhode Island Student Loan Authority ("RISLA") uses its tax-exempt bonding authority to offer low cost student loans to underlying borrowers. There are two distinct pooled loan programs administered by RISLA: (i) a Federal Family Educational Loan Program (FFELP), and (ii) a state-based Supplemental Loan Program. Since July of 2010, FFELP can no longer be originated, and therefore, since no new bonds, except refunding bonds can be issued, the PFMB guidance debt affordability for RISLA debt will focus on the Supplemental Loan Program.

The Parity Ratio is the percentage of total assets, including loans and funds in the loan acquisition account and the reserve account, to the total outstanding bonds. With the issuance of the 2016 bonds in April, the RISLA's parity ratio was calculated as 119.46% at closing.

Rating Agency Criteria for Student Loan Bonds	
Fitch Ratings	Fitch does not have a scoring methodology for defined metrics. Reviews collateral to determine expected loss frequency and loss severity, reviews historical performance and runs stress tests on expected cash flows. Performs quarterly monitoring. • Reviews Parity Ratio: Percentage of total assets, including loans and funds in the loan acquisition account and the reserve account, to the total outstanding bonds. • Reviews Overcollateralization: Difference between asset balance and outstanding bonds. • Reviews Credit Enhancement: Includes Overcollateralization and excess spread (difference between interest collections on the assets and the sum of debt interest costs, servicing fees and other trust expenses).
Standard & Poor's	S&P reviews loan attributes, performs stress cases with various default and recovery scenarios, taking into account historical performance. Does not have specific financial metrics in its rating criteria but cites the parity ratio and credit enhancement.

Issuer	Ratings (M/S/F)	ABT	Parity Ratio	Credit Enhancement (% to Total Assets)
Rhode Island Student Loan Authority	**--/AA(sf)/AAsf**	**Ratings Affirmation**	**120.97%**	**16.29%**
Massachusetts Educational Financing Authority (MEFA)	--/AA(sf)/A (sf)	Ratings Affirmation	109.32%	9.16%
Connecticut (CHESLA)	Aa3/--/A+	Credit based on State Special Capital Reserve Fund Make-Up		
Vermont(VSAC)	--/A (sf)/Asf	None	135%	26.03%
New Jersey (HESAA)	Sen: Aa2/AA (sf)/-- Sub: A2/A(sf)/--	Parity Percentage at least 103%	108%	Sen: 17.3% Sub: 12.8%
Iowa Student Loan Liquidity Corporation	--/A (sf)/Asf	Ratings Affirmation	150.1% (Initial)	32% (Initial)

** Source: Most recent Fitch pre-sale rating reports for each issuer and Quarterly disclosures published by each agency.*

RISLA's debt and other financial statistics presented above represent the recent, point-in-time numbers. RISLA's fiscal year 2016 results are generally with fiscal year 2015 results. The Authority reduced expenses in Fiscal Year 2016, however operating revenues were lower creating a flat to slightly lower operating income.

At this time, the PFMB recommends RISLA's target a Parity Ratio of 110% based on the lower range of Parity Ratios of its peer group. Additionally, PFMB requests notice of any rating agency action, including confirmation of ratings, outlook changes, or any upgrade/downgrade of the rating.

Quasi-Public Agency	Recommendations for Debt Affordability Measure	Current Debt Levels
Rhode Island Student Loan Authority	Target minimum Parity Ratio of 110% Provide notice to PFMB of any rating action	Parity ratio of 120.97%

Debt Affordability Study

Part Three: Municipalities, regional authorities, fire districts and other special district debt and long-term liabilities

Part Three – Municipalities, Fire Districts, Special Districts and Local Authorities

The third part of the debt affordability study focuses on the debt of the municipalities, fire districts, special districts and local authorities of the State. While the primary focus of this first debt affordability study for municipalities, fire districts, special districts and local authorities will be on debt, the PFMB recognizes that pensions represent additional long-term liabilities, and therefore, will include pension liability for the municipalities in determining appropriate measures of debt and liability affordability ratios. This debt affordability study will use the net pension liability as reported in the annual financial statements of the municipalities. It should be noted that the municipalities do not have consistent measures and assumptions in determining pension liabilities to make them comparable on these measures, but the PFMB believes recognition of pension liabilities is critical in assessing long-term debt affordability. This study does not include pensions for fire districts, special districts and local authorities, but the PFMB will endeavor to include this information in future iterations of the study. In addition, similar to Part One, OPEB liabilities will also not be considered in this first debt affordability study. Future debt affordability studies will endeavor to capture these additional long-term liabilities into the analysis.

Rhode Island Municipalities

Rhode Island has 39 municipalities. The table below summarizes the current general obligation ratings of the municipalities.

Obligor Name	Moody's	S&P	Fitch	Obligor Name	Moody's	S&P	Fitch
Barrington	Aa1	AAA	NR	New Shoreham	NR	AA	NR
Bristol	Aa2	AA+	NR	Newport	NR	AA+	NR
Burrillville	Aa2	NR	AAA	North Kingstown	Aa2	AA+	NR
Central Falls	Ba2	BBB	NR	North Providence	A2	AA-	NR
Charlestown	Aa2	NR	NR	North Smithfield	Aa2	NR	NR
Coventry	A1	AA	NR	Pawtucket	A3	A	A+
Cranston	A1	AA-	AA+	Portsmouth	Aa2	AAA	NR
Cumberland	Aa3	AA	NR	Providence	Baa1	BBB	A-
East Greenwich	Aa1	AA+	NR	Richmond	Aa3	NR	NR
East Providence	A2	AA	NR	Scituate	NR	AA	NR
Exeter	NR	NR	NR	Smithfield	Aa2	AA	NR
Foster	NR	NR	NR	South Kingstown	Aa1	NR	NR
Glocester	NR	AA+	NR	Tiverton	A1	AA	NR
Hopkinton	Aa3	NR	NR	Warren	Aa3	NR	NR
Jamestown	Aa1	NR	NR	Warwick	A1	AA-	NR
Johnston	A3	AA-	NR	West Greenwich	NR	AA+	NR
Lincoln	Aa2	NR	AA	West Warwick	Baa2	NR	BBB
Little Compton	NR	NR	NR	Westerly	Aa3	AA	NR
Middletown	Aa1	NR	NR	Woonsocket	Ba3	NR	BBB
Narragansett	Aa2	AA+	NR				

Appendix C provides a summary of the outstanding debt for each municipality for FY2015, including types of debt and associated FY2015 debt service. The 39 municipalities have tax-supported debt that includes the following: (i) general obligation bonds (ii) loans payable, (iii) capital leases and (iv) enterprise debt. In addition, the as reported net pension liability is included in Appendix C.

Fire Districts

Based on FY2015 information from the Division of Municipal Finance, there are 44 fire districts in Rhode Island as summarized in the table below with the corresponding town or towns that each serves.

Fire District	Town	Fire District	Town
Oakland-Mapleville	Burillville	Lime Rock	Lincoln
Pascoag	Burillville	Lonsdale	Lincoln
Harrisville	Burrillville	Manville	Lincoln
Nasonville	Burrillville	Quinnville	Lincoln
Charlestown	Charlestown	Saylesville	Lincoln
Quonochontaug Central	Charlestown	Bonnet Shores	Narragansett
Shady Harbor	Charlestown	Pojac Point	North Kingstown
Central Coventry	Coventry	Portsmouth Water and Fire	Portsmouth
Coventry	Coventry	Richmond Carolina	Richmond
Hopkins Hill	Coventry	Indian Lake	South Kingstown
Western Coventry	Coventry	Kingston	South Kingstown
Cumberland	Cumberland	Union	South Kingstown
Cumberland Hill	Cumberland	North Tiverton	Tiverton
North Cumberland	Cumberland	Stone Bridge	Tiverton
Valley Falls	Cumberland	Buttonwoods	Warwick
Exeter	Exeter	Bradford	Westerly
Chepachet	Glocester	Misquamicut	Westerly
Harmony	Glocester	Shelter Harbor	Westerly
West Glocester	Glocester	Watch Hill	Westerly
Ashaway	Hopkinton	Weekapaug	Westerly
Hope Valley-Wyoming	Hopkinton-Richmond	Westerly	Westerly
Albion	Lincoln	Dunn's Corners	Westerly-Charlestown

Exhibit B summarizes the debt outstanding for 2015, as compiled by the Division of Municipal Finance (the "Division") from the data self-reported by the fire districts in the Division's FY15 Fire District Adopted Budget Survey (based on self-reported data). Based on the Division's *Report on Rhode Island Fire Districts Based on Annual Fire District Survey 2013*, all fire districts have the authority to borrow money, and most fire district charters include a debt limit, which varies from district to district.

Fire districts in Rhode Island have the authority to tax real property, automobiles and tangible property located within the district. The taxes assessed and collected are an additional tax to the district population, separate from annual property taxes billed by the municipality. The tax revenues generated within the districts are used for operation, capital needs and debt service (if debt has been issued) of the individual fire district. For most of the districts, property tax revenue is the primary source of revenue. However, other fees from other services such as rescue, fire hydrant rentals, inspections, fire prevention/plan review, hazardous material and hall rentals provide additional revenues to the districts.

Other Special Districts and Local Authorities

There are 17 special districts and local authorities in Rhode Island that have been rated by the three national rating agencies, as summarized with the ratings in the following table. Exhibit C provides a summary of the debt outstanding and debt service for FY2015 (if available). Information on the local housing authorities is not readily available at this time and will therefore, not be included in this iteration of the debt affordability study.

Special Districts/Local Authorities	Moody's	S&P	Fitch
Bristol-Warren Regional School District	Aa3	NR	NR
Bristol County Water Authority[1]	NR	NR	NR
Burrillville Housing Authority	NR	A+	NR
Chariho Regional School District[2]	Aa3	NR	NR
Coventry Housing Authority	NR	AA-	NR
Cumberland Housing Authority	NR	AA-	NR
Exeter-West Greenwich Regional School District	A1	NR	NR
Foster-Glocester Regional School District	Aa3	NR	NR
Kent County Water Authority[3]	Aa3	AA-	NR
North Providence Housing Authority	NR	AA-	NR
Pascoag Utility District[4]	NR	A-	NR
Pawtucket Housing Authority	NR	A+	NR
Providence Housing Development Corp.	NR	AA-	NR
Providence Public Building Authority	NR	BBB-	NR
Providence Redevelopment Agency	NR	BBB-	NR
Providence Water Supply Board	NR	AA-	NR
Woonsocket Housing Authority	NR	A+	NR

1. Previously rated by Moody's and Standard & Poor's. Ratings no longer outstanding.
2. Regional school district for the towns of Charlestown, Hopkinton and Richmond.
3. Provides water supply services in the communities of Coventry, Warwick, West Warwick, East Greenwich, West Greenwich, and in smaller sections of Cranston, Scituate and North Kingstown.
4. Provides electric services to Villages of Pascoag and Harrisville, both in the Town of Burrillville, and provides water services to Village of Pascoag.

Municipal Debt Classifications

In assessing the debt burden of a municipality, various levels of debt need to be considered. Rating agencies will measure the burden of Gross Direct Debt, Net Direct Debt, Overall Debt and Overall Net Debt.

- *Gross Direct Debt.*
  - Definition: The sum of the total bonded debt and any short-term debt of the issuer. This debt includes: (i) general obligation bonds; (ii) other obligations such as loan agreements secured by taxes; (iii) capital lease obligations that are secured by lease rental or contract payments subject to appropriation; (iv) special assessment obligations; and (v) any enterprise debt.
  - Examples: City of Providence General Obligation Debt, and Providence Water Supply debt.

- *Net Direct Debt.*
  - Definition: Gross direct debt less all self-supporting debt. Net Direct Debt excludes enterprise bonds (water, sewer, solid waste and electric revenue bonds), where enterprise fund revenues cover debt service by at least 1.0x for at least the last three fiscal years.
  - Examples: City of Providence General Obligation Debt, but not Providence Water Supply Debt.

- *Overlapping Debt.*
  - *Definition*: The issuer's proportionate share of the debt of other local governmental units that either overlap it (the issuer is located either wholly or partly within the geographic limits of the other units) or underlie it (the other units are located within the geographic limits of the issuer). The debt is apportioned based upon some measure such as relative assessed values or student enrollment in the case of school districts.
  - *Examples*: Bristol-Warren School System, Albion Fire District, Narragansett Bay Commission, Kent County Water Authority.

- *Overall Debt.*
  - *Definition*: Gross direct debt plus the issuer's applicable share of the total debt of all overlapping jurisdictions.
  - *Examples*: Includes all examples listed for the above categories.

- *Overall Net Debt.*
  - *Definition*: Net direct debt plus the issuer's applicable share of the net direct debt of all overlapping jurisdictions. Excludes enterprise bonds (water, sewer, solid waste and electric revenue bonds), where enterprise fund revenues cover debt service by at least 1.0x for at least the last three fiscal years.
  - *Examples*: Includes City of Providence General Obligation debt, Albion Fire District, but not Providence Water Supply or Narragansett Bay Commission.

Most of the Rhode Island municipalities issue general obligation bonds directly and enter into capital leases. Many also issue bonds through the Rhode Island Health and Educational Building Corporation Public Schools Revenue Bonds Financing Program (RIHEBC Bonds), which are secured by financing agreements between the municipality and RIHEBC in which the municipality pledges its general obligation. To calculate gross direct debt, all general obligations bonds, capital leases and the municipality's share of RIHEBC Bonds would be included. For the City of Providence, debt of both the Providence Public Buildings Authority and the Providence Redevelopment Agency, which are subject to City of Providence appropriation, and debt of the Providence Water Supply Board, are included in Providence's gross direct debt.

Under Rhode Island law, the State provides aid to municipalities for the cost of school building construction or renovation. The most typical type of aid the State provides to municipalities is a reimbursement for a portion of the debt service of these projects, with the amount of reimbursement determined by a formula tied to the economic conditions of the municipality. It is important to note that in some cases, municipalities would not issue as much general obligation debt for school projects were it not for the fact that the state had promised a partial reimbursement of the debt service costs. Nevertheless, for the purpose of this study, all general obligation debt for school building projects is counted as debt of the municipality regardless of whether the municipality expects to receive state aid, because state aid is subject to annual appropriation and if the state were to fail to make an appropriation for the full amount of expected housing aid, the responsibility for those debt service payments would rest with the municipality. Appendix C provides a summary table of the reimbursements the State is expected to provide to each school district from FY2015 through FY2030 related to principal outstanding for school construction. For comparison purposes, the graphs following the table in Appendix C show the portion of the principal amount of debt outstanding for which the municipality receives State reimbursements and compares each municipalities' overall debt to the recommended debt affordability measures.

In addition, many municipalities issue water and sewer bonds directly, through the Rhode Island Infrastructure Bank (RIIB) or through a special utility district, and the City of Providence issues bonds through the Providence Water Supply Board. This enterprise debt is also included in gross direct debt calculation and to the extent enterprise revenue funds have historically covered debt service, the debt is subtracted out to calculate net direct debt for the municipality. The City of Providence includes the debt of the Providence Water Supply Board in its financials as enterprise debt and although it provides services to other communities in the State, the debt is ultimately the responsibility of Providence and therefore, not allocated to the other communities. Similarly, the City of Woonsocket has a regional wastewater system that services Woonsocket, North Smithfield, Bellingham and Blackstone. The debt is reflected in Woonsocket's financial statements and ultimately, the responsibility of Woonsocket and therefore, not allocated to the other communities.

Rhode Island also has four regional school districts that cover multiple cities and towns and the Kent County Water Authority provides water services to eight different communities. The debt issued by these issuers is overlapping debt and the proportionate share of the debt needs to be allocated to determine the overall debt of the affected communities. Further, the Kent County Water Authority debt is self-supporting and thus, subtracted from the overall debt of the communities to derive overall net debt.

Some of the fire districts also have debt outstanding secured primarily by taxes on real property, automobiles and tangible property located within the district. Since the tax base is within a town or city or in some cases multiple towns/cities, this debt would be considered overlapping debt and would need to be included in the overall debt of the municipality.

The Narragansett Bay Commission (NBC) provides wastewater collection and treatment services to its service area, which includes Providence, North Providence, Johnston, Pawtucket, Central Falls, Cumberland, Lincoln, the northern portion of East Providence and small sections of Cranston and Smithfield. As of June 30, 2016, NBC had approximately $242.82 million of NBC issued bonded debt outstanding under the trust indenture and approximately $385.09 million in subsidized loans from the Rhode Island Infrastructure Bank's clean water state revolving loan fund. The debt is secured by revenues of the system derived from the fees paid by the NBC customers. Since this debt is paid by the taxpayers of communities in the service area and to encompass the overall burden on the taxpayer, for purposes of this debt affordability study, the NBC debt is allocated to the municipalities in its service area based on the municipality's percentage of 2016 revenues, as shown in Appendix C.

Debt Affordability Measures

Statutory Debt Limitation for Municipalities

Under Rhode Island state law, municipalities are limited to a level of indebtedness at or below 3% of the full assessed value of the city or town. There are, however, avenues for municipalities to receive permission to take on levels of debt outside of the 3% cap, including through special legislation of the General Assembly authorizing a voter referendum, or ministerial approval by the state Auditor General or Director of Revenue if the community satisfies certain requirements.

Rating Agency Debt Ratios for Local Governments

Rating agencies have developed criteria for rating debt of local governments. Below is a summary of the debt and liability measures used by Fitch, Moody's and Standard & Poor's, how they score these ratios and other considerations they take into account with respect to debt and other liabilities.

<u>Fitch Ratings</u>. Fitch uses the following metric to measure long-term liability burden for local governments:

$$\frac{\text{Overall Local Government Debt + Fitch's Adjusted Direct Unfunded Pension Liability}}{\text{Personal Income}}$$

The Fitch pension adjustment inflates the reported pension liability by 11% for every 1% by which the assumed investment return exceeds 7%. No adjustment is made if the pension's assumed return is already at or below 7.0%. To calculate a personal income for local governments, Fitch takes the U.S. Bureau of Economic Analysis (BEA) per capita personal income number that is available for counties but no other levels of local government and uses that county-level data to develop a proxy for lower levels of government. Specifically, Fitch takes the U.S. Census Bureau per capita money income statistic, which is a narrower measure of income but one available for all units of local government, calculates the ratio of money income to per capita personal income for the county in which the rated issuer is located, and then applies that ratio to the issuer's money income. This per capita information is then multiplied by population to generate the denominator for the liability metric.

The following table summarizes how Fitch scores the long-term liability burden:

Liability Burden	Low	Moderate	Elevated but Still in Moderate Range	High	Very High
Rating Assessment	AAA	AA	A	BBB	BB
Ratio Level	Liabilities Less than 10% of Personal Income	Liabilities Less than 20% of Personal Income	Liabilities Less than 40% of Personal Income	Liabilities Less than 60% of Personal Income	Liabilities 60% or More of Personal Income

In addition, for local governments, Fitch also considers the liability burden as a percentage of property value. Further, while Fitch does not include OPEB as part of the calculation of long-term liability burden, Fitch states that the liability assessment burden could be negatively affected by "exceptionally large" OPEB liability without the ability or willingness to make changes to the benefits.

Moody's Investors Service. For Moody's, debt and pensions comprise 20% of a municipality's overall rating score. The table below summarizes the debt factors used by Moody's.

Rating Factor / Weight	Aaa	Aa	A	Baa
Net Direct Debt/ Full Value (5%)	< 0.75%	0.75% - 1.75%	1.75% - 4%	4% - 10%
Net Direct Debt/ Operating Revenues (5%)	< 0.33x	0.33x – 0.67x	0.67x – 3x	3x – 5x
3-Year Avg of Moody's Net Pension Liability/ Full Value (5%)	< 0.9%	0.9% - 2.1%	2.1% - 4.8%	4.8% - 12%
3-Year Avg of Moody's Net Pension Liability/ Operating Revenues (5%)	< 0.4x	0.4x – 0.8x	0.8x – 3.6x	3.6x – 6x

To arrive at net direct debt, Moody's takes the local government's gross debt burden, including general obligation bonds, notes, loans, capital leases, any third-party debt backed by a local government's general obligation guarantee, lease and other appropriation debt, special tax debt if these obligations represent future claims on operating resources. Debt for essential service utilities (such as water and sewer systems) that is self-supporting from user fees for the previous three years is subtracted out to arrive at net direct debt.

Moody's will also look at other factors and potentially make adjustments (up or down) to its debt/liability scoring. These other factors include:

- Very high or low debt service relative to budget
- Very high or low overall debt burden (including overlapping debt)
- Heavy capital needs implying future debt increases
- Rapidity of debt repayment within 10 years
- High OPEB liability

Standard & Poor's. In assessing a municipality's debt and contingent liability Standard & Poor's looks at the combination of two measures:

(i) Total governmental funds debt service as a percentage of total governmental funds expenditures, and
(ii) Net direct debt as a percentage of total governmental funds revenue

The following table summarizes how the two measures are combined to determine a score for the debt and contingent liabilities.

Total Governmental Funds Debt Service as % of Total Governmental Funds Expenditures	**Net Direct Debt As % of Total Governmental Funds Revenue**				
	< 30%	**30% to 60%**	**60% to 120%**	**120% to 180%**	**≥ 180%**
< 8%	1	2	3	4	5
8% to 15%	2	3	4	4	5
15% to 25%	3	4	5	5	5
25% to 35%	4	4	5	5	5
≥ 35%	4	5	5	5	5

1 = very strong, 2 = strong, 3 = adequate, 4 = weak, 5 = very weak

In addition, Standard & Poor's looks at the following qualitative factors with a positive impact on the initial score (each can increase initial debt score by 1 point):

- Overall net debt as a percentage of market value below 3%
- Overall rapid annual debt amortization with more than 65% coming due in 10 years

While the following factors would have a negative impact (each can decrease initial debt score by 1 point (or up to 2 for pension and OPEB):

- Significant medium-term debt plans produce a higher initial score when included
- Exposure to interest rate risk or instrument provisions that could increase annual payment requirements by at least 20%
- Overall net debt as a percentage of market value exceeding 10%
- Unaddressed exposure to unfunded pension or OPEB obligations leading to accelerating payment obligations over the medium term that represent significant budget pressure

Speculative contingent liabilities or those likely to be funded on an ongoing basis by the government and representing more than 10% of total governmental revenues

Debt Affordability Measures to Apply to Municipalities

Considering the patchwork nature of municipal governance in Rhode Island, with dozens of overlapping districts and authorities issuing different types of debt, the PFMB ultimately determined that the most important factor in judging municipal debt affordability is the ability of each municipality's underlying population to afford the liabilities of the various governmental agencies that serve them. For the purposes of this study, affordability is measured in two ways: the average income of the population in a town or city, and the assessed property value in a municipality, because property tax revenues are the primary source of income for most governmental units.

The PFMB recognizes that despite applying a unified set of affordability targets to all overlapping local governmental entities in a municipality, these entities do not always act in a coordinated fashion when making financing decisions, and municipal governments often have limited ability to influence the actions of special districts in their communities. Nevertheless, the purpose of this report is to provide a greater level of transparency on public debt, and to recommend some guidelines for how much total public debt municipal residents can afford.

As with state-level debt, the PFMB believes that municipal debt must be looked at in the context of other long-term liabilities, particularly pension liabilities. There are 150 pension plans for municipal employees across Rhode Island, 116 of which are managed centrally by the State through the Municipal Employees Retirement System (MERS), 34 of which are managed independently by municipalities. Regardless of the management structure, the municipalities and districts are fully responsible for the liabilities of these plans. In addition, school districts participate in the statewide Employees Retirement System (ERS), in which the State is responsible for 40% of the liability and the school district is responsible for 60% of the liability.

Pension liabilities are calculated through a series of assumptions, and thus can be difficult to estimate with precision. For the purposes of this study, municipal pension liabilities are derived from the financial statements of the municipalities, under rule 68 of the Governmental Accounting Standards Board (GASB) framework.

In setting these recommended targets, the PFMB relied heavily on Ratings Agency guidance, selecting ratios similar to those used by ratings agencies, and generally recommending a level equivalent to an A rating for each ratio.

Recommended Debt and Liability Ratios and Targets

- ***Net Direct Debt to Full Value:*** Less than 3% (includes tax-supported debt of a municipality)
- ***Overall Net Debt to Full Value:*** Less than 4% (includes tax-supported debt of a municipality and any overlapping districts)
- ***Overall Debt + Net Pension Liability to Full Value:*** Less than 6.3% (includes all tax-supported debt, enterprise debt, and pension liabilities of a municipality and overlapping districts)
- ***Overall Debt + Net Pension Liability to Personal Income:*** Less than 20% (includes all tax-supported debt, enterprise debt, and pension liabilities of a municipality and overlapping districts)

The income measurement is the total personal income of the municipality using Fitch's methodology for calculating personal income for localities. The full value measurement is the gross assessed value less exemptions, which is consistent with the rating agency methodologies. Communities that choose to have large homestead exemptions might be artificially inflating their debt ratios with a lower taxable base. The PFMB considered using the gross assessed value because communities could potentially end exemptions if needed, but since all three rating agencies use assessed value net of exemptions, the PFMB decided to be consistent with the rating agency approach.

The table below shows the current levels of these affordability ratios for each municipality with green shaded levels indicating the municipality is within the recommended limits, yellow shaded levels indicating current levels are slightly above the recommended limits and red shaded levels indicating the current levels significantly exceed the recommended limits.

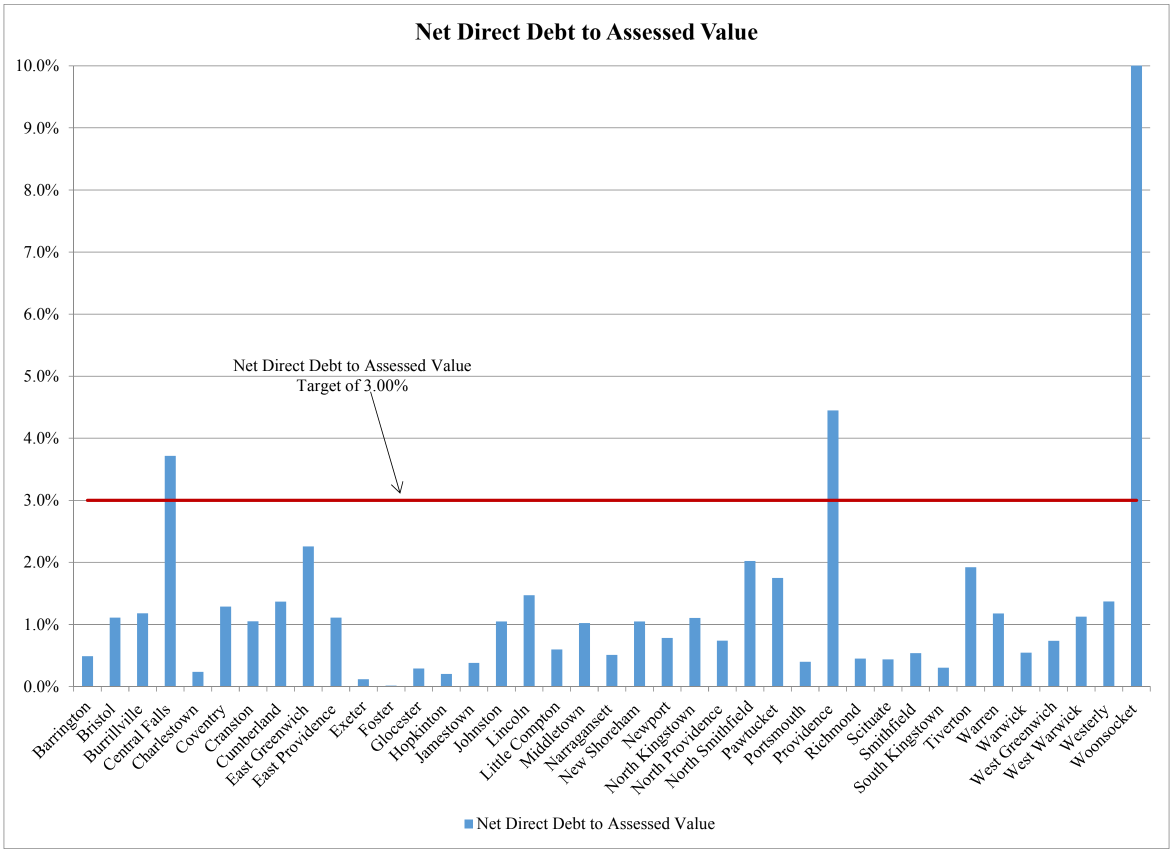
	Debt Ratios		Debt + Pension Ratios	
Obligor Name	**Net Direct Debt to Assessed Value Target < 3%**	**Overall Net Debt to Assessed Value Target < 4%**	**Overall Debt + Net Pension Liability to Assessed Value Target < 6.3%**	**Overall Debt + Net Pension Liability to Personal Income Target <20%**
Barrington	0.5%	0.5%	2.5%	4.6%
Bristol	1.1%	1.6%	3.0%	6.8%
Burrillville	1.2%	1.3%	3.1%	5.3%
Central Falls	3.7%	3.7%	19.2%	17.3%
Charlestown	0.2%	0.5%	0.6%	3.1%
Coventry	1.3%	1.4%	6.3%	11.5%
Cranston	1.1%	1.1%	6.8%	11.9%
Cumberland	1.4%	1.5%	4.6%	7.7%
East Greenwich	2.3%	2.3%	4.8%	9.8%
East Providence	1.1%	1.1%	4.6%	8.1%
Exeter	0.1%	0.1%	0.1%	0.3%
Foster	0.0%	2.7%	3.6%	N/A
Glocester	0.3%	3.2%	4.0%	6.9%
Hopkinton	0.2%	1.3%	1.6%	3.0%
Jamestown	0.4%	0.4%	1.1%	5.5%
Johnston	1.1%	1.1%	13.0%	19.2%
Lincoln	1.5%	1.6%	6.3%	10.0%
Little Compton	0.6%	0.6%	1.0%	N/A
Middletown	1.0%	1.0%	2.6%	8.0%
Narragansett	0.5%	0.5%	2.0%	8.6%
New Shoreham	1.1%	1.1%	1.5%	N/A
Newport	0.8%	0.8%	4.9%	19.5%
North Kingstown	1.1%	1.1%	3.3%	7.3%
North Providence	0.7%	0.7%	5.1%	6.8%
North Smithfield	2.0%	2.0%	3.7%	7.4%
Pawtucket	1.8%	1.8%	14.9%	20.1%
Portsmouth	0.4%	0.5%	2.7%	7.2%
Providence	4.4%	4.4%	17.8%	30.3%
Richmond	0.4%	1.4%	1.7%	3.2%
Scituate	0.4%	0.4%	0.6%	1.4%
Smithfield	0.5%	0.5%	3.1%	7.1%
South Kingstown	0.3%	0.3%	1.6%	4.2%
Tiverton	1.9%	2.2%	3.3%	7.2%
Warren	1.2%	1.9%	2.8%	5.3%
Warwick	0.5%	0.5%	6.0%	12.0%
West Greenwich	0.7%	1.1%	1.4%	3.4%
West Warwick	1.1%	1.1%	9.7%	16.4%
Westerly	1.4%	1.4%	2.4%	11.0%
Woonsocket	10.0%	10.0%	20.3%	22.3%

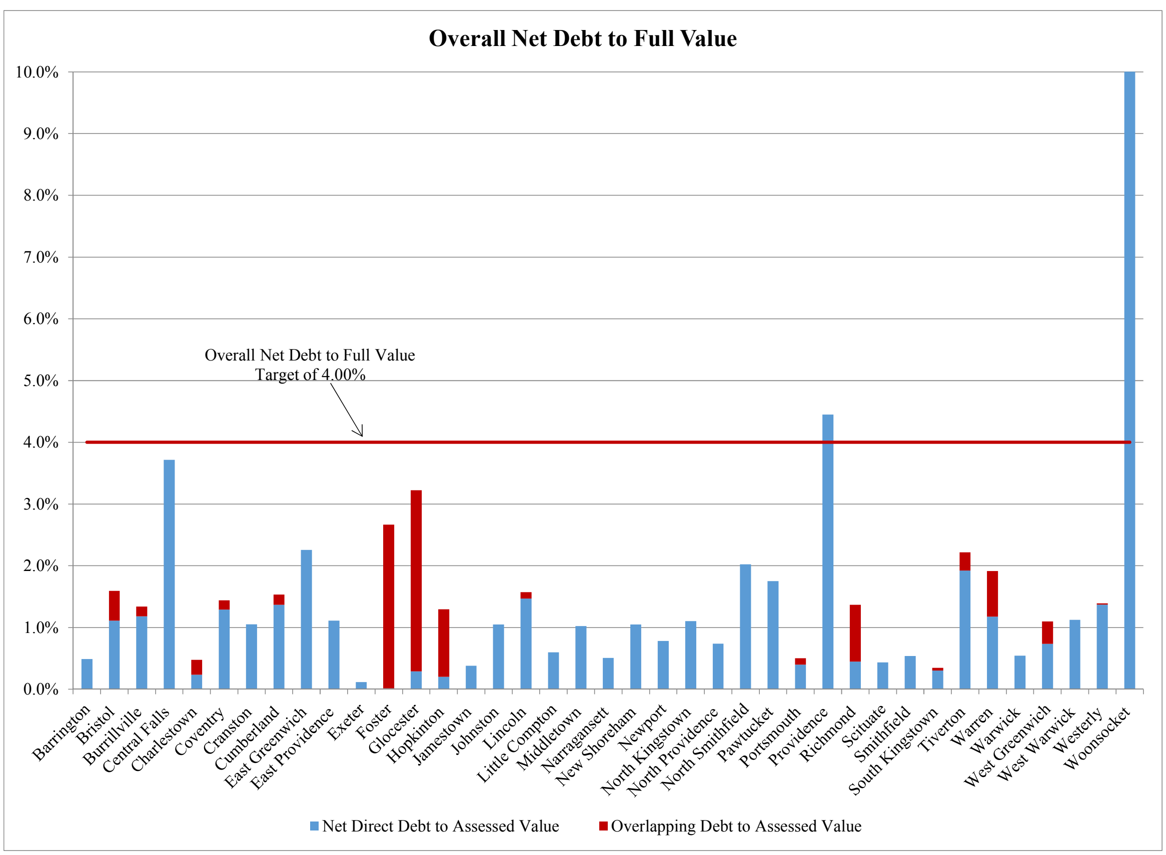
	Meets recommended target	Exceeds recommended target slightly
	Exceeds recommended target significantly	

(Note: above ratios include allocation of Narragansett Bay Commission debt to municipalities in its service area.)

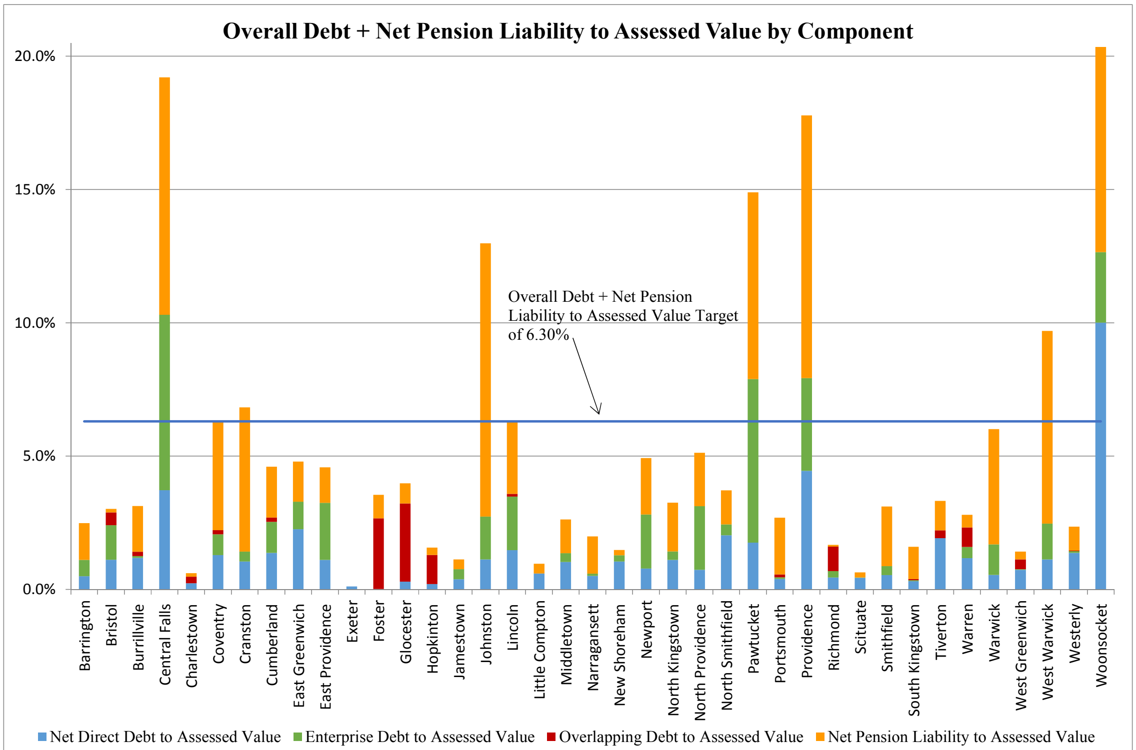
Net Direct Debt: All debt of an issuer less self-supporting enterprise debt. Enterprise Debt: Debt for essential service utilities that is self-supporting from user fees. Overlapping Debt: Issuer's proportionate share of the debt of other local governmental units that either overlap or underlie it. Overall Debt: Net debt + Enterprise Debt + Overlapping Debt.

The charts below show the debt only ratios for the municipalities.

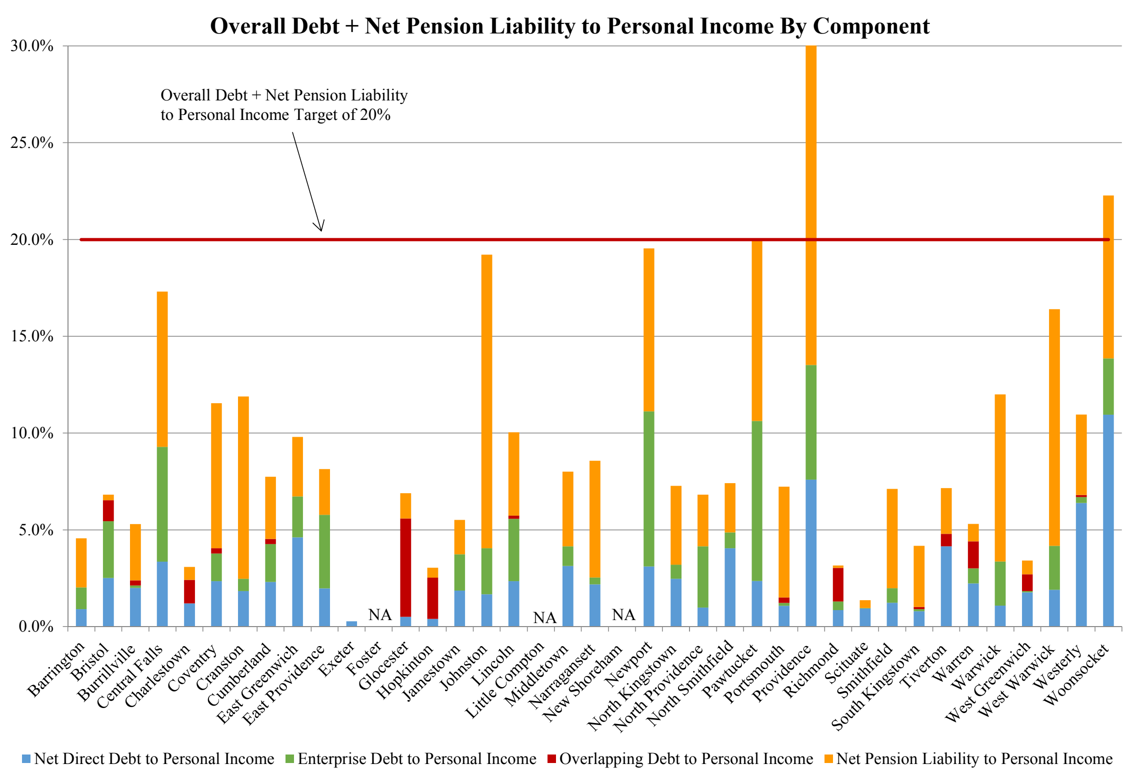




The charts below show the combined debt and pension ratios for the municipalities.



Overall Debt includes (1) Net Direct Debt: All debt of an issuer less self-supporting enterprise debt; (2) Enterprise Debt: Debt for essential service utilities that is self-supporting from user fees; (3) Overlapping debt: Issuer's proportionate share of the debt of other local governmental units that either overlap or underlie it.



Overall Debt includes (1) Net Direct Debt: All debt of an issuer less self-supporting enterprise debt; (2) Enterprise Debt: Debt for essential service utilities that is self-supporting from user fees; (3) Overlapping debt: Issuer's proportionate share of the debt of other local governmental units that either overlap or underlie it.

Debt Affordability Study

Part Four - Guidelines for Debt Management Best Practices

for

State Level Debt

and

Quasi-Public Entities and Local Governments

Part Four- Guidelines for Debt Management Best Practices

Guidelines for State-Level Debt Management

In maximizing debt affordability, the State should maintain certain guidelines on how best to issue and structure its tax-supported debt in order to minimize borrowing costs and to maintain, and if possible, eventually improve, its credit rating. The following provides debt structuring, issuance and post issuance compliance guidelines for State tax-supported debt.

Purpose

These guidelines are intended to aid the Department of Administration, Office of the General Treasurer, State agencies, commissions, boards and authorities in structuring their financing arrangements in a manner consistent with the best interests of the State. These are guidelines only, and consideration of a structure outside of these guidelines may be warranted under certain circumstances.

Applicability

These guidelines apply to all State agencies, corporations, boards and authorities where the debt service payments are expected to be made, in whole or in part, directly or indirectly, from tax revenues, including appropriations of the State and moral obligation debt.

Types of Debt

Debt financing may include State general obligation bonds, revenue bonds, certificates of participation, and lease/purchase debt. The primary debt type used has been State general obligation bonds. However, other outstanding tax supported debt has been issued by the Convention Center Authority and the Commerce Corporation. In addition, the State has issued Certificates of Participation and performance based obligations. The State has identified different categories of net tax-supported debt:

- Direct debt
- Guaranteed debt
- Contingent debt
- Other obligations subject to appropriation

Debt Structuring Practices

The following guidelines, which may be modified by an issuer to meet the particulars of the financial markets at the time of the issuance of a debt obligation, describe the basic debt issuance and debt structuring components and the terms and parameters are intended to provide general guidance to the issuer.

<u>Method of Sale</u>: Municipal bonds are typically sold by negotiated sale or competitive sale. With a negotiated sale, the issuer selects an underwriter, or more likely a group of underwriters, called a syndicate, to sell the bonds in a public offering. The book-running senior manager acts as the lead representative of the syndicate. The issuer, with advice from its financial advisor, will negotiate with the senior manager to determine the optimal structure, price, underwriter's discount and institutional and retail placement of the bonds. Negotiation may provide more flexibility as to timing, structure and pricing of the transaction. With a competitive sale, the issuer prepares a Notice of Sale, which is published with the preliminary offering document and describes all the parameters for bids on the bonds. On the day and time set for the sale, as established in the Notice of Sale, bidders submit bids and the bid with the lowest true interest cost wins. The winning bidder sells the bonds to investors at the prices that were bid. A third method of sale that is used much less frequently is a private placement, where bonds are not publicly offered, rather they are sold

directly to qualified investors. Private placements, including bank loans, bank funding agreements, and master lease programs can be cost effective for certain types of financings including: variable rate, short-term and smaller size issuances due to lower costs of issuance compared to publicly marketed securities.

Issuers should sell their debt using the method of sale that is most likely to achieve the lowest cost of borrowing. Under certain circumstances, a competitive sale will generally result in the lowest cost of borrowing and should be the preferred method of sale if certain factors are present. In determining the method of sale, the issuer should consider the following factors:

Factor	Competitive Sale	Negotiated Sale
Credit	General obligation credits High ratings No negative outlook on the ratings	New credit Complex credit with a "story" Low credit ratings (Baa/BBB)
Size of the Issue	Bond issue under $500 million for Rhode Island	Large debt issue that raises concerns about market saturation. Threshold level varies from issuer to issuer.
Financing Structure	Fixed rate, current interest bonds with serial maturities or term bonds	Structure is complex and is difficult to sell through a competitive sale. Complex refunding structure.
Market Volatility	Capital markets are functioning normally with no extreme volatility in interest rates and/or investor demand	Capital markets are experiencing wide shifts in interest rates and investor demand (e.g., financial crisis in late 2008/early 2009)
Retail Investor Demand	Retail investors are not the target buyers	Structure of the bonds is conducive to retail investor demand, with the expectation that many of the bonds would be placed with retail investors

The State's general obligation bonds are good candidates for a competitive sale. With ratings of Aa2/AA/AA and a stable outlook from all three major rating agencies and typical fixed rate, amortizing structure and manageable size, the State can sell its general obligation bonds on a competitive basis and achieve the lowest cost of borrowing. The State successfully sold its General Obligation Bonds, Series 2016A and General Obligation Refunding Bonds, Series 2016B competitively in April 2016. Strong demand for the state's first competitive bond sale since 2007 was reflected in the number of bidders and the pricing levels bid. The state received highly competitive bids from six underwriters for its sale of tax-exempt bonds, securing a true interest cost of 2.39 percent for the twenty year borrowing.

In certain circumstances, the State may want to consider issuing a private placement, a direct sale/purchase of securities or entered into a bank loan transaction as an alternative to issuing publicly offered municipal bonds. Private placements, direct sales and bank loans are often competitive with a public sale of securities in cases when the transaction size is small, when the term of debt is short and when the interest rate mode is variable. With a private placement, the State would typically issue a solicitation, based on the advice of its financing advisor, for offers from qualified lending institutions. The solicitation responses are then reviewed and compared with careful consideration being given to any non-standard or onerous covenants and a winning offer is selected and the terms are locked in. In evaluating the use of these alternatives, the State and its Financial Advisor should compare the costs of the private debt vs. a public sale of securities, taking into account the interest cost and upfront financing costs.

<u>Term of the Debt</u>: The Term (final maturity) of a financing must not exceed a conservative estimate of the useful life of the assets to be financed (or the remaining useful life of assets associated with refunding bonds). A term of twenty-years (20) years has been used for State general obligation bonds. Longer Terms are appropriate for project finance issues and financings where debt service is paid from a specific

revenue stream. Shorter Terms are appropriate for financings which rely on non-State or limited revenue sources to pay debt service such as GARVEE financings and other special obligation financings.

Amortization Structure of Debt: An amortization that produces level-annual debt service should be used unless otherwise dictated by considerations provided below. However, in all circumstances, the weighted average maturity must not be greater than useful life of the assets to be financed. Amortization structures that produce an increasing level of debt service (ascending debt service) are generally only appropriate for non-contingent debt. Level principal amortization or an amortization schedule producing descending debt service could be used to reduce interest cost and shorten the weighted average maturity of the bonds being issued. Principal repayment should begin within eighteen months of the issuance unless debt repayment is solely dependent on revenues derived from the project being financed or there is an overwhelming business rationale. Structures utilizing term bonds or other "balloon" payments should require annual sinking fund payments that achieve the required amortizations discussed above. Issuers may combine two or more series of bonds issued under a common plan of finance to achieve the required amortization structures. If one of the series includes a taxable component, it is generally advisable to amortize the taxable series with a shorter weighted average maturity. Issues with a fully funded debt service reserve fund should use any balance remaining at maturity to make the final payment.

Sizing the Issue: For bonds other than State General Obligation bonds approved by the voters, the project draw (spending) schedule should be used as the basis for sizing the issue. If possible, net funding, which takes into account the projected earnings on the bond proceeds as a source of funds for project costs using anticipated spending schedules and an assumed rate of investment earnings, should be used to size the issue, as this results in a smaller overall issue size.

Capitalized Interest: When interest is capitalized, a portion of the proceeds of an issue is set aside to pay interest on the bonds for a specified period of time. Capitalized interest should only be used when necessary (typically for revenue-producing projects) and should be limited to six months beyond the projected completion date of the project.

Call Provisions: Bonds issued without call provisions generally carry lower interest costs. However, issuing non-callable debt may inhibit a government's ability to effectively restructure future debt payments, if needed, and take advantage of refunding opportunities, thus reducing the debt service interest payments. It is standard for most bonds to be issued with a ten year call at a redemption price of 100% of the principal amount of the bonds to be redeemed, plus accrued interest to the redemption date. Issuers and their Financial Advisors should evaluate non-standard call provisions using an option analysis to estimate the value or cost of call option alternatives to determine the most beneficial structure. For competitive sales, the issuer's Financial Advisor should determine the option value and the necessary spreads to the municipal benchmark index needed to achieve the estimated benefit from a non-standard call provision.

Premium or Discount: Unless otherwise prohibited, the issuer should use the net original issuance premium (original issuance premium, less original issuance discount less underwriters' discount) for project costs for a new money financing and escrow costs for refunding bonds. Using net original issuance premium for the next interest or principal payment to bondholders is considered capitalized interest, which may be appropriate in the case of project financings or for tax-law considerations.

Credit Enhancement: The use of credit enhancement through the purchase of a municipal bond insurance policy to improve the credit ratings on a financing may be considered on transactions where the improved bond rating and corresponding reduction in interest rates paid by the issuer more than offsets the cost of the enhancement due at issuance. A cost-benefit analysis should be performed to determine if insurance or another type of enhancement is warranted. It is encouraged that the cost-benefit analysis be done to both the maturity of the bonds and to the bond's first call-date.

Election to Issue Variable Rate: Issuing Variable Rate Debt gives an issuer access to rates on the very short end of the yield curve. The difference between short versus long-term rates varies with the shape of the yield curve and has recently ranged from 100-300 basis points (or 1.0% to 3.0%). By issuing Variable Rate Debt, the issuer is subject to interest rate risk. However, Variable Rate Debt has historically been at lower interest rate levels than recognized fixed rate indices, and may enable an issuer to create a natural hedge against changes in its short-term investment portfolio. Variable Rate Debt may be used for two purposes: (1) as an interim financing device (during construction periods) and (2) subject to limitations, as a strategy to lower the issuer's overall effective cost of capital. Under either circumstance, when the cycle of long-term rates moves down to or near historic lows, consideration should be given to fixing (converting to a fixed rate) a portion of the then outstanding Variable Rate Debt to take advantage of the attractive long-term fixed rates. *Generally no more than 20% of an issuer's aggregate outstanding debt should be in a variable rate mode.* Before using variable rate debt, the issuer should understand the risks and compare the cost to a long term fixed rate borrowing to determine if the benefit outweighs the risks.

Interest Rate Swaps and Other Synthetic Products: To the extent permitted by State law, the use of contracts on interest rates, currency, cash flows, etc., including (but not limited to) interest rate swaps, interest rate caps and floors and guaranteed investment contracts (GICs) should not be used unless the issuer has adopted a separate policy regarding the use of such products and compared the risks and potential benefits against non-synthetic alternatives. Prior to entering into any Interest Rate Swaps and Other Synthetic Products associated with any Net Tax Supported Debt, the issuer should review the proposed product and transaction with the Office of the General Treasurer.

Refunding of Outstanding Debt

A refunding should only be done if there is a resulting economic benefit regardless of whether there is an accounting gain or loss, or a subsequent reduction or increase in cash flows. The issuer and its Financial Advisor will monitor the municipal bond market for opportunities to obtain interest savings by refunding outstanding debt. Refunding Bonds should be issued only when the issuance is of benefit to the issuer and/or the State. Tax-exempt bonds issued after 1986 can only be Advance Refunded one time; therefore, the one opportunity should be reserved for situations where the refunding is prudent and warranted. Refundings are generally undertaken for three reasons: (i) to provide present value debt service savings to the issuer; (ii) to escape burdensome or restrictive covenants imposed by the terms of the bonds being refinanced; (iii) to restructure debt for an appropriate purpose for the State. Refunding issues should be amortized to achieve level annual debt service savings or proportional savings based on the principal amount of the bonds being refunded. "Up-front" or "deferred" debt service savings structures should be employed only as necessary to meet specific objectives and dissavings in any year should be avoided, if possible. In addition, the final maturity on the Refunding Bonds should be no longer than the final maturity on the Refunded Bonds unless a debt restructuring is undertaken for an appropriate purpose for the State.

Advanced Refundings: For refundings for savings, the following parameters are suggested to ensure that the single advanced refunding opportunity is warranted:

- For bonds with call dates within two years of the delivery date of the refunding bonds, at least 3% present value savings on a maturity by maturity basis. For bonds with call dates two or more years past the delivery date of the refunding bonds, at least 5% present value savings on a maturity by maturity basis.
- The level of negative arbitrage, on a maturity by maturity basis, should not be greater than present value savings, and if relatively large, a higher level of present value savings should be required. Generally, negative arbitrage should be 50% or less than the net present value savings.
- On a bond series basis, the breakeven increase in interest rates should be calculated. The breakeven increase in interest rates is a calculation of how much rates have to increase

between an advance refunding of the bonds today and a current refunding at the time the bonds are callable to result in the same amount of present value savings. The breakeven increase in interest rates should not exceed the forward interest rate forecast or a pre-established target based on past market volatility. Generally, a breakeven increase in interest rates of 75 basis points to 100 basis points has been targeted by some issuers, but length of time to the call date, market conditions, shape of the yield curve and interest rate expectations are factors to be considered in determining the target.

- Lower maturity by maturity net present value savings targets may be appropriate for shorter term or smaller fixed rate refunding issues or series, including maturities outstanding less than two years from the call date.

Current Refundings. Current refundings are a diminishing asset. Current refundings should be completed as long as the net present value savings is meaningful and the market for tax-exempt bonds is not extraordinary volatile.

Forward Refunding. A refunding in which bonds are sold with the intent to close or deliver at some future point in time, generally more than 30 days after pricing, and often to coincide with a date 90 days prior to the call date on the refunded bonds, thereby qualifying the issue as a current refunding. In general, the issuer should evaluate the breakeven savings rate (described above) to consider the likelihood of achieving higher savings than a current refunding, while minimizing other risks associated with a Forward Refunding.

Debt Issuance Practices

Sale Process: A competitive bond offering involves bid solicitation from potential purchasers, principally underwriters. It is a public bid where the bonds are sold to the underwriter or other purchaser that offers the lowest "true interest cost" or TIC. TIC is defined as the rate necessary, when compounded semi-annually, to discount the amounts payable on the respective principal and interest payment dates back to the delivery date where the total equals the purchase price received for the new issue securities.

A negotiated offering differs from a competitive offering in the method used for selecting the underwriter, the role of the underwriter in the bond marketing process, and the procedures used for determining interest rates and underwriter compensation. In a negotiated offering, the underwriter is selected first, generally through the solicitation of competitive requests for proposals. The underwriter or senior underwriter will engage in pre-sale marketing and will negotiate interest rates. The State should conduct financings on a competitive basis; however, negotiated financings may be used due to market volatility or the use of an unusual or complex financing or security structure. Retail only issues or sales are sold through a negotiated process. Also, bond refundings are often conducted through a negotiated process, due to complexities associated with refunding economics and escrow structuring. However, a straightforward refunding can be done on a competitive basis. In either case, there should still be a competitive process, in the first case, by virtue of the bid of the bonds and in the latter case by an RFP process to select an underwriting firm or firms. The negotiated offering is structured to require the solicitation of multiple underwriting proposals and permits the issuers to solicit the advice of several underwriters about how to structure and price a proposed bond issue. To provide the broadest distribution of bonds, the use of co-managers and selling groups are encouraged in negotiated transactions. The size of the transaction, anticipated retail/institutional demand, experience, etc., will determine the number of participants.

Competitive Sale: After disclosure documents are completed and structuring issues have been decided, the competitive sale process may begin. A Summary Notice of Sale can be published in the Bond Buyer alerting potential bidders to the date and time of the sale, approximately one or two weeks in advance of the sale date. Simultaneously, the State posts and electronically distributes its Preliminary Official Statement that contains a detailed Notice of Sale containing the relevant aspects of the sale including precise bidding rules and the date and times bidders must submit their bids. The most common on-line bidding platform used by the municipal market is Parity IPREO. Bids are promptly “opened” and disclosed. As a condition of submitting a bid, bidders may have to provide a good faith pledge, typically 1% of the value of the bonds being offered. On a date specified, after all legal documentation has been completed, the sale closes. The final purchase price of the bonds is wired to the State and the bonds are released.

<u>Negotiated Sale</u>: A sale date is chosen by the issuer with input from the underwriter and the Financial Advisor. Prior to any pre-marketing of the bonds, the book-running senior underwriter should submit proposed pricing to the Financial Advisor and the issuer which will include proposed coupons, yields and take downs for each maturity to be sold. The scale should reflect input from the other members of the underwriting groups (co-managers and so-senior managers if any), known as price views, and a consensus scale. The proposal should also include all fees and costs associated with the underwriting. The issuer and the Financial Advisor should consider the proposal and negotiate any recommended changes. Following the pre-marketing, this process should be repeated with information gained from the pre-marketing activity and investor interest. Prior to the official pricing date, a retail order period may be held to solicit orders from retail investors. On the day of the institutional pricing an interest rate scale is released to potential investors through a pricing wire. The issuer and the Financial Advisor should review the pricing wire and confirm that it is consistent with agreed upon terms. An order period is conducted lasting several hours. During the order period, orders are placed by investors through the senior manager, the co-managers and selling group. The issuer and the Financial Advisor may view the orders as they are placed and entered into the senior manager’s order management system, using the IPREO system. After the order period closes, the senior manager, issuer and Financial Advisor review the "book of orders." Based on the amount and distribution of orders, the senior manager and the issuer determine whether any adjustments to the pricing of the bonds are necessary. After the bonds are repriced, the management group checks to see whether additional orders can be obtained and/or whether initial orders are withdrawn. Several iterations of this process may take place. When the senior manager (on behalf of the entire underwriting group), the issuer and Financial Advisor agree on a price, a verbal award is made. Subsequent to pricing, an official Bond Purchase Agreement is signed between the underwriting group and the issuer. A good faith deposit is obtained, similar to the competitive process. On a date specified, after all legal documentation has been completed, the sale closes. The final purchase price of the bonds is wired to the State and the bonds are released, as with the competitive process.

<u>Professional Services:</u> The State or the issuer will employ financial specialists to assist it in developing a bond issuance strategy, preparing bond documents, and marketing bonds to investors. The key Financing Team members include the issuer’s financial advisor, bond counsel, underwriter (in a negotiated sale) and in some instances, a disclosure counsel. The use of an independent Municipal Advisor is encouraged. Bond Counsel and Underwriters’ Counsel should not be the same firm. Other outside firms, such as those providing paying agent, trustee, and/or printing services, are retained as required. For refunding bonds, the issuer will likely need to retain a verification agent (that verifies the refunding cash flows) and an escrow agent (hold the refunding moneys in trust until the bonds are redeemed). Depending on the statutory authority, the costs for these services and fees can be paid through the proceeds of the bonds or through budgeted appropriations.

<u>Credit Ratings and Rating Agencies</u>. Obtaining a minimum of two ratings is encouraged as the use of two or more ratings broaden the pool of investors. Obtaining one rating can be appropriate for smaller or unique transactions. The cost of ratings can be the highest single cost other than the underwriters’ discount, especially for larger transactions. Other states have had success reducing its transactional State and State agency rating costs by annually negotiating with each of the agencies and receiving a price for all state and state-agency expected transactions.

<u>Underwriters’ Discount</u>: The underwriters’ discount or spread is the difference between the price the underwriter pays the issuer for the bonds and the price the underwriter receives from the resale of those bonds to investors. Underwriter’s compensation consists of takedown, management fee, underwriting risk, and expenses, although currently spreads reflect the amounts of only takedown and expenses. The

expense component is made up of costs incurred by the underwriter on behalf of the issuer, including underwriters' counsel. The costs for these services need to be managed, through the competitive bid process used to select underwriters and subsequent negotiation and monitoring of fees.

Pricing/Sale Date: The Sale date should be driven by the need for proceeds and an appropriate time that the State is able to generate a thorough disclosure document, either due to the availability of financials or the ability to dedicate necessary State resources. The issuer should not attempt to "time the market"; however, issuers should avoid market competition with other state issues and/or comparable credits.

Closing Date: Sufficient time should be allowed between the sale (or pricing) date and the closing date to permit adequate review and execution of all closing documents. Issues requiring the execution of any document by the Governor (e.g., Consent of the Governor, Governor's Certificate, etc.) may require additional time to allow for review and execution by the Governor. Closing documents requiring the approval of and/or execution by the General Treasurer must be provided as soon as possible after pricing in order to allow adequate time for review and approval. Where appropriate, draft documents may be provided prior to pricing in order to speed the process.

Rating Agency Relations: Full disclosure of operations and open lines of communication shall be made to the rating agencies. Large and frequent issuers, such as the State, should meet with the rating agencies no less than annually to provide relevant updates on financial, economic and operational performance.

Disclosure: The State of Rhode Island is committed to continuing disclosure of financial and pertinent credit information relevant to the State's outstanding securities and will abide by the provisions of Securities and Exchange Commission (SEC) Rule 15c2-12 concerning primary and secondary market disclosure. See below.

Investment of Bond Proceeds: All general obligation and revenue bond proceeds shall be invested in separate bond accounts by issuance to aid in calculating arbitrage. Investments will be consistent with those authorized by existing statute and by the State's investment policies. If invested in a portfolio of securities, the portfolio should be structured to meet expected spending requirements. Accordingly, draw schedules should be reviewed and updated periodically and provided to the investment manager. The investment of a refunding escrow portfolio should include an analysis of the use of State and Local Government Securities (SLGs) and open market securities. The State's or the issuer's municipal advisor should estimate any potential benefit of the use of an open market escrow and the State or the issuer should determine if the potential savings will be worth the time and the risk of the bid.

Pre-Issuance Review of Projects: Prior to the issuance of the bonds, the State should conduct a review of the projects to be financed, in coordination with bond counsel in order to confirm that the projects are eligible to be financed on a tax-exempt basis.

Disclosure and Post Issuance Debt Management

Municipal securities are exempt from the disclosure regulations generally applied to corporations in both the Securities Act of 1933 and the Securities Exchange Act of 1934. Municipal securities, however, are subject to the anti-fraud provisions of the acts and related rules, specifically, section 17(a) of the 1933 Act, Section 10(b) of 1934 Act, and SEC Rule 10b-5 states that it is unlawful "to make an untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading." As the issuer of the bonds, the State has the responsibility to assure the accuracy and completeness of information provided to the potential investors. Issuers such as the State must also comply with SEC Rule 15c2-12. It is an SEC rule under the 1934 Act setting forth certain obligations of underwriters to receive, review and disseminate official statements prepared by issuers of most primary offerings of municipal securities.

The State issues a preliminary and final Official Statement (OS) in connection with its bonds. The Official Statement is one of the most critical documents produced by the bond financing team. The OS document discloses material information on a new issue including the purposes of the issue, how the securities will be repaid, and the financial, economic and demographic characteristics of the State. Investors, analysts and rating agencies may use this information to evaluate the credit quality of the securities. Federal securities laws generally require that if an official statement is used to market an issue, it must fully disclose all facts that would be of interest to potential investors evaluating the bonds. The OS also includes a statement that there have been no material misstatements or omissions by the issuer with respect to the issue, and that no facts have become known which would render false or misleading any statement which was made. While the State employs consultants and bond counsel to assist in this task, the ultimate responsibility for the document rests with the State.

In addition to paying principal and interest on the bonds, after the bonds are issued the State has continuing obligations to bondholders including:

- Compliance with IRS code relative to arbitrage earnings, private use, useful life and the tax-exempt status of the bonds; and
- Secondary Market Disclosure requirements for the issuer or the State to provide:
  - (i) ongoing information on State's or the issuer's financial condition and
  - (ii) disclosure to bondholders about material events that affect the status of the bonds including arbitrage and tax compliance, and
  - (iii) for the benefit of individuals purchasing and/or holding the securities subsequent to their initial issuance.

Issuers must commit in the bond documents to provide secondary market disclosure.

<u>Compliance with IRS Code</u>: The primary IRS code applicable to tax-exempt bonds are the Federal Tax Reform Act of 1986 as incorporated in the U.S. Treasury Internal Revenue Code (IRC) sections 103 and 141 through 150. While there are many criteria, the most common issues relate to private use, arbitrage, and useful life. Section 103 of the Code indicates that an "arbitrage bond" under Section 148 will not be tax-exempt. "The basic arbitrage rule is that a municipality may not invest the proceeds of a tax-exempt note or bond in such a manner so that the yield on the invested funds exceeds the interest rate being paid on its borrowing by more than .125%. This should be distinguished from an unintentional generation of arbitrage earnings. Intent factors into the determination of "arbitrage." If projects fall behind schedule, there may be an arbitrage "rebate' to the IRS but not necessarily a determination that an arbitrage bond exists. In these cases, there are safe harbors such as spend down exemptions and there are certain requirements for tracking the arbitrage rebate. Intentional arbitrage would, however, affect the tax status of the bonds. In addition to arbitrage, another requirement is that tax-exempt bonds issued must be for a public, not private use, which generally includes bridges, schools, infrastructure used by the general public. There are, however, private uses that have a public benefit; pollution related clean-up, affordable housing, etc. Private use and private debt service of the bond cannot exceed 10% of the issue (5% on certain loans). Another issue is continued private use. For instance, a building constructed using bond funds for a public use may not generally be resold for private use, although the "change in use" provisions do provide for certain remedies. In addition, bonds may not exceed certain useful life criteria for the underlying capital assets. For any matters relating to the use of proceeds or investments, the State should always consult with bond counsel to ensure compliance with IRS Code and other governing provisions.

<u>Continuing/Secondary Market Disclosure</u>: At the time of issuance, disclosure of material facts is made. Issuers such as the State have a continuing obligation for disclosure. This is required by SEC Rule 15c2-12 as stated by the MSRB:

> "Under Rule 15c2-12(b)(5), an underwriter for a primary offering of municipal securities subject to the rule currently is prohibited from underwriting the offering unless the underwriter has determined that the issuer or an obligated person for whom financial information or operating data is presented in the final official statement has undertaken in writing to provide certain items

> of information to the marketplace. Rule 15c2-12(b)(5) provides that such items include: (A) annual financial information concerning obligated persons; (B) audited financial statements for obligated persons if available and if not included in the annual financial information; (C) notices of certain events, if material; and (D) notices of failures to provide annual financial information on or before the date specified in the written undertaking."

The SEC further defines "obligated person" as:

> "… any person, including an issuer of municipal securities, who is either generally or through an enterprise, fund, or account of such person committed by contract or other arrangement to support payment of all or part of the obligations on the municipal securities sold in a primary offering (other than providers of bond insurance, letters of credit, or other liquidity facilities)."

The SEC further requires that broker-dealers can only buy securities for which the issuer has agreed to provide written assurance of their continuing disclosure. As noted above, the SEC does not have authority over disclosure requirements in the municipal bond market. Through these rules, however, the SEC has placed restrictions on underwriters, broker-dealers and other business partners, creating effective compliance.

SEC Rule 15c2-12 mandates continuing disclosure unless the bonds qualify for an exemption, which is generally not the case given the size of State issues. The State is responsible for providing ongoing disclosure information to established national information repositories and for maintaining compliance with disclosure standards. The State works with Bond Counsel or Disclosure Counsel to assure that this is completed annually and in the event of the occurrence of a disclosure event. Notice would be required for the following events:

- Principal and interest payment delinquencies
- Non-payment related defaults
- Unscheduled draws on the debt service reserves reflecting financial difficulties
- Unscheduled draws on the credit enhancements reflecting financial difficulties
- Substitution of the credit or liquidity providers or their failure to perform
- Adverse tax opinions or events affecting the tax-exempt status of the bonds
- Modifications to rights of bondholders
- Optional, contingent or unscheduled calls of bonds
- Defeasances
- Release, substitution or sale of property securing repayment of the bonds
- Rating changes
- Bankruptcy, insolvency, receivership or similar event of the obligated person
- Consummation of a merger, consolidation, or acquisition involving an obligated person
- Appointment of a successor or additional trustee

Annual filings are to be sent to and posted on the MSRB's Electronic Municipal Market Access database ("EMMA"). In addition, if the State determines that the occurrence of an above listed event is material under applicable federal securities laws, the State has a duty to promptly file a notice of such occurrence and have it posted on EMMA. http://www.emma.msrb.org/

It is also a best practice that issuers also disclose any private placements, direct sales and bank loans to the public market on the EMMA system. The SEC is currently considering including the disclosure private placements, direct sales and bank loan as required disclosure for issuers of municipal securities.

Guidelines for Debt Management - Rhode Island Quasi-Public Entities and Local Governments

In maximizing debt affordability, Rhode Island Quasi-Public Entities, Local Governments, Local Authorities and Special Districts (the "Issuers") should consider the guidelines outlined below regarding how best to issue and structure its tax-supported debt in order to minimize borrowing costs and to maintain, and if possible, eventually improve, its credit rating. The following section provides debt structuring, issuance and post issuance compliance guidelines for Issuer debt.

Purpose

These guidelines are intended to aid Issuer finance professionals and policy makers in structuring their financing arrangements in a manner consistent with the best interests of the Issuer. These are guidelines only, and consideration of a structure outside of these guidelines may be warranted in certain circumstances. In addition, these guidelines should be considered in conjunction with the specific state law and governing provisions to which the Issuer is required to comply. Specifically, certain state law provisions, local resolutions or charters may include limitations on issuance practices or structure that are more stringent than the recommendations provided herein.

Applicability

These guidelines apply to Issuers where the debt service payments are expected to be made, in whole or in part, directly or indirectly, from Rhode Island Quasi-Public Entities, Local Government, Local Agency and Special District revenues.

Types of Debt

Debt financing may include Issuer general obligation bonds, revenue bonds, certificates of participation, and lease/purchase debt. The primary debt type used by Rhode Island Quasi-Public Entities has been revenue bonds. The primary debt type used by Local Governments and Special Districts has been general obligation bonds. However, other outstanding debt has been issued by Local Governments and Special Districts in the form of revenue bonds, certificates of participation, and lease/purchase debt. PFMB has identified different categories of local government debt:

- Gross Debt
- Net Direct Debt
- Overlapping Debt
- Overall Debt
- Overall Net Debt
- Other long-term obligations subject to appropriation

Debt Structuring Practices

The following guidelines, which may be modified by an issuer to meet the particulars of the financial markets at the time of the issuance of a debt obligation, describe the basic debt issuance and debt structuring components and the terms and parameters are intended to provide general guidance to the Issuer.

Method of Sale: Municipal bonds are typically sold by negotiated sale or competitive sale. With a negotiated sale, the issuer selects an underwriter, or more likely a group of underwriters, called a syndicate, to sell the bonds in a public offering. The book-running senior manager acts as the lead representative of the syndicate. The issuer, with advice from its financial advisor, will negotiate with the senior manager to determine the optimal structure, price, underwriter's discount and institutional and retail placement of the bonds. Negotiation may provide more flexibility as to timing, structure and pricing of the transaction. With a competitive sale, the issuer prepares a Notice of Sale, which is published with the preliminary offering document and describes all the parameters for bids on the bonds. On the day and time set for the sale, as established in the Notice of Sale, bidders submit bids and the bid with the lowest true interest cost wins. The winning bidder sells the bonds to investors at the prices that were bid. A third method of sale that is used much less frequently is a private placement, where bonds are not publicly offered and sold directly to qualified investors. Private placements, including bank loans, bank funding agreements, and master lease programs can be cost effective for certain type of financings including: variable rate, short-term and smaller size issuances due to lower costs of issuance compared to publicly marketed securities.

Issuers should sell their debt using the method of sale that is most likely to achieve the lowest cost of borrowing. In stable markets and for a straightforward issuance, a competitive sale will generally result in the lowest cost of borrowing and should be the preferred method of sale if certain factors are present. In determining the method of sale, the issuer should consider the following factors:

Factor	Competitive Sale	Negotiated Sale
Credit	General obligation credits High ratings No negative outlook on the ratings	New credit Complex credit with a "story" Low credit ratings (Baa/BBB)
Size of the Issue	Bond issue over $5 to $10 million	Small debt issues for issuers with limited resources may be appropriate.
Financing Structure	Fixed rate, current interest bonds with serial maturities or term bonds	Variable rate bonds. Structure is complex and is difficult to sell through a competitive sale. Complex refunding structure.
Market Volatility	Capital markets are functioning normally with no extreme volatility in interest rates and investor demand	Capital markets are experiencing wide shifts in interest rates and investor demand (e.g., financial crisis in late 2008/early 2009)
Retail Investor Demand	Retail investors are not the target buyers	Structure of the bonds is conducive to retail investor demand, with the expectation that many of the bonds would be placed with retail investors

In certain circumstances, Issuers may want to consider issuing a private placement, a direct sale/purchase of securities or entered into a bank loan transaction as an alternative to issuing publicly offered municipal bonds. Private placements, direct sales and bank loans are often competitive with a public sale of securities in cases when the transaction size is small, when the term of debt is short and when the interest rate mode is variable. With a private placement, the issuer typically issues a solicitation, based on the advice of its financing advisor, for offers from qualified lending institutions. The solicitation responses are then reviewed and compared with careful consideration being given to any non-standard or onerous covenants and a winning offer is selected and the terms are locked in. In evaluating the use of these alternatives, the Issuers and their Financial Advisor should compare the costs of the private debt vs. a public sale of securities, taking into account the interest cost and upfront financing costs.

Term of the Debt: The Term (final maturity) of a financing must not exceed a conservative estimate of the useful life of the assets to be financed (or the remaining useful life of assets associated with refunding bonds). Longer Terms are appropriate for project finance issues and financings where debt service is paid from a specific revenue stream. Shorter Terms are appropriate for financings with limited revenue sources to pay debt service.

Amortization Structure of Debt: For self-supporting proprietary operations, the primary strategy is to use an amortization structure that produces level annual debt service. To the extent that shorter maturities or alternative amortization strategies are utilized in an effort to reduce the effective borrowing costs, any comparative advantages must be considered in relationship to the potential negative impacts on user fees, rates and charges. For other categories of debt, an amortization that produces level-annual debt service should be used unless otherwise dictated by considerations provided below. However, in all circumstances, the weighted average maturity must not be greater than useful life of the assets to be financed. Amortization structures that produce an increasing level of debt service (ascending debt service) are generally only appropriate for non-contingent debt. Level principal amortization or an amortization schedule producing declining annual debt service could be used to reduce interest cost and shorten the weighted average maturity of the bonds being issued. Some revenue or asset backed bonds which rely on the repayment of loans will required accelerated prepayment and redemption based on loan repayments. Principal repayment should begin within eighteen months of the issuance unless debt repayment is solely dependent on revenues derived from the project being financed or there is an overwhelming business rationale. Structures utilizing term bonds or other "balloon" payments should require annual sinking fund payments that achieve the required amortizations discussed above. Issuers may combine two or more series of bonds issued under a common plan of finance to achieve the required amortization structures. If one of the series includes a taxable component, it is generally advisable to amortize the taxable series with a shorter weighted average maturity. Issues with a fully funded debt service reserve fund should use any balance remaining at maturity to make the final payment.

Sizing the Issue: Generally, the project draw (spending) schedule should be used as the basis for sizing the issue. If possible, net funding, which takes into account the projected earnings on the bond proceeds as a source of funds for project costs using anticipated spending schedules and an assumed rate of investment earnings, should be used to size the issue, as this results in a smaller overall issue size.

Capitalized Interest: When interest is capitalized, a portion of the proceeds of an issue is set aside to pay interest on the bonds for a specified period of time. Capitalized interest should only be used when necessary (typically for revenue-producing projects) and should be limited to six months beyond the projected completion date of the project.

Call Provisions: Bonds issued without call provisions generally carry lower interest costs. However, issuing non-callable debt may inhibit a government's ability to effectively restructure future debt payments, if needed, and take advantage of refunding opportunities, thus reducing the debt service interest payments. It is standard for most tax-exempt bonds to be issued with a ten-year call at a redemption price of 100% of the principal amount of the bonds to be redeemed, plus accrued interest to the redemption date. Issuers and their Financial Advisors should evaluate non-standard call provisions using an option analysis to estimate the value or cost of call option alternatives to determine the most beneficial structure. For competitive sales, the issuer's Financial Advisor should determine the option value and the necessary spreads to the municipal benchmark index needed to achieve the estimated benefit from a non-standard call provision.

Premium or Discount: Unless otherwise prohibited, the issuer should use the net original issuance premium (original issuance premium, less original issuance discount less underwriters' discount) for project costs for a new money financing and escrow costs for refunding bonds (effectively reducing the bond issue size). Using net original issuance premium for the next interest or principal payment to bondholders is considered capitalized interest, which may be appropriate in the case of project financings or for tax-law considerations.

Credit Enhancement: The use of credit enhancement through the purchase of a municipal bond insurance policy to improve the credit ratings on a financing may be considered on transactions where the improved bond rating and corresponding reduction in interest rates paid by the issuer more than offsets the cost of the enhancement due at issuance. A cost-benefit analysis should be performed to determine if insurance or another type of enhancement is warranted. It is encouraged that the cost-benefit analysis be done to both the maturity of the bonds and to the bond's first call-date.

Election to Issue Variable Rate: Issuing Variable Rate Debt gives an issuer access to rates on the very short end of the yield curve. The difference between short versus long-term rates varies with the shape of the yield curve and has recently ranged from 100-300 basis points (or 1.0% to 3.0%). By issuing Variable Rate Debt, the issuer is subject to interest rate risk. However, Variable Rate Debt has historically been at lower interest rate levels than recognized fixed rate indices, and may enable an issuer to create a natural hedge against changes in its short-term investment portfolio. Variable Rate Debt may be used for two purposes: (1) as an interim financing device (during construction periods) and (2) subject to limitations, as a strategy to lower the issuer's overall effective cost of capital. Under either circumstance, when the cycle of long-term rates moves down to or near historic lows, consideration should be given to fixing (converting to a fixed rate) a portion of the then outstanding Variable Rate Debt to take advantage of the attractive long-term fixed rates. *Generally, no more than 20% of an issuer's aggregate outstanding debt should be in a variable rate mode.* Before using variable rate debt, the Issuers should understand the risks and administrative burden and compare the cost to a long term fixed rate borrowing to determine if the benefit outweighs the risks.

<u>Interest Rate Swaps and Other Synthetic Products</u>: To the extent permitted by Rhode Island state law, the use of contracts on interest rates, currency, cash flows, etc., including (but not limited to) interest rate swaps, interest rate caps and floors and guaranteed investment contracts (GICs) should not be used unless the issuer has adopted a separate policy regarding the use of such products and compared the risks and potential benefits against non-synthetic alternatives. Prior to entering into any Interest Rate Swaps and Other Synthetic Products, the Issuers should review the proposed product and transaction with the Office of the General Treasurer.

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A refunding should only be done if there is a resulting economic benefit regardless of whether there is an accounting gain or loss, or a subsequent reduction or increase in cash flows. The Issuer and its Financial Advisor should monitor the municipal bond market for opportunities to obtain interest savings by refunding outstanding debt. Refunding Bonds should be issued only when the issuance is of benefit to the issuer and/or the Issuer. Tax-exempt bonds issued after 1986 can only be Advance Refunded one time; therefore, the one opportunity should be reserved for situations where the refunding is prudent and warranted. Refundings are generally undertaken for three reasons: (i) to provide present value debt service savings to the Issuer; (ii) to escape burdensome or restrictive covenants imposed by the terms of the bonds being refinanced; (iii) to restructure debt for an appropriate purpose for the Issuer. Refunding issues should be amortized to achieve level annual debt service savings or proportional savings based on the principal amount of the bonds being refunded. "Up-front" or "deferred" debt service savings structures should be employed only as necessary to meet specific objectives and dis-savings in any year should be avoided, if possible. In addition, the final maturity on the Refunding Bonds should be no longer than the final maturity on the Refunded Bonds unless a debt restructuring is undertaken for an appropriate purpose for the Issuer.

<u>Advanced Refundings</u>: For refundings for savings, the following parameters are suggested to ensure that the single advanced refunding opportunity is warranted:

- For bonds with call dates within two years of the delivery date of the refunding bonds, at least 3% present value savings on a maturity by maturity basis. For bonds with call dates two or more years past the delivery date of the refunding bonds, at least 5% present value savings on a maturity by maturity basis. However, lower maturity by maturity net present value savings targets may be appropriate for shorter term or smaller fixed rate refunding issues or series, including maturities outstanding less than two years from the call date.

- The level of negative arbitrage, on a maturity by maturity basis, should not be greater than present value savings, and if relatively large, a higher level of present value savings should be required. Negative arbitrage should be less than the net present value savings. Issuers may want to adopt a more stringent standard.

- On a bond series basis, the breakeven increase in interest rates should be calculated. The breakeven increase in interest rates is a calculation of how much rates have to increase between an advance refunding of the bonds today and a current refunding at the time the bonds are callable to result in the same amount of present value savings. The breakeven increase in interest rates should not exceed the forward interest rate forecast or a pre-established target based on past market volatility.

Current Refundings. Current refundings are a diminishing asset. Current refundings should be completed as long as the net present value savings is meaningful and the market for tax-exempt bonds is not extraordinary volatile.

Forward Refunding. A refunding in which bonds are sold with the intent to close or deliver at some future point in time, generally more than 30 days after pricing, and often to coincide with a date 90 days prior to the call date on the refunded bonds, thereby qualifying the issue as a current refunding. In general, the Issuer should evaluate the breakeven savings rate (described above) to consider the likelihood of achieving higher savings than a current refunding, while minimizing other risks and future administrative burdens associated with a Forward Refunding.

Debt Issuance Practices

Sale Process: A competitive bond offering involves bid solicitation from potential purchasers, principally underwriters. It is a public bid where the bonds are sold to the underwriter or other purchaser that offers the lowest "true interest cost" or TIC. TIC is defined as the rate necessary, when compounded semi-annually, to discount the amounts payable on the respective principal and interest payment dates back to the delivery date where the total equals the purchase price received for the new issue securities.

A negotiated offering differs from a competitive offering in the method used for selecting the underwriter, the role of the underwriter in the bond marketing process, and the procedures used for determining interest rates and underwriter compensation. In a negotiated offering, the underwriter is selected first, generally through the solicitation of competitive requests for proposals. The underwriter or senior underwriter will engage in pre-sale marketing and will negotiate interest rates. Issuers should consider conducting fixed rate financings on a competitive basis if they meet the criteria described above; however, negotiated financings may be used due to market volatility or the use of an unusual or complex financing or security structure. Retail only issues or sales are sold through a negotiated process. Private placements, direct purchase and bank loans should be considered for small, shorter-term and variable rate financing and should be compared to the cost (taking into account upfront fees and interest rates) and administrative burden associated with a public sale of securities. Also, bond refundings are often conducted through a negotiated process, due to complexities associated with refunding economics and escrow structuring. However, a straightforward refunding can be done on a competitive basis. In either case, there should still be a competitive process, in the first case, by virtue of the bid of the bonds and in the latter case by an RFP process to select an underwriting firm or firms. The negotiated offering is structured to require the solicitation of multiple underwriting proposals and permits the state to solicit the advice of several underwriters about how to structure and price a proposed bond issue. To provide the broadest distribution of bonds, the use of co-managers and selling groups are encouraged for larger negotiated transactions. The size of the transaction, anticipated retail/institutional demand, experience, etc., should be considered in determining the number of participants.

Competitive Sale: After disclosure documents are completed and structuring issues have been decided, the competitive sale process may begin. A Summary Notice of Sale can be published in the Bond Buyer alerting potential bidders to the date and time of the sale, approximately one or two weeks in advance of the sale date. Simultaneously, the issuer posts and electronically distributes its Preliminary Official Statement that contains a detailed Notice of Sale containing the relevant aspects of the sale including precise bidding rules and the date and times bidders must submit their bids. The most common on-line bidding platform used by the municipal market is Parity IPREO. Muniauction can also be considered. Bids are promptly "opened" and disclosed. As a condition of submitting a bid, bidders may have to provide a good faith pledge, typically 1% of the value of the bonds being offered. On a date specified, after all legal documentation has been completed, the sale closes. The final purchase price of the bonds is wired to the Issuer and the bonds are released.

Negotiated Sale: A sale date is chosen by the issuer with input from the underwriter and the Financial Advisor. Prior to any pre-marketing of the bonds, the Book-running senior underwriter should submit proposed pricing to the Financial Advisor and the Issuer which will include proposed coupons, yields and take downs for each maturity to be sold. The scale should reflect input from the other members of the underwriting groups (co-managers and so-senior managers if any), known as price views, and a consensus scale. The proposal should also include all fees and costs associated with the underwriting. The Issuer and the Financial Advisor should consider the proposal and negotiate any recommended changes. Following the pre-marketing, this process should be repeated with information gained from the pre-marketing activity and investor interest. Smaller negotiated sale offering may not include a pre-marketing process. Prior to the official pricing date, a retail order period may be held to solicit orders from retail investors, if a retail order period is recommended by the senior manager and the Financial Advisor agrees. On the day of the institutional pricing an interest rate scale is released to potential investors through a pricing wire. The Issuer and the Financial Advisor should review the pricing wire and confirm that it is consistent with agreed upon terms. An order period is conducted lasting several hours. During the order period, orders are placed by investors through the senior manager, the co-managers and selling group (if a selling group is used). The Issuer and the Financial Advisor may view the orders as they are placed and entered into the senior manager's order management system, using the IPREO system. After the order period closes, the senior manager, Issuer and Financial Advisor review the "book of orders." The Issuer should request the Financial Advisor's input and recommendation. Based on the amount and distribution of orders, the senior manager and the Issuer determine whether any adjustments to the pricing of the bonds are necessary. After the bonds are repriced, the management group checks to see whether additional orders can be obtained and/or whether initial orders are withdrawn. Several iterations of this process may take place for a larger sales in certain circumstances. When the senior manager (on behalf of the entire underwriting group), the Issuer and Financial Advisor agree on a price, a verbal award is made. Subsequent to pricing, an official Bond Purchase Agreement is signed between the underwriting group and the Issuer. A good faith deposit is obtained, similar to the competitive process. On a date specified, after all legal documentation has been completed, the sale closes. The final purchase price of the bonds is wired to the Issuer and the bonds are released, as with the competitive process.

Professional Services: The Issuer will employ financial specialists to assist it in developing a bond issuance strategy, preparing bond documents, and marketing bonds to investors. The key Financing Team members include the Issuer's financial advisor, bond counsel, underwriter (in a negotiated sale) and in some instances, a disclosure counsel. The use of an independent Municipal Advisor is encouraged. Bond Counsel and Underwriters' Counsel should not be the same firm. Other outside firms, such as those providing paying agent, trustee, and/or printing services, are retained as required. For refunding bonds, the Issuer will likely need to retain a verification agent (that verifies the refunding cash flows) and an escrow agent (hold the refunding moneys in trust until the bonds are redeemed). Depending on the statutory authority, the costs for these services and fees can be paid through the proceeds of the bonds or through budgeted appropriations.

Credit Ratings and Rating Agencies. Obtaining a minimum of two ratings is encouraged as the use of two or more ratings broaden the pool of investors. Obtaining one rating can be appropriate for smaller or unique transactions. The cost of ratings can be the highest single cost other than the underwriters' discount, especially for larger transactions. Issuers and Financial Advisors on behalf of their issuer clients have had success reducing its transactional rating costs by annually negotiating with each of the agencies and receiving a price for all issuer's expected transactions.

Underwriters' Discount: The underwriters' discount or spread is the difference between the price the underwriter pays the issuer for the bonds and the price the underwriter receives from the resale of those bonds to investors. Underwriter's compensation consists of takedown, management fee, underwriting risk, and expenses, although currently spreads reflect the amounts of only takedown and expenses. The expense component is made up of costs incurred by the underwriter on behalf of the issuer, including underwriters' counsel. The costs for these services need to be managed, through the competitive bid process used to select underwriters and subsequent negotiation and monitoring of fees.

Pricing/Sale Date: The Sale date should be driven by the need for proceeds and an appropriate time that the Issuer is able to generate a thorough disclosure document, either due to the availability of financials or the ability to dedicate necessary Issuer resources. The Issuer should not attempt to "time the market";

however, issuers should avoid, if possible, market competition with other Rhode Island issues and/or comparable credits.

Closing Date: Sufficient time should be allowed between the sale (or pricing) date and the closing date to permit adequate review and execution of all closing documents. Where appropriate, draft documents may be provided prior to pricing in order to speed the process.

Rating Agency Relations: Full disclosure of operations and open lines of communication shall be made to the rating agencies. Larger and frequent issuers, should communicate with the rating agencies no less than annually to provide relevant updates on financial, economic and operational performance. Communication at times not related to a rating of a particular bond issue is encouraged for more frequent issuers.

Disclosure: Issuers should take their disclosure obligations seriously by providing disclosure of financial and pertinent credit information relevant to the Issuer's outstanding securities and abide by the provisions of Securities and Exchange Commission (SEC) Rule 15c2-12 concerning primary and secondary market disclosure. See below.

Investment of Bond Proceeds: Proceeds of tax-exempt bonds may be invested in separate bond accounts by issuance to aid in calculating arbitrage. Investments will be consistent with those authorized by existing statute, bond documents and by the Issuer's investment policies. If invested in a portfolio of securities, the portfolio should be structured to meet expected spending requirements. Accordingly, draw schedules should be reviewed and updated periodically and provided to the Issuer's investment manager. The investment of a refunding escrow portfolio should include an analysis of the use of State and Local Government Securities (SLGs) and open market securities. The Issuer's Municipal Advisor should estimate any potential benefit of the use of an open market escrow and the Issuer should determine if the potential savings will be worth the time and the additional risk of the bid.

Pre-Issuance Review of Projects: Prior to the issuance of the bonds, the Issuer should conduct a review of the projects to be financed, in coordination with bond counsel in order to confirm that the projects are eligibility to be financed on a tax-exempt basis.

Disclosure and Post Issuance Debt Management

Municipal securities are exempt from the disclosure regulations generally applied to corporations in both the Securities Act of 1933 and the Securities Exchange Act of 1934. Municipal securities, however, are subject to the anti-fraud provisions of the acts and related rules, specifically, section 17(a) of the 1933 Act, Section 10(b) of 1934 Act, and SEC Rule 10b-5 states that it is unlawful "to make an untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading." As the issuer of the bonds, the Issuer has the responsibility to assure the accuracy and completeness of information provided to the potential investors. Issuers must also comply with SEC Rule 15c2-12. It is an SEC rule under the 1934 Act setting forth certain obligations of underwriters to receive, review and disseminate official statements prepared by issuers of most primary offerings of municipal securities.

The Issuer issues a preliminary and final Official Statement (OS) in connection with its public sale of bonds. The Official Statement is one of the most critical documents produced by the bond financing team. The OS document discloses material information on a new issue including the purposes of the issue, how the securities will be repaid, and the financial, economic and demographic characteristics of the Issuer. Investors, analysts and rating agencies may use this information to evaluate the credit quality of the securities. Federal securities laws generally require that if an official statement is used to market an issue, it must fully disclose all facts that would be of interest to potential investors evaluating the bonds. The OS also includes a statement that there have been no material misstatements or omissions by the issuer with respect to the issue, and that no facts have become known which would render false or misleading any statement which was made. While the Issuer may employ consultants and bond counsel to assist in this task, the ultimate responsibility for the document rests with the Issuer.

In addition to paying principal and interest on the bonds, after the bonds are issued the Issuer has continuing obligations to bondholders including:

- Compliance with IRS code relative to arbitrage earnings, private use, useful life and the tax-exempt status of the bonds; and
- For the benefit of individuals purchasing and/or holding the securities subsequent to their initial issuance, Secondary Market Disclosure requirements for the Issuer or Obligated Party to provide:
  (iv) ongoing information on Issuer's and/or Obligated Party's financial condition, and
  (v) disclosure to bondholders about material events that affect the status of the bonds including arbitrage and tax compliance.

Issuers must commit in the bond documents to provide secondary market disclosure for most publicly issued municipal securities (see below).

Compliance with IRS Code: The primary IRS code applicable to tax-exempt bonds are the Federal Tax Reform Act of 1986 as incorporated in the U.S. Treasury Internal Revenue Code (IRC) sections 103 and 141 through 150. While there are many criteria, the most common issues relate to private use, arbitrage, and useful life. Section 103 of the Code indicates that an "arbitrage bond" under Section 148 will not be tax-exempt. "The basic arbitrage rule is that a municipality may not invest the proceeds of a tax-exempt note or bond in such a manner so that the yield on the invested funds exceeds the interest rate being paid on its borrowing by more than .125%. This should be distinguished from an unintentional generation of arbitrage earnings. Intent factors into the determination of "arbitrage." If projects fall behind schedule, there may be an arbitrage "rebate' to the IRS but not necessarily a determination that an arbitrage bond exists. In these cases, there are safe harbors such as spend down exemptions and there are certain requirements for tracking the arbitrage rebate. Intentional arbitrage would, however, affect the tax status of the bonds. In addition to arbitrage, another requirement is that tax-exempt bonds issued must be for a public, not private use, which generally includes bridges, schools, infrastructure used by the general public. There are, however, private uses that have a public benefit; pollution related clean-up, affordable housing, etc. Private use and private debt service of the bond cannot exceed 10% of the issue (5% on certain loans). Another issue is continued private use. For instance, a building constructed using bond funds for a public use may not generally be resold for private use, although the "change in use" provisions do provide for certain remedies. In addition, bonds may not exceed certain useful life criteria for the underlying capital assets. For any matters relating to the use of proceeds or investments, issuers should always consult with their bond counsel to ensure compliance with IRS Code and other governing provisions.

Continuing/Secondary Market Disclosure: At the time of issuance, disclosure of material facts is made. Issuers have a continuing obligation for disclosure. This is required by SEC Rule 15c2-12 as stated by the MSRB:

> "Under Rule 15c2-12(b)(5), an underwriter for a primary offering of municipal securities subject to the rule currently is prohibited from underwriting the offering unless the underwriter has determined that the issuer or an obligated person for whom financial information or operating data is presented in the final official statement has undertaken in writing to provide certain items of information to the marketplace. Rule 15c2-12(b)(5) provides that such items include: (A) annual financial information concerning obligated persons; (B) audited financial statements for obligated persons if available and if not included in the annual financial information; (C) notices of certain events, if material; and (D) notices of failures to provide annual financial information on or before the date specified in the written undertaking."

The SEC further defines "obligated person" as:

> "… any person, including an issuer of municipal securities, who is either generally or through an enterprise, fund, or account of such person committed by contract or other arrangement to support payment of all or part of the obligations on the municipal securities sold in a primary offering (other than providers of bond insurance, letters of credit, or other liquidity facilities)."

The SEC further requires that broker-dealers can only buy securities for which the issuer has agreed to provide written assurance of their continuing disclosure. As noted above, the SEC does not have authority over disclosure requirements in the municipal bond market. Through these rules, however, the SEC has placed restrictions on underwriters, broker-dealers and other business partners, creating effective compliance.

SEC Rule 15c2-12 mandates continuing disclosure unless the bonds qualify for an exemption. The Issuer is responsible for providing ongoing disclosure information to established national information repositories and for maintaining compliance with disclosure standards. The Issuer should work with Bond Counsel or Disclosure Counsel to assure that this is completed annually and in the event of the occurrence of a disclosure event. Notice would be required for the following events:

- Principal and interest payment delinquencies
- Non-payment related defaults
- Unscheduled draws on the debt service reserves reflecting financial difficulties
- Unscheduled draws on the credit enhancements reflecting financial difficulties
- Substitution of the credit or liquidity providers or their failure to perform
- Adverse tax opinions or events affecting the tax-exempt status of the bonds
- Modifications to rights of bondholders
- Optional, contingent or unscheduled calls of bonds
- Defeasances
- Release, substitution or sale of property securing repayment of the bonds
- Rating changes
- Bankruptcy, insolvency, receivership or similar event of the obligated person
- Consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of its assets, other than in the ordinary course of business
- Appointment of a successor or additional trustee or the change of name of a trustee, if material.

Annual filings are to be sent to and posted on the MSRB's Electronic Municipal Market Access database ("EMMA"). In addition, if the Issuer determines that the occurrence of an above listed event is material under applicable federal securities laws, the Issuer has a duty to promptly file a notice of such occurrence and have it posted on EMMA. http://www.emma.msrb.org/

It is also a best practice that issuers also disclose any private placements, direct sales and bank loans to the public market on the EMMA system, if the Issuer has outstanding publicly offered securities. The SEC is considering including the disclosure private placements, direct sales and bank loan as required disclosure for issuers of municipal securities.

APPENDIX A – PART ONE
STATE DEBT AND PENSION RATIOS

APPENDIX A
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Moody's State Debt Medians				
State (M/S/F)	**Debt Service to Revenues**	**Debt to Personal Income**	**Debt Per Capita**	**Debt to Gross State Product**
50 State Median	**4.3%**	**2.5%**	**$1,025**	**2.21%**
Double-A Median	**4.7%**	**2.7%**	**$1,132**	**2.28%**
Rhode Island (Aa2/AA/AA)	**6.4%**	**3.7%**	**$1,813**	**3.51%**
Alabama (Aa1/AA/AA+)	3.9%	2.3%	$849	2.06%
Alaska (Aa2/AA+/AA+)	2.4%	2.7%	$1,422	1.85%
Arizona (Aa2/AA/--)	4.6%	2.1%	$776	1.85%
Arkansas (Aa1/AA/--)	4.1%	1.7%	$628	1.56%
California (Aa3/AA-/AA-)	5.3%	4.7%	$2,323	3.94%
Colorado (Aa1/AA/--)	2.5%	0.9%	$424	0.76%
Connecticut (Aa3/AA-/AA-)	14.3%	9.8%	$6,155	8.82%
Delaware (Aaa/AAA/AAA)	7.3%	5.2%	$2,385	3.56%
Florida (Aa1/AAA/AAA)	4.2%	2.5%	$1,038	2.51%
Georgia (Aaa/AAA/AAA)	6.6%	2.7%	$1,029	2.21%
Hawaii (Aa1/AA+/AA)	10.9%	9.9%	$4,557	8.56%
Idaho (Aa1/AA+/AA+)	1.6%	1.2%	$455	1.19%
Illinois (Baa2/BBB/BBB+)	9.2%	5.2%	$2,522	4.41%
Indiana (Aaa/AAA/AAA)	1.2%	1.2%	$463	0.96%
Iowa (Aaa/AAA/AAA)	0.7%	0.5%	$239	0.44%
Kansas (Aa2/AA-/--)	3.4%	3.4%	$1,534	3.09%
Kentucky (Aa2/A+/AA-)	7.6%	5.2%	$1,954	4.60%
Louisiana (Aa3/AA/AA-)	3.1%	3.8%	$1,609	2.99%
Maine (Aa2/AA/AA)	5.1%	2.2%	$928	2.27%
Maryland (Aaa/AAA/AAA)	6.2%	3.5%	$1,928	3.34%
Massachusetts (Aa1/AA+/AA+)	10.6%	9.5%	$5,592	8.34%
Michigan (Aa1/AA-/AA)	2.5%	1.8%	$719	1.59%
Minnesota (Aa1/AA+/AAA)	3.7%	3.2%	$1,527	2.64%
Mississippi (Aa2/AA/AA)	6.0%	5.0%	$1,707	4.88%
Missouri (Aaa/AAA/AAA)	3.5%	1.4%	$574	1.25%

Moody's State Debt Medians				
State (M/S/F)	**Debt Service to Revenues**	**Debt to Personal Income**	**Debt Per Capita**	**Debt to Gross State Product**
Montana (Aa1/AA/AA+)	1.3%	0.6%	$247	0.58%
Nebraska (--/AAA/--)	0.3%	0.0%	$8	0.01%
Nevada (Aa2/AA/AA+)	5.6%	1.5%	$591	1.26%
New Hampshire (Aa1/AA/AA+)	4.7%	1.5%	$808	1.53%
New Jersey (A2/A-/A)	8.5%	7.3%	$4,141	6.72%
New Mexico (Aa1/AA/--)	4.4%	3.3%	$1,230	2.79%
New York (Aa1/AA+/AA+)	7.6%	5.4%	$3,021	4.29%
North Carolina (Aaa/AAA/AAA)	3.5%	1.8%	$721	1.50%
North Dakota (Aa1/AA+/--)	0.5%	0.3%	$166	0.22%
Ohio (Aa1/AA+/AA+)	5.2%	2.6%	$1,091	2.20%
Oklahoma (Aa2/AA+/AA+)	2.6%	0.9%	$397	0.85%
Oregon (Aa1/AA+/AA+)	5.7%	4.6%	$1,907	3.61%
Pennsylvania (Aa3/AA-/AA-)	3.8%	2.5%	$1,172	2.28%
South Carolina (Aaa/AA+/AAA)	3.7%	1.7%	$603	1.56%
South Dakota (Aaa/AAA/AAA)	2.2%	1.4%	$652	1.21%
Tennessee (Aaa/AAA/AAA)	1.3%	0.7%	$298	0.66%
Texas (Aaa/AAA/AAA)	2.4%	0.9%	$383	0.64%
Utah (Aaa/AAA/AAA)	5.9%	2.5%	$921	1.97%
Vermont (Aaa/AA+/AAA)	2.1%	2.1%	$1,002	2.14%
Virginia (Aaa/AAA/AAA)	5.0%	2.9%	$1,418	2.57%
Washington (Aa1/AA+/AA+)	7.0%	5.7%	$2,761	4.68%
West Virginia (Aa1/AA-/AA)	6.3%	2.8%	$1,020	2.53%
Wisconsin (Aa2/AA/AA)	6.8%	4.0%	$1,780	3.55%
Wyoming (--/AAA/--)	0.1%	0.1%	$45	0.06%

Source: Moody's State Debt Medians 2016, May 6, 2016. Alabama, Arizona, Massachusetts, New Mexico, West Virginia & Wyoming debt service to revenues based on fiscal 2014 revenues; fiscal 2015 audited financial statements not available at time of publication.

Moody's State Pension Medians						
State (M/S/F)	**2015 ANPL as % of Own-Source Revenues**	**3-Yr Avg ANPL as % of Own-Source Revenues**	**3-Yr Avg ANPL as % of Total Governmental Revenues**	**ANPL as % of Personal Income**	**ANPL as % of Gross State Product**	**ANPL Per Capita**
50 State Median	**85%**	**88%**	**53%**	**5.8%**	**5.0%**	**$2,393**
Double-A Median	**95%**	**107%**	**57%**	**5.8%**	**5.0%**	**$2,394**
Rhode Island (Aa2/AA/AA)	**121%**	**134%**	**80%**	**9.7%**	**9.0%**	**$4,843**
Alabama (Aa1/AA/AA+)	57%	61%	35%	3.5%	3.2%	$1,344
Alaska (Aa2/AA+/AA+)	241%	261%	179%	32.4%	25.3%	$18,112
Arizona (Aa2/AA/--)	61%	66%	35%	3.5%	3.2%	$1,369
Arkansas (Aa1/AA/--)	59%	70%	39%	4.7%	4.5%	$1,858
California (Aa3/AA-/AA-)	115%	114%	74%	9.1%	7.6%	$4,775
Colorado (Aa1/AA/--)	143%	144%	90%	7.1%	6.2%	$3,601
Connecticut (Aa3/AA-/AA-)	288%	298%	209%	22.0%	20.5%	$14,738
Delaware (Aaa/AAA/AAA)	68%	75%	59%	8.5%	5.7%	$4,078
Florida (Aa1/AAA/AAA)	33%	37%	23%	1.7%	1.7%	$751
Georgia (Aaa/AAA/AAA)	86%	88%	50%	4.6%	3.9%	$1,879
Hawaii (Aa1/AA+/AA)	118%	156%	111%	12.0%	10.3%	$5,728
Idaho (Aa1/AA+/AA+)	31%	33%	24%	2.7%	2.6%	$1,010
Illinois (Baa2/BBB/BBB+)	437%	419%	280%	30.3%	24.9%	$14,996
Indiana (Aaa/AAA/AAA)	91%	100%	61%	6.2%	5.0%	$2,543
Iowa (Aaa/AAA/AAA)	37%	38%	24%	2.7%	2.1%	$1,197
Kansas (Aa2/AA-/--)	168%	181%	126%	11.0%	9.9%	$5,049
Kentucky (Aa2/A+/AA-)	261%	283%	162%	20.7%	18.4%	$8,092
Louisiana (Aa3/AA/AA-)	92%	225%	119%	5.8%	4.8%	$2,497
Maine (Aa2/AA/AA)	168%	175%	108%	13.5%	13.4%	$5,717
Maryland (Aaa/AAA/AAA)	200%	197%	133%	13.6%	12.6%	$7,624
Massachusetts (Aa1/AA+/AA+)	182%	201%	125%	13.8%	12.0%	$8,419
Michigan (Aa1/AA-/AA)	107%	85%	51%	7.9%	7.1%	$3,357
Minnesota (Aa1/AA+/AAA)	43%	40%	28%	4.0%	3.3%	$2,000
Mississippi (Aa2/AA/AA)	70%	113%	61%	5.8%	5.7%	$2,052
Missouri (Aaa/AAA/AAA)	80%	71%	39%	4.0%	3.5%	$1,706

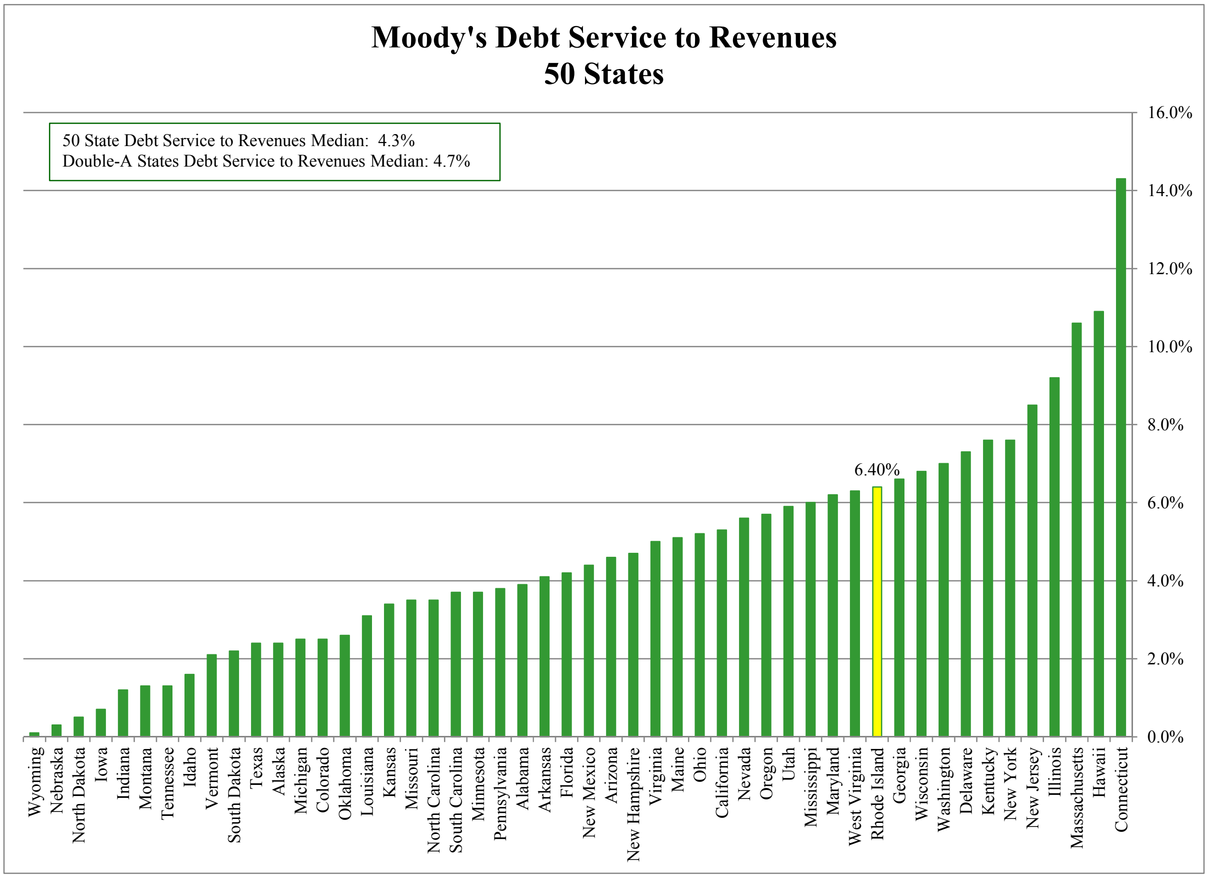
Moody's State Pension Medians						
State (M/S/F)	2015 ANPL as % of Own-Source Revenues	3-Yr Avg ANPL as % of Own-Source Revenues	3-Yr Avg ANPL as % of Total Governmental Revenues	ANPL as % of Personal Income	ANPL as % of Gross State Product	ANPL Per Capita
Montana (Aa1/AA/AA+)	147%	138%	81%	11.2%	10.3%	$4,599
Nebraska (--/AAA/--)	33%	21%	14%	2.1%	1.6%	$988
Nevada (Aa2/AA/AA+)	122%	100%	52%	4.9%	4.2%	$2,076
New Hampshire (Aa1/AA/AA+)	50%	51%	33%	2.3%	2.3%	$1,267
New Jersey (A2/A-/A)	227%	220%	157%	16.8%	15.9%	$10,070
New Mexico (Aa1/AA/--)	66%	68%	40%	7.4%	6.4%	$2,843
New York (Aa1/AA+/AA+)	30%	35%	22%	2.4%	1.9%	$1,402
North Carolina (Aaa/AAA/AAA)	22%	37%	23%	1.4%	1.2%	$589
North Dakota (Aa1/AA+/--)	20%	48%	38%	3.1%	2.3%	$1,658
Ohio (Aa1/AA+/AA+)	43%	48%	27%	2.7%	2.2%	$1,173
Oklahoma (Aa2/AA+/AA+)	83%	114%	71%	5.2%	5.0%	$2,290
Oregon (Aa1/AA+/AA+)	38%	56%	31%	2.8%	2.2%	$1,187
Pennsylvania (Aa3/AA-/AA-)	160%	172%	108%	10.4%	9.5%	$5,100
South Carolina (Aaa/AA+/AAA)	177%	132%	79%	12.1%	11.4%	$4,615
South Dakota (Aaa/AAA/AAA)	75%	69%	40%	4.1%	3.4%	$1,842
Tennessee (Aaa/AAA/AAA)	39%	39%	23%	2.4%	2.1%	$1,016
Texas (Aaa/AAA/AAA)	189%	179%	109%	9.6%	7.8%	$4,509
Utah (Aaa/AAA/AAA)	53%	51%	35%	3.7%	2.9%	$1,439
Vermont (Aaa/AA+/AAA)	106%	105%	65%	12.3%	12.1%	$5,873
Virginia (Aaa/AAA/AAA)	62%	67%	48%	3.6%	3.2%	$1,859
Washington (Aa1/AA+/AA+)	98%	88%	48%	6.1%	5.0%	$3,106
West Virginia (Aa1/AA-/AA)	134%	151%	91%	13.2%	12.2%	$4,887
Wisconsin (Aa2/AA/AA)	22%	23%	15%	1.6%	1.4%	$722
Wyoming (--/AAA/--)	43%	80%	55%	4.0%	3.4%	$2,220

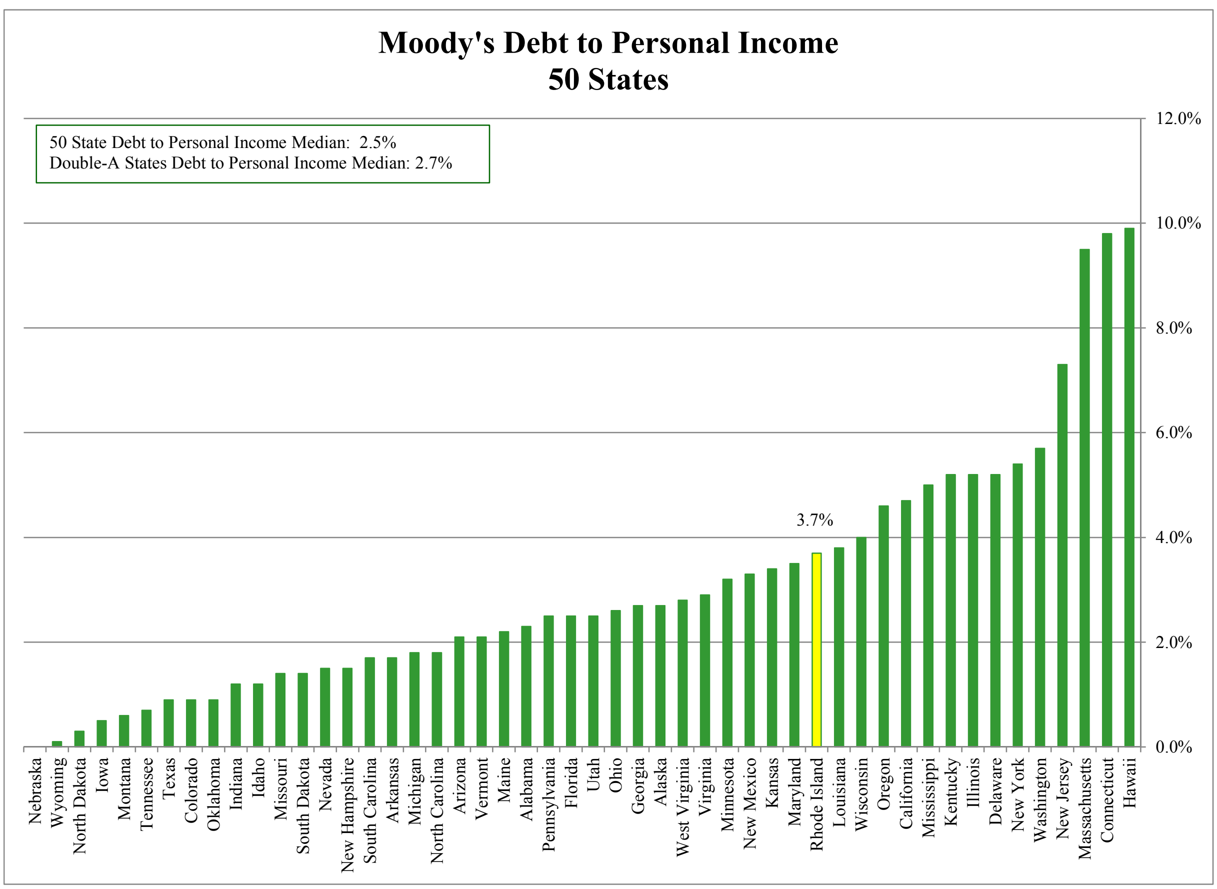
Source: Moody’s Medians – Low Returns, Weak Contributions Drive Growth of State Pension Liabilities, October 6, 2016.
ANPL is adjusted net pension liability.

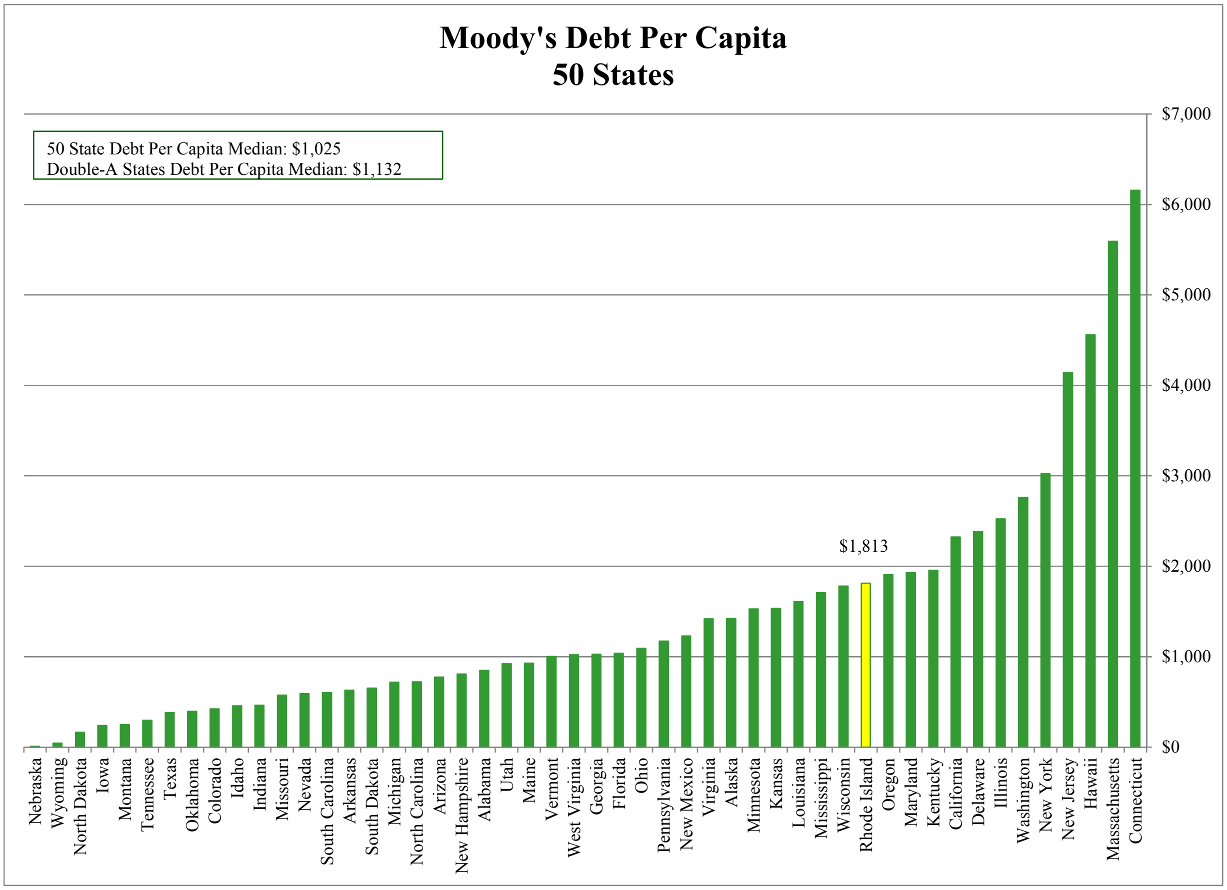
Moody's Fixed Costs as Percent of Own Source Revenues					
State (M/S/F)	**2015 Debt Service**	**2015 Pension Contribution**	**2015 Debt Service + Pension Contribution**	**2015 OPEB Contribution**	**FY 2015 Total Fixed Costs**
50 State Median	**4.2%**	**3.4%**	**7.6%**	**0.9%**	**8.5%**
Double-A Median	**4.6%**	**3.0%**	**8.3%**	**0.7%**	**9.7%**
Rhode Island (Aa2/AA/AA)	**6.4%**	**6.0%**	**12.4%**	**1.4%**	**13.7%**
Alabama (Aa1/AA/AA+)	3.9%	2.0%	5.9%	1.3%	7.2%
Alaska (Aa2/AA+/AA+)	2.4%	2.5%	4.9%	2.2%	7.2%
Arizona (Aa2/AA/--)	4.4%	2.0%	6.4%	0.2%	6.6%
Arkansas (Aa1/AA/--)	4.1%	2.5%	6.6%	0.6%	7.2%
California (Aa3/AA-/AA-)	5.3%	3.8%	9.1%	1.3%	10.3%
Colorado (Aa1/AA/--)	2.5%	3.4%	5.9%	0.4%	6.3%
Connecticut (Aa3/AA-/AA-)	14.3%	12.2%	26.5%	3.1%	29.5%
Delaware (Aaa/AAA/AAA)	6.6%	3.5%	10.1%	4.1%	14.2%
Florida (Aa1/AAA/AAA)	4.2%	1.0%	5.2%	0.2%	5.4%
Georgia (Aaa/AAA/AAA)	6.6%	3.3%	9.9%	1.3%	11.2%
Hawaii (Aa1/AA+/AA)	10.9%	5.1%	16.0%	5.7%	21.6%
Idaho (Aa1/AA+/AA+)	1.6%	1.6%	3.2%	0.2%	3.3%
Illinois (Baa2/BBB/BBB+)	9.2%	15.4%	24.6%	2.1%	26.7%
Indiana (Aaa/AAA/AAA)	1.2%	5.5%	6.7%	0.2%	6.9%
Iowa (Aaa/AAA/AAA)	0.7%	1.5%	2.2%	0.3%	2.5%
Kansas (Aa2/AA-/--)	3.4%	6.0%	9.4%	0.2%	9.6%
Kentucky (Aa2/A+/AA-)	7.6%	5.9%	13.5%	2.6%	16.1%
Louisiana (Aa3/AA/AA-)	3.1%	5.8%	8.9%	1.5%	10.4%
Maine (Aa2/AA/AA)	5.1%	6.8%	11.9%	2.2%	14.1%
Maryland (Aaa/AAA/AAA)	6.2%	7.7%	13.9%	2.0%	16.0%
Massachusetts (Aa1/AA+/AA+)	11.7%	5.6%	17.3%	2.0%	19.3%
Michigan (Aa1/AA-/AA)	2.5%	4.8%	7.3%	2.6%	9.9%
Minnesota (Aa1/AA+/AAA)	3.7%	1.0%	4.7%	0.3%	5.0%
Mississippi (Aa2/AA/AA)	6.0%	2.2%	8.2%	0.4%	8.6%
Missouri (Aaa/AAA/AAA)	3.5%	3.7%	7.2%	0.9%	8.1%

Moody's Fixed Costs as Percent of Own Source Revenues					
State (M/S/F)	**2015 Debt Service**	**2015 Pension Contribution**	**2015 Debt Service + Pension Contribution**	**2015 OPEB Contribution**	**FY 2015 Total Fixed Costs**
Montana (Aa1/AA/AA+)	1.3%	5.9%	7.2%	0.4%	7.6%
Nebraska (--/AAA/--)	0.3%	1.6%	1.9%	0.0%	1.8%
Nevada (Aa2/AA/AA+)	5.6%	3.7%	9.3%	0.8%	10.0%
New Hampshire (Aa1/AA/AA+)	4.7%	2.1%	6.8%	3.0%	9.7%
New Jersey (A2/A-/A)	8.5%	2.2%	10.7%	4.1%	14.8%
New Mexico (Aa1/AA/--)	4.3%	2.0%	N/A	0.0%	6.3%
New York (Aa1/AA+/AA+)	7.6%	1.7%	9.3%	1.7%	11.0%
North Carolina (Aaa/AAA/AAA)	3.5%	1.3%	4.8%	1.7%	6.5%
North Dakota (Aa1/AA+/--)	0.5%	0.6%	1.1%	0.2%	1.3%
Ohio (Aa1/AA+/AA+)	5.2%	1.3%	6.5%	0.3%	6.7%
Oklahoma (Aa2/AA+/AA+)	2.6%	6.8%	9.4%	0.5%	9.9%
Oregon (Aa1/AA+/AA+)	5.7%	1.2%	6.9%	0.2%	7.1%
Pennsylvania (Aa3/AA-/AA-)	3.8%	7.1%	10.9%	2.5%	13.4%
South Carolina (Aaa/AA+/AAA)	3.7%	5.3%	9.0%	4.5%	13.5%
South Dakota (Aaa/AAA/AAA)	2.2%	2.0%	4.2%	0.0%	4.2%
Tennessee (Aaa/AAA/AAA)	1.3%	2.3%	3.6%	0.7%	4.3%
Texas (Aaa/AAA/AAA)	2.4%	3.9%	6.3%	1.6%	8.0%
Utah (Aaa/AAA/AAA)	5.9%	8.7%	14.6%	0.4%	14.9%
Vermont (Aaa/AA+/AAA)	2.1%	3.7%	5.8%	1.3%	7.0%
Virginia (Aaa/AAA/AAA)	5.0%	2.4%	7.4%	0.8%	8.1%
Washington (Aa1/AA+/AA+)	8.3%	1.9%	10.2%	0.3%	10.5%
West Virginia (Aa1/AA-/AA)	6.2%	8.5%	14.7%	1.9%	16.6%
Wisconsin (Aa2/AA/AA)	6.8%	1.5%	8.3%	0.2%	8.5%
Wyoming (--/AAA/--)	0.1%	2.0%	N/A	0.3%	2.5%

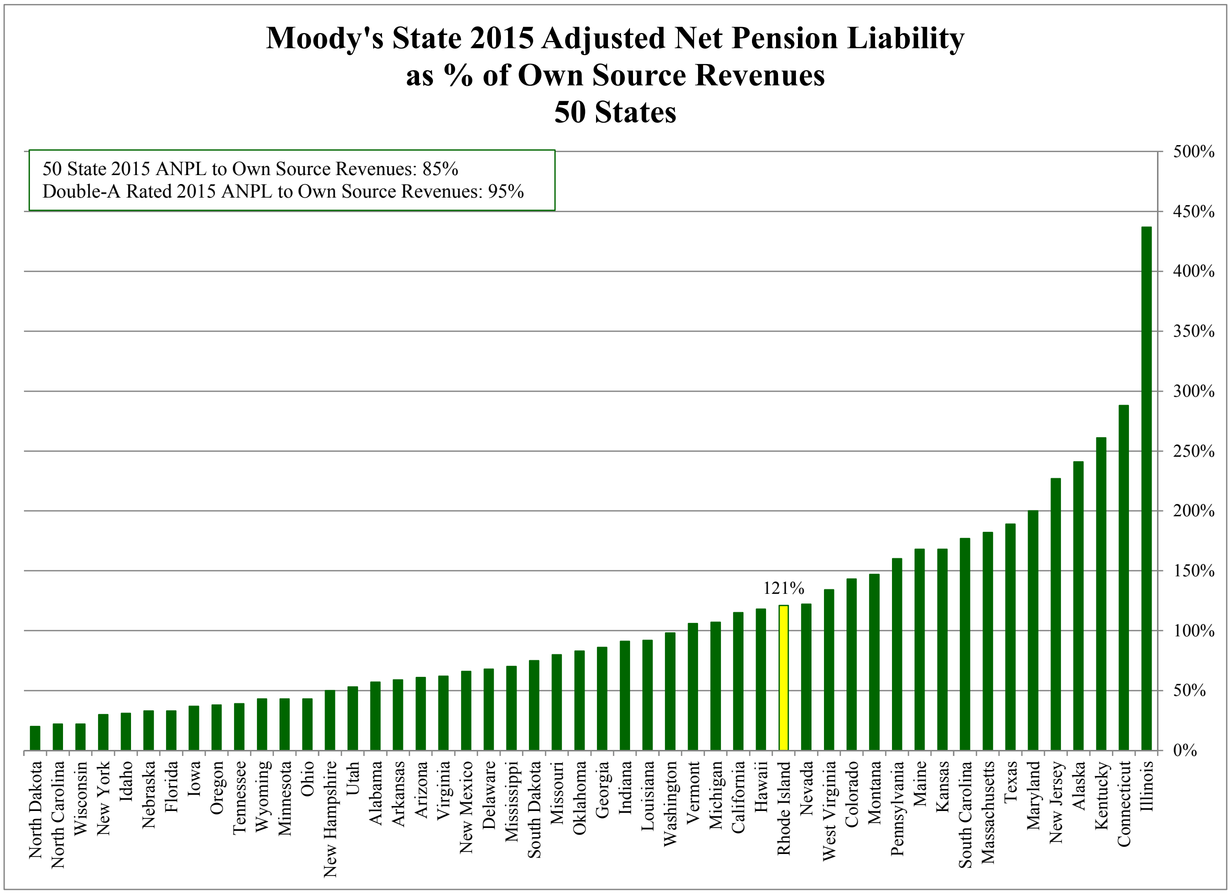
Source: Moody's Medians – Low Returns, Weak Contributions Drive Growth of State Pension Liabilities, October 6, 2016.
ANPL is adjusted net pension liability.

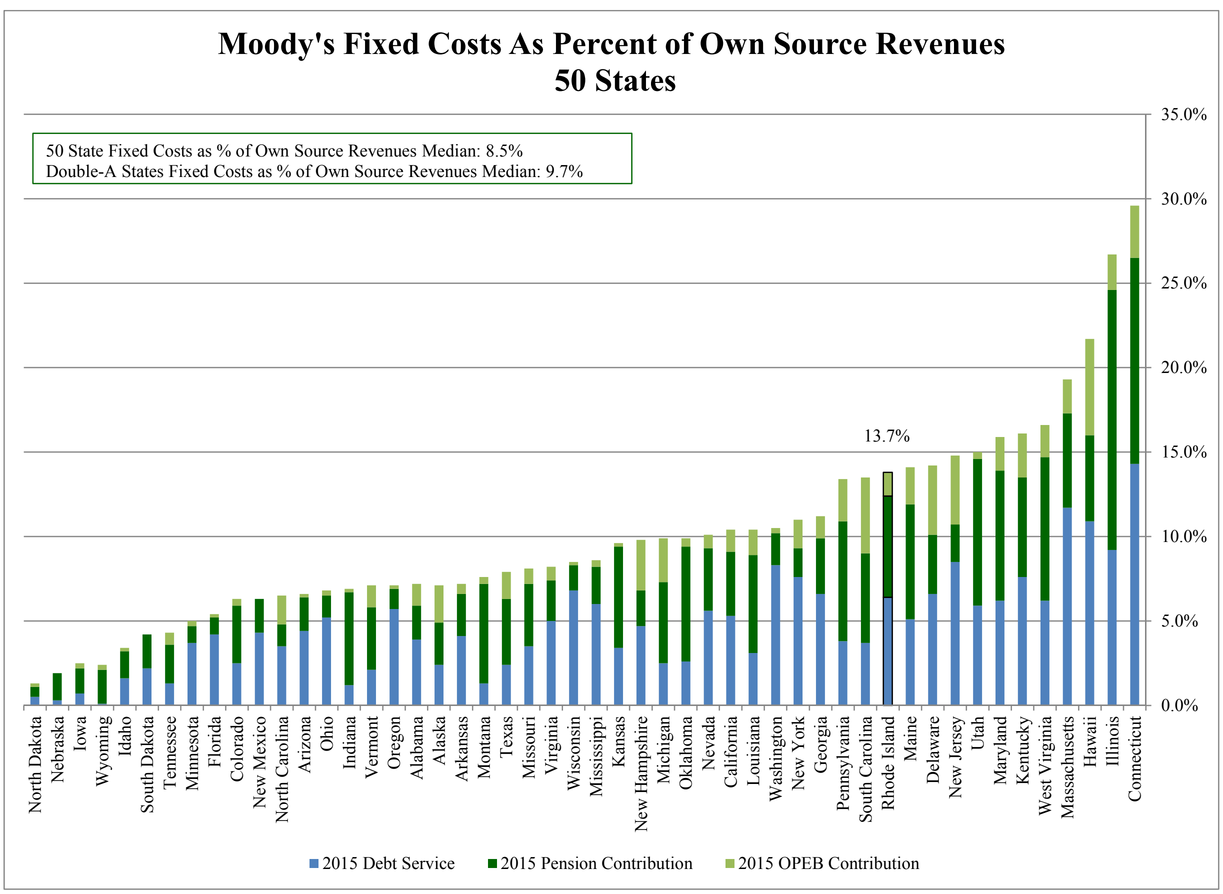

Moody's Debt Service to Revenues
50 States
50 State Debt Service to Revenues Median: 4.3%
Double-A States Debt Service to Revenues Median: 4.7%
6.40%
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
Wyoming
Nebraska
North Dakota
Iowa
Indiana
Montana
Tennessee
Idaho
Vermont
South Dakota
Texas
Alaska
Michigan
Colorado
Oklahoma
Louisiana
Kansas
Missouri
North Carolina
South Carolina
Minnesota
Pennsylvania
Alabama
Arkansas
Florida
New Mexico
Arizona
New Hampshire
Virginia
Maine
Ohio
California
Nevada
Oregon
Utah
Mississippi
Maryland
West Virginia
Rhode Island
Georgia
Wisconsin
Washington
Delaware
Kentucky
New York
New Jersey
Illinois
Massachusetts
Hawaii
Connecticut


Moody's Debt to Personal Income
50 States
50 State Debt to Personal Income Median: 2.5%
Double-A States Debt to Personal Income Median: 2.7%
3.7%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
Nebraska
Wyoming
North Dakota
Iowa
Montana
Tennessee
Texas
Colorado
Oklahoma
Indiana
Idaho
Missouri
South Dakota
Nevada
New Hampshire
South Carolina
Arkansas
Michigan
North Carolina
Arizona
Vermont
Maine
Alabama
Pennsylvania
Florida
Utah
Ohio
Georgia
Alaska
West Virginia
Virginia
Minnesota
New Mexico
Kansas
Maryland
Rhode Island
Louisiana
Wisconsin
Oregon
California
Mississippi
Kentucky
Illinois
Delaware
New York
Washington
New Jersey
Massachusetts
Connecticut
Hawaii



Moody's Debt Per Capita
50 States
50 State Debt Per Capita Median: $1,025
Double-A States Debt Per Capita Median: $1,132
$1,813
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
Nebraska
Wyoming
North Dakota
Iowa
Montana
Tennessee
Texas
Oklahoma
Colorado
Idaho
Indiana
Missouri
Nevada
South Carolina
Arkansas
South Dakota
Michigan
North Carolina
Arizona
New Hampshire
Alabama
Utah
Maine
Vermont
West Virginia
Georgia
Florida
Ohio
Pennsylvania
New Mexico
Virginia
Alaska
Minnesota
Kansas
Louisiana
Mississippi
Wisconsin
Rhode Island
Oregon
Maryland
Kentucky
California
Delaware
Illinois
Washington
New York
New Jersey
Hawaii
Massachusetts
Connecticut


Moody's State 2015 Adjusted Net Pension Liability
as % of Own Source Revenues
50 States
50 State 2015 ANPL to Own Source Revenues: 85%
Double-A Rated 2015 ANPL to Own Source Revenues: 95%
121%
500%
450%
400%
350%
300%
250%
200%
150%
100%
50%
0%
North Dakota
North Carolina
Wisconsin
New York
Idaho
Nebraska
Florida
Iowa
Oregon
Tennessee
Wyoming
Minnesota
Ohio
New Hampshire
Utah
Alabama
Arkansas
Arizona
Virginia
New Mexico
Delaware
Mississippi
South Dakota
Missouri
Oklahoma
Georgia
Indiana
Louisiana
Washington
Vermont
Michigan
California
Hawaii
Rhode Island
Nevada
West Virginia
Colorado
Montana
Pennsylvania
Maine
Kansas
South Carolina
Massachusetts
Texas
Maryland
New Jersey
Alaska
Kentucky
Connecticut
Illinois

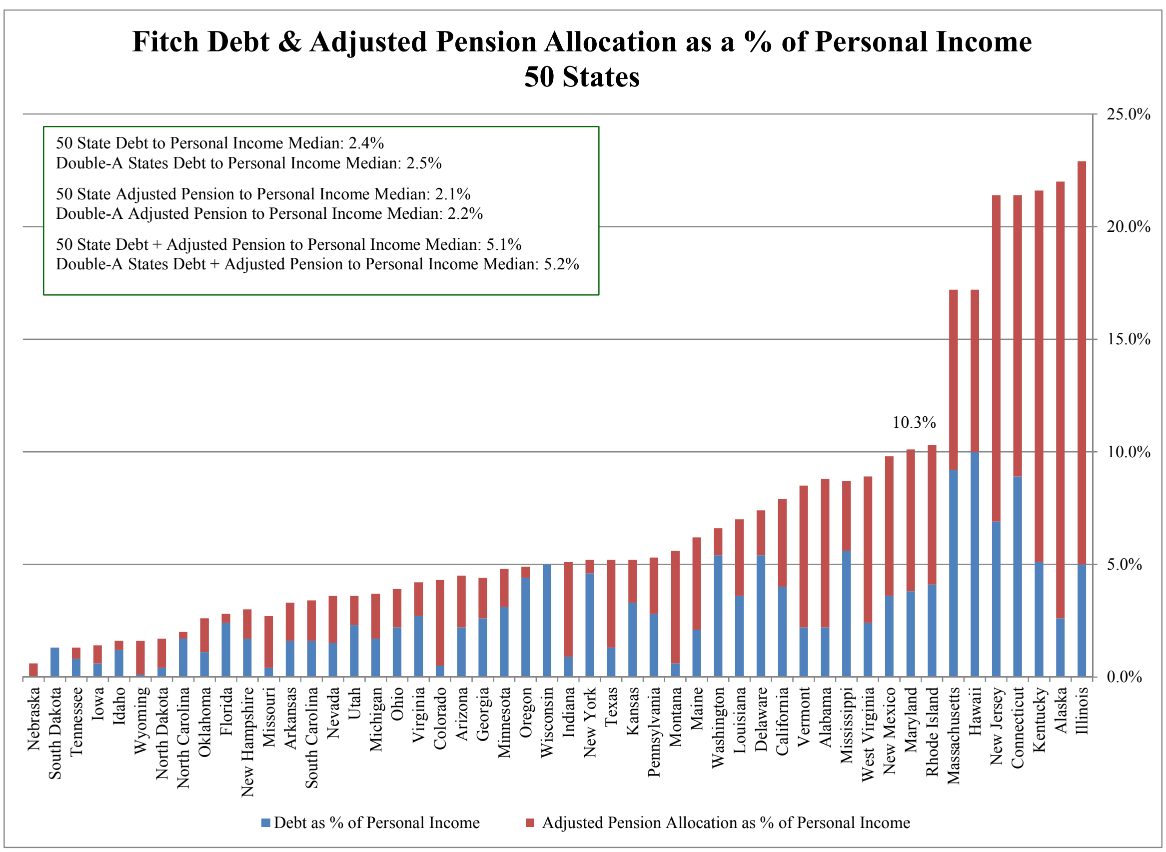

Moody's Fixed Costs As Percent of Own Source Revenues
50 States
50 State Fixed Costs as % of Own Source Revenues Median: 8.5%
Double-A States Fixed Costs as % of Own Source Revenues Median: 9.7%
13.7%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
North Dakota
Nebraska
Iowa
Wyoming
Idaho
South Dakota
Tennessee
Minnesota
Florida
Colorado
New Mexico
North Carolina
Arizona
Ohio
Indiana
Vermont
Oregon
Alabama
Alaska
Arkansas
Montana
Texas
Missouri
Virginia
Wisconsin
Mississippi
Kansas
New Hampshire
Michigan
Oklahoma
Nevada
California
Louisiana
Washington
New York
Georgia
Pennsylvania
South Carolina
Rhode Island
Maine
Delaware
New Jersey
Utah
Maryland
Kentucky
West Virginia
Massachusetts
Hawaii
Illinois
Connecticut
2015 Debt Service
2015 Pension Contribution
2015 OPEB Contribution

Fitch Estimated State Net Tax-Supported Debt and Unfunded Pension Obligations					
State (M/S/F)	**Debt as % of Personal Income**	**Adjusted Pension Allocation as % of Personal Income**	**Debt & Adjusted Pension Allocation as % of Personal Income**	**2015 Funded Ratio**	**2015 % of ADEC Paid**
50-State Median	**2.4%**	**2.1%**	**5.1%**	**NA**	**NA**
Double-A Median	**2.4%**	**2.1%**	**5.1%**	**NA**	**NA**
Rhode Island (Aa2/AA/AA)	4.1%	6.2%	10.3%	State: 56.6% Teachers: 58.8%	100.0%
Alabama (Aa1/AA/AA+)	2.2%	6.6%	8.7%	State: 67.3% Teachers: 68.3%	100.0%
Alaska (Aa2/AA+/AA+)	2.6%	19.4%	22.0%	State: 67.0% Teachers: 76.9%	State: 231.7% Teachers: 527.7%
Arizona (Aa2/AA/--)	2.2%	2.3%	4.4%	Public Safety: 49% State: 77.1%	Public Safety: 96.5% State: 100.0%
Arkansas (Aa1/AA/--)	1.6%	1.7%	3.3%	State: 79.1% Teachers: 79.6%	State: 100.0% Teachers: 86.0%
California (Aa3/AA-/AA-)	4.0%	3.9%	7.9%	State: 76.3% (2014) Teachers: 68.5%	State: 100% Teachers: 53.1%
Colorado (Aa1/AA/--)	0.5%	3.8%	4.3%	57.6%	80.4%
Connecticut (Aa3/AA-/AA-)	8.9%	12.5%	21.4%	State: 43.3% Teachers: 59.0%	State:99.5% Teachers: 100.0%
Delaware (Aaa/AAA/AAA)	5.4%	2.0%	7.4%	91.6%	100.0%
Florida (Aa1/AAA/AAA)	2.4%	0.4%	2.8%	86.5%	100.0%
Georgia (Aaa/AAA/AAA)	2.6%	1.8%	4.4%	State: 74.1% Teachers: 79.1%	100.0%
Hawaii (Aa1/AA+/AA)	10.0%	7.2%	17.2%	62.2%	102.2%
Idaho (Aa1/AA+/AA+)	1.2%	0.4%	1.6%	90.4%	98.2%
Illinois (Baa2/BBB/BBB+)	5.0%	17.9%	22.9%	State: 36.2% Teachers: 42.0%	State: 88.2% Teachers: 82.0%
Indiana (Aaa/AAA/AAA)	0.9%	4.2%	5.1%	State: 78.6% Teachers: 30.4% (Pre-96)/92.5% (1996)	State: 103.6% Teachers: 100% (Pre-96)/115.4% (1996)
Iowa (Aaa/AAA/AAA)	0.6%	0.8%	1.5%	83.7%	101.9%
Kansas (Aa2/AA-/--)	3.3%	1.9%	5.2%	67.1%	74.5%
Kentucky (Aa2/A+/AA-)	5.1%	16.5%	21.7%	State: 19.0% Teachers: 55.3%	State: 100.1% Teachers: 61.2%
Louisiana (Aa3/AA/AA-)	3.6%	3.4%	7.0%	State: 62.1% Teachers: 60.9%	State: 103.6% Teachers: 107.5%
Maine (Aa2/AA/AA)	2.1%	4.1%	6.1%	82.2%	100.0%
Maryland (Aaa/AAA/AAA)	3.8%	6.3%	10.1%	State: 66.7% Teachers: 71.9%	State: 83.9% Teachers: 89.4%

Fitch Estimated State Net Tax-Supported Debt and Unfunded Pension Obligations					
State (M/S/F)	**Debt as % of Personal Income**	**Adjusted Pension Allocation as % of Personal Income**	**Debt & Adjusted Pension Allocation as % of Personal Income**	**2015 Funded Ratio**	**2015 % of ADEC Paid**
Massachusetts (Aa1/AA+/AA+)	9.2%	8.0%	17.1%	State: 63.5% Teachers: 52.8%	75.0%
Michigan (Aa1/AA-/AA)	1.7%	2.0%	3.7%	State: 64.2% Schools: 60.6%	State: 114.5% Schools: 90.1%
Minnesota (Aa1/AA+/AAA)	3.1%	1.7%	4.8%	State: 76.3% Teachers: 77.1%	State: 83.2% Teachers: 76.9%
Mississippi (Aa2/AA/AA)	5.6%	3.1%	8.7%	60.4%	107.1%
Missouri (Aaa/AAA/AAA)	0.4%	2.3%	3.1%	State: 75.0% DOT & Hwy: 52.9%	100.0%
Montana (Aa1/AA/AA+)	0.6%	5.0%	5.6%	State: 76.1% Teachers: 67.5%	State: 102.4% Teachers: 100.0%
Nebraska (--/AAA/--)	0.0%	0.6%	0.6%	State: 102.5% Teachers: 88.0%	100.0%
Nevada (Aa2/AA/AA+)	1.5%	2.1%	3.6%	73.2%	95.8%
New Hampshire (Aa1/AA/AA+)	1.7%	1.3%	3.0%	63.4%	100.0%
New Jersey (A2/A-/A)	6.9%	14.5%	21.3%	State (Local/State): 73.0%/41.0% Teachers: 51.1% Police/Fire (Local/State): 76.7%/44.4%	State (Local/State): NA Teachers: 23.4% Police/Fire (Local/State): 100%/33.6%
New Mexico (Aa1/AA/--)	3.6%	6.2%	9.8%	State: 74.9% Teachers: 63.7%	100.0%
New York (Aa1/AA+/AA+)	4.6%	0.6%	5.1%	State: 93.8% Police/Fire: 93.2%	100.0%
North Carolina (Aaa/AAA/AAA)	1.7%	0.3%	2.1%	95.6% (2014)	100.0%
North Dakota (Aa1/AA+/--)	0.4%	1.3%	1.7%	State: 68.6% Teachers: 61.6%	State: 65.9% Teachers: 110.2%
Ohio (Aa1/AA+/AA+)	2.2%	1.7%	3.9%	State: 85.0% Teachers: 69.3%	State:100.0 Teachers: 105.9%
Oklahoma (Aa2/AA+/AA+)	1.1%	1.5%	2.6%	State: 93.6% Teachers: 66.6%	State: 145.5% Teachers: 132.3%
Oregon (Aa1/AA+/AA+)	4.4%	0.5%	4.8%	78.7%	100.0%
Pennsylvania (Aa3/AA-/AA-)	2.8%	2.5%	5.3%	State: 58.0% Teachers: 60.6%	State: 92.5% Teachers: 78.5%
South Carolina (Aaa/AA+/AAA)	1.6%	1.8%	3.4%	State: 62.0% Police: 69.2%	100.0%
South Dakota (Aaa/AAA/AAA)	1.3%	0.0%	1.3%	100.0%	115.1%
Tennessee (Aaa/AAA/AAA)	0.8%	0.5%	1.3%	95.2%	100.0%

Fitch Estimated State Net Tax-Supported Debt and Unfunded Pension Obligations					
State (M/S/F)	**Debt as % of Personal Income**	**Adjusted Pension Allocation as % of Personal Income**	**Debt & Adjusted Pension Allocation as % of Personal Income**	**2015 Funded Ratio**	**2015 % of ADEC Paid**
Texas (Aaa/AAA/AAA)	1.3%	3.9%	5.2%	State: 80.2% Teachers: 76.3%	State: 67.9% Teachers: 93.6%
Utah (Aaa/AAA/AAA)	2.3%	1.3%	3.6%	State: 86.5% Public Safety: 85.1%	100.0%
Vermont (Aaa/AA+/AAA)	2.2%	6.3%	8.5%	State: 75.1% Teachers: 58.6%	State: 125.1% Teachers: 100.1%
Virginia (Aaa/AAA/AAA)	2.7%	1.5%	4.2%	73.3%	83.5%
Washington (Aa1/AA+/AA+)	5.4%	1.2%	6.6%	State Plan 1 & 2/3: 58.3/88.4% Teachers 1 & 2/3: 64.5/91.9%	State Plan 1 & 2/3: 101.8/96.5% Teachers 1 & 2/3: 102.4%/99.2%
West Virginia (Aa1/AA-/AA)	2.4%	6.5%	9.0%	State: 86.8% Teachers: 66.0%	State: 103.4% Teachers: 107.9%
Wisconsin (Aa2/AA/AA)	5.0%	0.0%	5.0%	100.0%	100.0%
Wyoming (--/AAA/--)	0.1%	1.5%	1.6%	State:78.2% Law Enforcement: 98.8%	State:85.9% Law Enforcement: 108.5%

Source: Fitch 2016 State Pension Update, November 15, 2016. ADEC: Actuarially determined employer contribution.



Standard & Poor's Debt Ratios				
State (M/S/F)	**Debt Per Capita**	**Debt as % Personal income**	**Debt as % GSP**	**Debt Service as % General Spending**
50 State Median	**$1,018**	**2.5%**	**2.4%**	**3.9%**
Double-A States Median	**$1,068**	**2.6%**	**2.5%**	**4.0%**
Rhode Island (Aa2/AA/AA)	$1,708	3.5%	3.6%	7.2%
Alabama (Aa1/AA/AA+)	$982	2.6%	2.6%	4.0%
Alaska (Aa2/AA+/AA+)	$1,396	2.6%	1.8%	0.8%
Arizona (Aa2/AA/--)	$652	1.7%	1.7%	3.7%
Arkansas (Aa1/AA/--)	$607	1.6%	1.6%	4.0%
California (Aa3/AA-/AA-)	$2,254	4.6%	3.8%	7.5%
Colorado (Aa1/AA/--)	$436	0.9%	0.8%	3.0%
Connecticut (Aa3/AA-/AA-)	$5,707	8.8%	9.0%	12.3%
Delaware (Aaa/AAA/AAA)	$2,348	5.1%	3.5%	5.5%
Florida (Aa1/AAA/AAA)	$1,064	2.5%	2.5%	7.2%
Georgia (Aaa/AAA/AAA)	$930	2.4%	2.2%	6.8%
Hawaii (Aa1/AA+/AA)	$4,520	9.9%	8.4%	12.0%
Idaho (Aa1/AA+/AA+)	$134	0.4%	0.4%	0.9%
Illinois (Baa2/BBB/BBB+)	$2,672	5.6%	5.1%	9.1%
Indiana (Aaa/AAA/AAA)	$227	0.6%	0.5%	1.0%
Iowa (Aaa/AAA/AAA)	$286	0.6%	0.5%	1.5%
Kansas (Aa2/AA-/--)	$1,085	2.4%	2.4%	2.9%
Kentucky (Aa2/A+/AA-)	$1,757	4.7%	4.1%	5.2%
Louisiana (Aa3/AA/AA-)	$1,602	3.8%	3.0%	5.1%
Maine (Aa2/AA/AA)	$691	1.7%	1.8%	3.5%
Maryland (Aaa/AAA/AAA)	$1,934	3.6%	3.6%	5.9%
Massachusetts (Aa1/AA+/AA+)	$5,122	8.7%	8.2%	7.0%
Michigan (Aa1/AA-/AA)	$838	2.1%	1.8%	2.7%
Minnesota (Aa1/AA+/AAA)	$1,585	3.2%	3.0%	3.9%
Mississippi (Aa2/AA/AA)	$1,751	5.1%	5.5%	6.5%

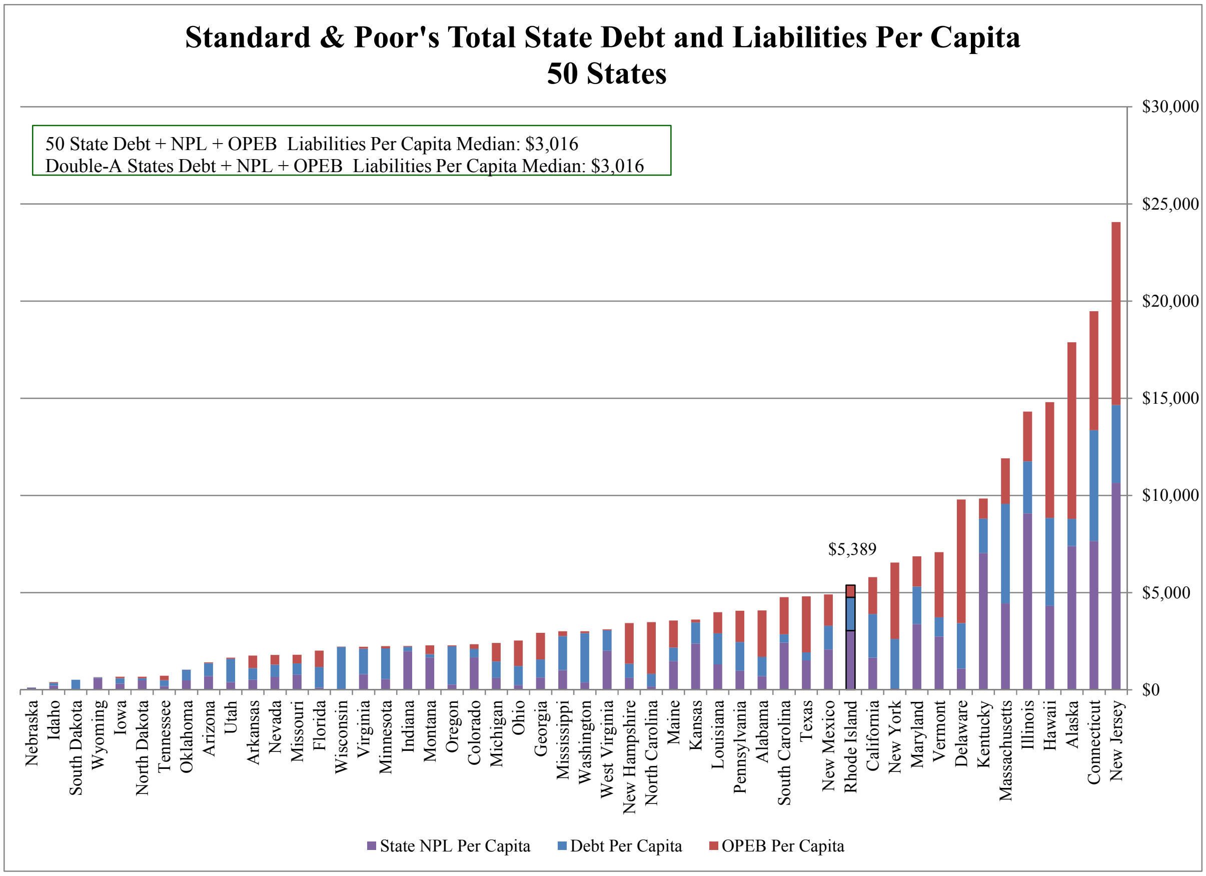
Standard & Poor's Debt Ratios				
State (M/S/F)	**Debt Per Capita**	**Debt as % Personal income**	**Debt as % GSP**	**Debt Service as % General Spending**
Missouri (Aaa/AAA/AAA)	$583	1.4%	1.3%	3.5%
Montana (Aa1/AA/AA+)	$175	0.4%	0.5%	1.4%
Nebraska (--/AAA/--)	$8	0.0%	0.0%	0.2%
Nevada (Aa2/AA/AA+)	$635	1.6%	1.5%	4.2%
New Hampshire (Aa1/AA/AA+)	$725	1.4%	1.5%	4.0%
New Jersey (A2/A-/A)	$4,008	7.1%	6.5%	9.6%
New Mexico (Aa1/AA/--)	$1,230	3.3%	3.1%	3.5%
New York (Aa1/AA+/AA+)	$2,538	4.6%	4.0%	6.0%
North Carolina (Aaa/AAA/AAA)	$656	1.7%	1.4%	3.2%
North Dakota (Aa1/AA+/--)	$107	0.2%	0.2%	1.0%
Ohio (Aa1/AA+/AA+)	$975	2.3%	2.2%	3.8%
Oklahoma (Aa2/AA+/AA+)	$542	1.2%	1.3%	4.4%
Oregon (Aa1/AA+/AA+)	$1,966	4.8%	3.7%	5.8%
Pennsylvania (Aa3/AA-/AA-)	$1,483	3.1%	3.1%	3.0%
South Carolina (Aaa/AA+/AAA)	$425	1.2%	1.1%	3.6%
South Dakota (Aaa/AAA/AAA)	$520	1.1%	1.1%	1.3%
Tennessee (Aaa/AAA/AAA)	$304	0.8%	0.7%	2.0%
Texas (Aaa/AAA/AAA)	$413	0.9%	0.7%	2.4%
Utah (Aaa/AAA/AAA)	$1,192	3.2%	2.5%	4.9%
Vermont (Aaa/AA+/AAA)	$986	2.1%	2.3%	2.0%
Virginia (Aaa/AAA/AAA)	$1,314	2.6%	2.6%	3.4%
Washington (Aa1/AA+/AA+)	$2,552	5.1%	4.3%	5.7%
West Virginia (Aa1/AA-/AA)	$1,050	2.9%	2.9%	3.5%
Wisconsin (Aa2/AA/AA)	$2,207	5.0%	4.4%	7.0%
Wyoming (--/AAA/--)	$46	0.1%	0.1%	0.1%

Source: Standard & Poor's Debt Levels Flatline As U.S. States Prioritize Management Over Investment, June 14, 2016

Standard & Poor's Pension Ratio & Total State Debt + Liabilities Per Capita					
State (M/S/F)	**Funded Ratio**	**State NPL Per Capita**	**Debt Per Capita**	**OPEB Per Capita**	**Debt, Pension & OPEB Per Capita**
50 State Median	**74.6%**	**$894**	**$1,018**	**$896**	**$3,016**
Double-A States Median	**69.0%**	**$716**	**$1,068**	**$562**	**$3,016**
Rhode Island (Aa2/AA/AA)	55.5%	$3,051	$1,708	$630	$5,389
Alabama (Aa1/AA/AA+)	67.0%	$711	$982	$2,395	$4,088
Alaska (Aa2/AA+/AA+)	67.5%	$7,405	$1,396	$9,086	$17,887
Arizona (Aa2/AA/--)	63.2%	$716	$652	$52	$1,420
Arkansas (Aa1/AA/--)	82.4%	$515	$607	$637	$1,758
California (Aa3/AA-/AA-)	75.0%	$1,651	$2,254	$1,893	$5,798
Colorado (Aa1/AA/--)	60.0%	$1,676	$436	$233	$2,344
Connecticut (Aa3/AA-/AA-)	49.4%	$7,660	$5,707	$6,116	$19,484
Delaware (Aaa/AAA/AAA)	89.1%	$1,090	$2,348	$6,351	$9,789
Florida (Aa1/AAA/AAA)	92.0%	$113	$1,064	$840	$2,017
Georgia (Aaa/AAA/AAA)	80.7%	$632	$930	$1,365	$2,927
Hawaii (Aa1/AA+/AA)	62.4%	$4,328	$4,520	$5,958	$14,806
Idaho (Aa1/AA+/AA+)	91.3%	$215	$134	$52	$402
Illinois (Baa2/BBB/BBB+)	40.2%	$9,078	$2,672	$2,570	$14,320
Indiana (Aaa/AAA/AAA)	60.3%	$1,984	$227	$50	$2,261
Iowa (Aaa/AAA/AAA)	85.1%	$321	$286	$70	$677
Kansas (Aa2/AA-/--)	65.2%	$2,383	$1,085	$148	$3,616
Kentucky (Aa2/A+/AA-)	37.4%	$7,046	$1,757	$1,042	$9,845
Louisiana (Aa3/AA/AA-)	63.8%	$1,302	$1,602	$1,090	$3,994
Maine (Aa2/AA/AA)	81.3%	$1,481	$691	$1,402	$3,574
Maryland (Aaa/AAA/AAA)	68.8%	$3,382	$1,934	$1,559	$6,876
Massachusetts (Aa1/AA+/AA+)	61.5%	$4,451	$5,122	$2,339	$11,912
Michigan (Aa1/AA-/AA)	66.5%	$618	$838	$952	$2,408
Minnesota (Aa1/AA+/AAA)	78.8%	$546	$1,585	$121	$2,252
Mississippi (Aa2/AA/AA)	61.8%	$1,018	$1,751	$245	$3,013

Standard & Poor's Pension Ratio & Total State Debt + Liabilities Per Capita					
State (M/S/F)	**Funded Ratio**	**State NPL Per Capita**	**Debt Per Capita**	**OPEB Per Capita**	**Debt, Pension & OPEB Per Capita**
Missouri (Aaa/AAA/AAA)	66.9%	$773	$583	$449	$1,805
Montana (Aa1/AA/AA+)	74.5%	$1,665	$175	$452	$2,292
Nebraska (--/AAA/--)	88.8%	$121	$8	N/A	$130
Nevada (Aa2/AA/AA+)	75.2%	$664	$635	$494	$1,793
New Hampshire (Aa1/AA/AA+)	65.4%	$611	$725	$2,100	$3,436
New Jersey (A2/A-/A)	37.8%	$10,648	$4,008	$9,409	$24,065
New Mexico (Aa1/AA/--)	70.6%	$2,073	$1,230	$1,613	$4,916
New York (Aa1/AA+/AA+)	98.1%	$74	$2,538	$3,932	$6,544
North Carolina (Aaa/AAA/AAA)	94.6%	$169	$656	$2,655	$3,480
North Dakota (Aa1/AA+/--)	70.4%	$481	$107	$91	$679
Ohio (Aa1/AA+/AA+)	78.8%	$251	$975	$1,310	$2,536
Oklahoma (Aa2/AA+/AA+)	80.3%	$483	$542	$1	$1,025
Oregon (Aa1/AA+/AA+)	91.9%	$271	$1,966	$60	$2,296
Pennsylvania (Aa3/AA-/AA-)	57.6%	$981	$1,483	$1,608	$4,072
South Carolina (Aaa/AA+/AAA)	57.9%	$2,434	$425	$1,906	$4,765
South Dakota (Aaa/AAA/AAA)	104.1%	(109)	$520	N/A	$411
Tennessee (Aaa/AAA/AAA)	91.3%	$195	$304	$218	$717
Texas (Aaa/AAA/AAA)	75.6%	$1,515	$413	$2,884	$4,812
Utah (Aaa/AAA/AAA)	88.5%	$402	$1,192	$62	$1,655
Vermont (Aaa/AA+/AAA)	65.4%	$2,750	$986	$3,348	$7,084
Virginia (Aaa/AAA/AAA)	74.6%	$806	$1,314	$96	$2,216
Washington (Aa1/AA+/AA+)	86.8%	$372	$2,552	$95	$3,019
West Virginia (Aa1/AA-/AA)	76.9%	$2,012	$1,050	$52	$3,114
Wisconsin (Aa2/AA/AA)	102.7%	(119)	$2,207	$16	$2,104
Wyoming (--/AAA/--)	80.1%	$592	$46	$4	$642

Source: Standard & Poor's U.S. State Pensions: Weak Market Returns Will Contribute to Rise in Expense, September 12, 2016


Standard & Poor's Total State Debt and Liabilities Per Capita
50 States
50 State Debt + NPL + OPEB Liabilities Per Capita Median: $3,016
Double-A States Debt + NPL + OPEB Liabilities Per Capita Median: $3,016
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
$5,389
Nebraska
Idaho
South Dakota
Wyoming
Iowa
North Dakota
Tennessee
Oklahoma
Arizona
Utah
Arkansas
Nevada
Missouri
Florida
Wisconsin
Virginia
Minnesota
Indiana
Montana
Oregon
Colorado
Michigan
Ohio
Georgia
Mississippi
Washington
West Virginia
New Hampshire
North Carolina
Maine
Kansas
Louisiana
Pennsylvania
Alabama
South Carolina
Texas
New Mexico
Rhode Island
California
New York
Maryland
Vermont
Delaware
Kentucky
Massachusetts
Illinois
Hawaii
Alaska
Connecticut
New Jersey
State NPL Per Capita
Debt Per Capita
OPEB Per Capita

State (M/S/F)	Boston College - Center for Retirement Research Pension Statistics		Debt + Pension Ratios with Boston College - Center for Retirement Research Pension Statistics	
	Annual Required Contribution (ARC) ($ million)	Unfunded Actuarial Accrued Liability (UAAL) ($million)	Debt Service + ARC to Own Source Revenues	Net-Tax Supported Debt + UAAL to Personal Income
50 State Median	465.0	3,026.6	8.2%	4.5%
Double-A Median	419.2	2,728.1	8.3%	4.8%
Rhode Island (Aa2/AA/AA)	240.1	2,882.0	12.1%	9.1%
Alabama (Aa1/AA/AA+)	286.8	6,483.5	6.3%	5.7%
Alaska (Aa2/AA+/AA+)	301.8	3,963.3	7.8%	12.1%
Arizona (Aa2/AA/--)	213.1	2,574.2	6.1%	2.9%
Arkansas (Aa1/AA/--)	841.0	1,950.6	13.2%	3.4%
California (Aa3/AA-/AA-)	7,454.2	64,034.1	9.9%	7.4%
Colorado (Aa1/AA/--)	646.3	9,884.8	7.2%	4.4%
Connecticut (Aa3/AA-/AA-)	2,448.2	30,564.3	27.7%	21.3%
Delaware (Aaa/AAA/AAA)	178.1	692.5	10.8%	6.5%
Florida (Aa1/AAA/AAA)	558.2	5,062.2	5.5%	2.9%
Georgia (Aaa/AAA/AAA)	615.3	6,175.9	9.4%	4.1%
Hawaii (Aa1/AA+/AA)	625.0	5,360.5	19.9%	17.2%
Idaho (Aa1/AA+/AA+)	60.1	15.2	2.7%	1.2%
Illinois (Baa2/BBB/BBB+)	9,072.3	107,100.0	29.7%	21.6%
Indiana (Aaa/AAA/AAA)	864.4	8,397.1	5.8%	4.1%
Iowa (Aaa/AAA/AAA)	696.4	1,129.6	7.3%	1.3%
Kansas (Aa2/AA-/--)	530.8	1,373.1	9.5%	4.3%
Kentucky (Aa2/A+/AA-)	1,794.7	23,230.2	20.7%	18.7%
Louisiana (Aa3/AA/AA-)	1,000.6	8,594.8	10.9%	8.0%
Maine (Aa2/AA/AA)	197.2	1,678.8	9.5%	5.1%
Maryland (Aaa/AAA/AAA)	2,468.1	18,162.9	16.9%	8.8%

State (M/S/F)	Boston College - Center for Retirement Research Pension Statistics		Debt + Pension Ratios with Boston College - Center for Retirement Research Pension Statistics	
	Annual Required Contribution (ARC) ($ million)	Unfunded Actuarial Accrued Liability (UAAL) ($million)	Debt Service + ARC to Own Source Revenues	Net-Tax Supported Debt + UAAL to Personal Income
Massachusetts (Aa1/AA+/AA+)	3,452.6	33,141.2	20.6%	16.7%
Michigan (Aa1/AA-/AA)	626.4	7,951.7	4.5%	3.6%
Minnesota (Aa1/AA+/AAA)	448.1	5,258.7	5.5%	4.9%
Mississippi (Aa2/AA/AA)	257.5	3,171.2	8.9%	8.0%
Missouri (Aaa/AAA/AAA)	598.4	5,520.8	8.1%	3.5%
Montana (Aa1/AA/AA+)	184.4	1,709.7	7.2%	4.5%
Nebraska (--/AAA/--)	59.0	1,077.6	1.4%	1.2%
Nevada (Aa2/AA/AA+)	217.9	1,623.1	10.1%	2.8%
New Hampshire (Aa1/AA/AA+)	94.3	974.9	7.5%	2.8%
New Jersey (A2/A-/A)	3,012.5	43,651.4	16.1%	15.0%
New Mexico (Aa1/AA/--)	270.6	2,565.8	7.3%	6.5%
New York (Aa1/AA+/AA+)	2,476.1	5,806.1	10.2%	5.6%
North Carolina (Aaa/AAA/AAA)	208.3	442.9	4.3%	1.9%
North Dakota (Aa1/AA+/--)	74.0	707.8	1.7%	2.0%
Ohio (Aa1/AA+/AA+)	442.7	2,273.8	6.5%	3.0%
Oklahoma (Aa2/AA+/AA+)	395.7	1,996.0	6.3%	2.0%
Oregon (Aa1/AA+/AA+)	243.7	683.1	7.6%	4.7%
Pennsylvania (Aa3/AA-/AA-)	2,747.1	32,627.2	10.5%	7.5%
South Carolina (Aaa/AA+/AAA)	763.9	9,941.5	9.7%	6.9%
South Dakota (Aaa/AAA/AAA)	36.7	0.0	4.0%	1.4%
Tennessee (Aaa/AAA/AAA)	163.3	1,465.7	2.2%	1.2%
Texas (Aaa/AAA/AAA)	5,726.8	47,784.3	11.1%	4.5%
Utah (Aaa/AAA/AAA)	192.8	975.7	8.3%	3.2%

State (M/S/F)	Boston College - Center for Retirement Research Pension Statistics		Debt + Pension Ratios with Boston College - Center for Retirement Research Pension Statistics	
	Annual Required Contribution (ARC) ($ million)	Unfunded Actuarial Accrued Liability (UAAL) ($million)	Debt Service + ARC to Own Source Revenues	Net-Tax Supported Debt + UAAL to Personal Income
Vermont (Aaa/AA+/AAA)	125.6	1,976.2	5.8%	8.6%
Virginia (Aaa/AAA/AAA)	821.7	6,882.0	8.3%	4.3%
Washington (Aa1/AA+/AA+)	555.3	2,498.3	9.1%	6.0%
West Virginia (Aa1/AA-/AA)	481.9	3,592.2	13.6%	8.1%
Wisconsin (Aa2/AA/AA)	178.6	0.0	7.8%	3.9%
Wyoming (--/AAA/--)	86.9	708.7	2.7%	2.2%

Source: Debt: Moody's State Debt Medians 2016. UAAL: Boston College Center for Retirement Research pension model. Personal Income: Bureau of Economic Analysis, 2015 Personal Income

The Boston College Center for Retirement Studies pension model produces a standardized annual required contribution (ARC) and unfunded accrued actuarial liability (UAAL) for each of the 50 states and relies on data from fiscal year 2014 state Comprehensive Annual Financial Reports (CAFRs) and actuarial valuations and CAFRs for pension plans. For each state, the analysis includes only pension plans to which the state has a funding obligation. The model adjusts the reported ARC and liabilities based on differences between each plan's own assumptions and methods and a selected discount rate, amortization period, amortization level, and payroll growth assumptions. For its larger plans (State Employees and Teachers), Rhode Island assumes a 7.5% discount rate, 21 year amortization period, level percent amortization method and 3.00% payroll growth, and these are the assumptions used in the CRR model to normalize the pension liabilities across the 50 states.

To standardize the reported ARC for a plan CRR first separates the reported ARC into its normal cost and amortization components because the standardization process is different for each component. The normal cost represents the cost of benefits accrued in the current year, while the amortization component represents the schedule of payments required to pay off the unfunded liability. For many of the large plans, the two components are presented separately in plan financial reports. When plan data are not available, the plan's funded ratio and discount rate are used to estimate the proportion of the ARC that is normal cost and the proportion that is the amortization payment.

Once the ARC has been separated into its components, each component is standardized independently. The normal cost is adjusted using an actuarial rule-of-thumb that assumes a 22.5% change in the normal cost for each 1% change in the discount rate. The adjustment for the amortization payment involves three steps: 1) re-discounting the accrued liability using an actuarial rule-of-thumb that assumes a 12.5% change for each 1% change in the selected discount rate; 2) calculating a standardized UAAL using the actuarial assets and the re-discounted liability; and 3) calculating an amortization payment for the new UAAL using the selected discount rate and amortization period. When selecting a level-dollar amortization method, the amortization payment is calculated as constant annual dollar amounts. When selecting a level-percent amortization method, the amortization payment is calculated using a fixed percentage of future payroll growth based on the selected payroll growth assumptions. The adjusted normal cost and amortization payments are then re-combined to get the standardized ARC.

Appendix B - Part Two

Quasi-Public Agencies Debt Information

APPENDIX B
TABLE OF CONTENTS

Quasi-Public Agencies with Debt Outstanding

Issuer/Debt Program	Ratings (M/S/F)	Security	Indenture Required Additional Bonds Test	Outstanding as of 6/30/2016
Narragansett Bay Commission				
Wastewater System Revenue Bonds *(Also issues debt through the Rhode Island Infrastructure Bank)*	--/AA-/--	Revenues derived from operation of the wastewater system	Requires estimated net revenues for the three years following the issuance of bonds to be at least 1.25x the debt service requirement for revenue bonds and 1.35x the debt service requirement for RIIB loans Rate Covenant: 1.25x the debt service	$242,820,000 (2016)
Rhode Island Turnpike and Bridge Authority				
Toll Revenue Bonds	--/A-/A	Net revenues derived from the operation of the System (currently tolls from Newport Bridge)	After retirement of 2003A Bonds, Net Revenues plus Dedicated Payments (gifts, grants or other payments to the Authority from US government, State or any public or private entity) in most recent fiscal year or projected for each of the next 5 fiscal years must be at least 1.20x Maximum Annual Debt Service	$56,160,000 (2016)
Tobacco Settlement Financing Corporation				
Tobacco Settlement Asset-Backed Bonds	S: A, BBB+, BBB F: BBB+sf	Pledged Tobacco Settlement Revenues	Additional bonds may be issued only for the purpose of refunding outstanding bonds	$604,785,000 (2016)
Rhode Island Resource Recovery Corporation				
Resource Recovery System Revenue Bonds	Not Rated (Private Placement)	Net revenues of the Corporation	For any 12 month period out of the last 18 months, Net Revenues plus State Subsidy plus Assets Held in Trust must be at least 1.25x Maximum Annual Debt Service	$29,142,861 (2016)
Rhode Island Commerce Corporation				
Rhode Island Department of Transportation Grant Anticipation Revenue Bonds (GARVEEs)	A3/AA-/--	Federal reimbursements for eligible projects	Additional bonds test – Federal Transportation Funds must be 3.00 maximum bond payments in any federal fiscal year	$230,280,000 (2016)
Rhode Island Airport Corporation Airport Revenue Special Facility Revenue Bonds Subordinate TIFIA Loan	 Baa1/BBB+/BBB+ Baa1/BBB+/--	Airport Revenues: Pledge of RIAC's net revenues (include rentals, fees, and other charges) and certain Passenger Facility Charge revenues Special Facility: Revenues generated by the operation of the Intermodal Facility, including Customer Facility Charges, Rental Car Companies fees, Parking Revenues	Rate covenant: 1.25x rate covenant (including pledged passenger facility charges). Additional bonds test - 1.25x	Airport Revenue: $265,973,591 (2016) Special Facility + TIFIA: $90,123,400 (2016)
YMCA of Pawtucket	S: AA-/A-1+	Secured by Borrower's pledge and grant, assignment effected by the Agreement, all other monies and securities held from time to time by the Trustee and letter of credit.	Additional bonds may be issued that are equally and ratably secured with the Bonds and secured with a letter of credit.	$10,404,400

Quasi-Public Agencies with Debt Outstanding

Issuer/Debt Program	Ratings (M/S/F)	Security	Indenture Required Additional Bonds Test	Outstanding as of 6/30/2016
RI Philharmonic Orchestra	S: AA-/A-1+	Secured by assignment effected by the Agreement, all other monies and securities held from time to time by the Trustee, pledge of Borrower's Gross Receipts and letter of credit.	Additional bonds may be issued that are equally and ratably secured with the Bonds and secured with a letter of credit.	$5,285,000
Rhode Island Health and Educational Building Corporation -Education				
Public Schools Revenue Bond Financing Program	Various. Range of A1 to Aa3	Loan repayments reflecting general obligation pledge of the participating borrowers. Failure to pay would result in intercept of the State Housing Aid and Basic Education Aid of a borrower	Additional bonds may be issued and separately secured by applicable revenues. Intercept of State Housing Aid and Basic Education Aid is available	$461,709,000
Higher Education Facility Revenue Bonds	Various: A+ Range of A1 to Aa3	Rent payments, Educational and General Revenues of specific university/state colleges	Additional bonds test: 1.0x MADs	$39,505,000
Board of Governors for Higher Education	Aa3/--/--	Rent payments, Educational and General Revenues, including tuition and state appropriations, except Auxiliary Enterprise Revenues	Additional bonds test: 1.0x MADs	$189,750,000
Brown University	Aa1/AA+/--	General obligation of Brown University	No additional bonds test	$639,850,000
Bryant University	A2/A/--	General obligation of Bryant University	If rated below investment grade, additional bonds must be secured by a letter or credit.	$116,570,000
Catholic School Pool Program	S: A-/A-2	Each Borrower has a general obligation for their share	No additional bonds test	$5,705,000
CVS-Highlander Charter School	S: AA-/A-1+	General obligation pledge of Borrower's Gross Receipts and letter of credit.	Additional bonds must have a letter of credit and ratings confirmation.	$3,520,000
Johnson & Wales University	A2/A-/---	Secured by pledge of tuition fees similar to other Johnson & Wales debt	Additional bonds permitted	$37,380,614
Meeting Street School	M: A2/VMIG-1	Secured by pledge of School's Gross Receipts and letter of credit.	Additional bonds must have a letter of credit and ratings confirmation.	$7,465,000
Moses Brown School	S: A+/A-1	Secured by the loan, all moneys and securities held by the Trustee, mortgage and letter of credit.	Unless Institution maintains an Investment Grade Rating, any additional bonds shall be secured by a letter of credit.	$27,000,000
New England Institute of Technology	--/A-/A+	General obligation of New England Institute of Technology and a mortgage.	Additional bonds permitted with DSRF	$107,275,000
Providence College	A2/A/--	General obligation secured by a pledge of certain Tuition Fees up to 1.1x MADs	Additional bonds test: 1.1x MADs	$116,775,000
Providence Public Buildings Authority	Baa2 Insured: A1/A1	Secured by payments under the financing agreements and an intercept of the State Housing Aid and Basic Education Aid and a mortgage.	No additional bond test	$245,680,000
Rhode Island School of Design	A1/--/A+	Pledge of Unrestricted College Revenues.	Additional bonds must have a letter of credit and ratings confirmation.	$153,510,000
Roger Williams University	S: AA+/A-1+	Pledge of Tuition Fees and Rentals up to 1.1x MADs	Additional bonds must have a letter of credit and ratings confirmation.	$109,848,630

Quasi-Public Agencies with Debt Outstanding

Issuer/Debt Program	Ratings (M/S/F)	Security	Indenture Required Additional Bonds Test	Outstanding as of 6/30/2016
Salve Regina University	--/BB/--	Secured by Tuition Fees and Mortgage	Additional bonds may be issued pursuant to a supplemental loan and trust agreement	$46,490,059
St. George's School	M: Aa3/VMIG-1	Secured by assignment effected by the Agreement and all other monies and securities held from time to time by the Trustee.	Additional bonds may be issued that are equally and ratably secured with the Bonds.	$44,251,077
The Groden Center	--/AA-/--	Secured by revenues of the Institution.	Additional bonds may be issued that are equally and ratably secured with the Bonds with rating confirmation.	$3,050,000
Rhode Island Health and Educational Building Corporation – Health Care				
Care New England Health System	--/BB/BBB-	General obligation of the Borrower. Secured by Gross Receipts of the Obligated Group.	Additional bonds test at 1.10x of historical debt service	$152,706,644
Child and Family Services of Newport County	S: AA-/A-1+	Secured by Borrower's pledge and grant, assignment effected by the Agreement, all other monies and securities held from time to time by the Trustee and letter of credit.	Additional bonds may be issued that are equally and ratably secured with the Bonds and secured with a letter of credit.	$9,256,190
Home & Hospice Care of RI	S: AA-/A-1+	General obligation secured by pledge of Borrower's Gross Receipts and letter of credit.	Additional bonds permitted with a letter of credit and ratings confirmation.	$8,814,500
Lifespan Obligated Group	--/BBB+/BBB+	Gross receipts from the hospitals, including contributions, donations, pledges and revenues derived from the operation of all the facilities of the members of the obligated group. Also secured by mortgages on portions of certain hospital campuses.	Additional indebtedness with 1.25x coverage with additional tests.	$322,897,776
Newport Hospital	S: AA+/A-1+	Secured by Borrower's Gross Receipts, letter of credit and Guaranty.	Additional bonds permitted with a letter of credit and ratings confirmation.	$19,098,000
NRI Community Services, Inc.	S:AA-/A-1+	Secured by assignment effected by the Agreement, all other monies and securities held from time to time by the Trustee and letter of credit.	Additional bonds may be issued that are equally and ratably secured with the Bonds and secured with a letter of credit.	$2,710,000
Seven Hills Rhode Island Inc.	Baa3/BBB/--	Unlimited obligation of the Hospital and pledge of Gross Receipts and a mortgage.	Additional bonds test with 1.30x coverage historical and 1.40x coverage projected.	$4,842,499
South County Hospital	Baa3/BBB/--	Unlimited obligation of the Hospital and pledge of Gross Receipts and a mortgage.	Additional bonds test with 1.30x coverage historical and 1.40x coverage projected.	$43,620,000
St. Antoine Residence	M: Aa2/VMIG-1	Secured by Revenues of Borrower and letter of credit	Additional bonds may be issued so long as loan agreement is in effect, no event of default shall exist and written consent of the letter of credit bank.	$10,085,000

Quasi-Public Agencies with Debt Outstanding

Issuer/Debt Program	Ratings (M/S/F)	Security	Indenture Required Additional Bonds Test	Outstanding as of 6/30/2016
Steere House	--/--/BBB-	Secured by pledge of Gross Receipts of Institution, monies in the Debt Service Fund, monies in the Debt Service Reserve Fund and Mortgage.	Additional bonds may be issued that are equally and ratably secured with the Bonds and pursuant to a supplemental loan and trust agreement.	$4,802,000
Tockwotton Home	--/--/--	Secured by mortgages on current facility of Borrower and on project facility of the Borrower and security interest in the unrestricted Borrower revenues.	Additional bonds require majority holder consent above $1 million.	$40,300,000
Rhode Island Infrastructure Bank				
Water Pollution Control Revenue Bonds	--/AAA/AAA	Pledged loan payments from underlying borrowers and Local Interest Subsidy Trust (LIST) fund reserves	Additional senior bonds can be issued if projected loan revenues and LIST earnings are at least 1x maximum annual debt service (MADS) on existing and proposed senior bonds. When incorporating planned LIST de-allocations and direct loan principal, these revenues need to represent at least 1.15x MADS on senior bonds. To issue subordinate bonds, all available revenues must represent at least 1x pro forma MADS.	$522,700,000 (2016)
Safe Drinking Water	--/AAA/AAA	Pledged loan payments from underlying borrowers and Local Interest Subsidy Trust (LIST) fund reserves	Additional senior bonds can be issued if projected loan revenues and LIST earnings are at least 1x MADS on existing and proposed senior bonds. When incorporating planned LIST de-allocations and direct loan principal, these revenues need to represent at least 1.15x MADS on senior bonds. To issue subordinate bonds, all available revenues must represent at least 1x pro forma MADS.	$186,475,000 (2016)
Other Safe Drinking Water (non-SRF) & Water Utility Revenue Bonds City of Pawtucket	A3/A/--	Pawtucket Water Supply Board's (PWSB) net revenue pledge secures the bonds	Revenue Sufficiency Certificate, stating that revenues are sufficient to pay debt service.	$78,267,000 (2016)
Rhode Island Housing and Mortgage Finance Corporation				
Homeownership Opportunity Bonds	Aa2/AA+/--	Secured by bond proceeds, mortgage revenues and non-mortgage receipts, accounts under the resolution and all program obligations financed by the resolution	Certificate stating revenues are sufficient to provide for the payment of bonds	$611,704,448 (2016)
Home Funding Bonds and Notes	Aa2/--/--	Secured by all proceeds of bonds deposited to the Loan Account and revenues derived from program obligations	Certificate stating revenues are sufficient to provide for the payment of bonds	$130,262,468 (2016)

Quasi-Public Agencies with Debt Outstanding

Issuer/Debt Program	Ratings (M/S/F)	Security	Indenture Required Additional Bonds Test	Outstanding as of 6/30/2016
Multi-Family Housing Bonds	Aa2/--/--	Includes moral obligation to fill-up capital reserve fund	Certificate stating revenues are sufficient to provide for the payment of bonds	$630,000 (2016)
Rental Housing Bonds	S: A/A-1+	Mortgage loans financed from bond proceeds and Revenues, including Pledged Receipts or payments required by any Mortgage Loan. Includes moral obligation to fill-up capital reserve fund	Certificate stating revenues are sufficient to provide for the payment of bonds	$65,039,132 (2016)
Multi-Family Funding Bonds	Aaa/--/--	Mortgage loans and revenues	Certificate stating revenues are sufficient to provide for the payment of bonds	$88,760,000 (2016)
Multi-Family Development Bonds	Aa2/--/--	Mortgage loans and revenues	Certificate stating revenues are sufficient to provide for the payment of bonds	$214,758,428 (2016)
Multi-Family Mortgage Rev Bonds	S: AAA/A-1+	Freddie Mac credit enhancement. Mortgage loans and revenues	Certificate stating revenues are sufficient to provide for the payment of bonds	$100,691,010 (2016)
Rhode Island Student Loan Authority				
Student Loan Program Revenue Bonds	--/AA(sf)/AAsf	Secured by non-federal loans, various accounts established under the indenture, payments of principal and interest on Non-Federal Loans financed pursuant to the Indenture and investment earnings.	Requires rating affirmations from rating agencies rating the bonds.	$239,755,000 (as of February 29, 2016)
FFELP Loan Program Revenue Bonds	--/AA+(sf)/AAAsf	Secured by FFELP Loans, all amounts held under the indenture, and the rights to the servicing agreements and guarantee agreements related to the loans.	The FFELP Loan program is not available. Any additional bonds would likely be only for refinancing outstanding bonds.	$286,233,000 as of February 29, 2016

Comparison of Rating Agency Methodologies for Pooled Programs and State Revolving Funds

	Fitch Ratings	Moody's Investors Service	Standard & Poor's
Portfolio Analysis	Assess Weighted Average Default Rate (WADR) and calculates a Portfolio Stress Calculator (PSC) based on long-term default rates of corporate entities. Assess credit quality of underlying borrowers: • AAA Median investment grade borrowers: 70% Calculate Pool Concentration: • AAA Median single-borrower concentration: 18% • AAA Median for top 10 borrowers: 55% Liability Rating Stress Hurdle Portfolio Stress Calculator	Pool financings: Debt obligations secured by loan repayments from a small group of obligors Evaluate underlying credit quality of pool participants and nature of obligation. Employ Weighted Average Probability of Default or Weak Link Plus approach. Determine weighted average credit quality of pool participants. State Revolving Funds: Evaluate Portfolio Credit Quality and Default Tolerance Score**:** • Portfolio size and diversity (size, percentage of borrowers with less than 1% of the portfolio, percentage of loans to the top five borrowers)	Calculate **Enterprise Risk Score** • Industry risk for government and not-for-profit municipal pool programs equates to low risk • Market position reflects level of government support received, existence of legislative authorization and presence of any significant challenges that could affect demand. • Geographic concentration – programs that target only one metropolitan area receive a one-notch negative adjustment Calculate Financial Risk Score • Determine relative default rates given credit quality of underlying loan portfolio • Review operating performance • Review financial policies and practices
Program Management	Evaluate management's processes and procedures, including underwriting criteria, loan monitoring procedures, technology, program goals and requirements, historical loan delinquencies and defaults	Review program and portfolio management: loan underwriting standards, portfolio monitoring	Review Loan Origination Policies, Loan Monitoring Policies, Default and Delinquencies Policies, Long-term Planning, Investment Policies
Legal Review	State aid intercept mechanisms Required program-level reserves Moral obligation to fund debt service reserve funds may benefit from one to three notch rating improvement Surplus Reserve Fund release requirements (cash flow coverage test must be met before surplus is released or de-allocated) Review Additional Bonds Test Review other credit enhancements (debt service fund, additional local reserve requirements, higher interest rate on a delinquent loan) Review any provisions for cross-collateralization.	Requirement for debt service reserve fund. Provision for obligating pool participants to make up any funding shortfall or refill a DSRF. Restrictions on removing surplus funds from the program. SRF: Review rate covenants, pledged reserves at borrower level; presence of state aid intercept or moral obligation; presence of step-provisions. Review assets pledged, cross-collateralization. Surplus Reserve Fund release requirements (cash flow coverage test must be met before surplus is released or de-allocated) Review additional bonds test, reserve requirements.	Examine state sponsored programs for power to influence local borrower behavior: • Regulatory or oversight authority • State intercept provisions • Reserve balances
Cash Flow Sufficiency	Review cash sources (loan repayments, subsidies, reserves and surplus fund balances)	Review cash flow structure and over-collateralization of loans to bonds.	Loss Coverage: Leverage Test for AAA rated programs : Review leverage level - Total loan revenue

Comparison of Rating Agency Methodologies for Pooled Programs and State Revolving Funds

	Fitch Ratings	Moody's Investors Service	Standard & Poor's
	Coverage requirements of at least 1.25x viewed as strong; 1.1x or less viewed as weaker Program Asset Strength Ratio: Aggregate Pledged Assets (loan repayments plus reserve funds, account earnings) divided by aggregate outstanding debt service. 2016 Median of 1.9x		receivable plus pledged reserves divided by total bond debt service payable Operating Performance: Number of non-performing loans as a percent of total loans and percent of payments more than five days late in the past 12 months
Stress Tests	Use internal Cash Flow Model to test stress scenarios and find the 4 year default tolerance rate.	Assess cash flow under different interest rates and loan performance scenarios	Largest obligor test – assess possibility of default if largest obligor defaults
Clean Water and Drinking Water SRF	Many have significant enhancement from federal capitalization grants and required state matching grants (typically state appropriations, state revenues, or state bond proceeds), which are usually invested in reserve funds and used to provide overcollateralization.		
	State Revolving Fund and Leveraged Municipal Loan Pool Criteria, October 20, 2016	*Public Sector Financings, July 18, 2012* *U.S. State Revolving Fund Debt, March 20, 2013*	*U.S. Public Finance Long-Term Municipal Pools: Methodology and Assumptions, March 19, 2012*

Connecticut

- Connecticut does not have debt policies for quasi-public agencies.
- There is no formal oversight of quasi-public agencies.
- State Treasurer sits on the board of quasi-public agencies.
- Certain agencies are able to use the Special Capital Reserve Fund (SCRF)
  - A SCRF is a debt service reserve fund set up at the time the bonds are issued, in an amount equal to the lesser of either one year's principal and interest on the bonds or ten percent of the issue.
  - If the borrower makes the scheduled debt service payments, the interest earnings on the reserve fund will pay the interest on the bonds that created it and the principal will go to retire the final maturity of the bond issue.
  - If the borrower is unable to pay all or part of the scheduled debt service payments, the reserve may be drawn upon to pay debt service.
  - The reserve provides up to a year's adjustment time to deal with a revenue shortfall.
  - When the SCRF has been drawn down in part or completely, a draw on the General Fund is authorized and the reserve is fully restored. The draw on the General Fund is deemed to be appropriated and is not subject to the constitutional or statutory appropriations cap. All that is required is a certification by the issuing authority of the amount required. If draws on a SCRF continue, the annual draws on the General Fund required to refill it also continue.
  - State Treasurer conducts a full review and analysis for cash flow sufficiency to ensure that the State will not be making any debt service payments. There are no defined debt affordability measures.
  - Currently, only the South Central Regional Water Authority has debt with SCRF.

Massachusetts

- Massachusetts does not have procedures to control debt by quasi-public agencies.
- Treasurer sits on the board of quasi-public agencies.
- Massachusetts does not allow any moral obligation debt.
- Massachusetts has a debt management policy for the state's six bond programs: General Obligation Bonds, Special Obligation Revenue Bonds (motor fuel excise), Special Obligation Dedicated Tax Revenue Bonds (Convention Center), Senior Federal Highway Grant Anticipation Notes (or GANs), Commonwealth Transportation Fund Bonds (CTF for the Accelerated Bridge Program), and Federal Highway Grant Anticipation Notes (Accelerated Bridge Program)

New Hampshire

- New Hampshire does not have procedures to control debt by quasi-public agencies.
- Treasurer sits on the board of several quasi-public agencies.
- New Hampshire has various guarantee programs
  - The statutes authorizing the guarantee programs require approval by the Governor and Council of any award of a State guarantee
  - Statutory limitations may be either on the total amount guaranteed or on the total amount guaranteed that remains outstanding at any time (a revolving limit)

- The statutory dollar limit may represent either the total amount of principal and interest or only the total amount of principal
- The State has the following guarantee programs: Local Water Pollution Control Bonds; Local School Bonds; Local Superfund Site Bonds; Local Landfill and Waste Site Bonds; Business Finance Authority Bonds, Loans; Pease Development Authority; and Housing Finance Authority Child Care Loans

Vermont

- The Vermont Treasurer is responsible for managing all tax-supported debt, which is all State of Vermont issued debt
- Vermont does not have specific procedures to control debt by quasi-public agencies.
- The Vermont Treasurer sits on boards of debt issuing quasi-public agencies and all quasi-public agencies that have moral obligation authority.
- The Vermont Treasurer chairs the Capital Debt Affordability Advisory Committee which has established a target of total moral obligation debt as a percentage of total State tax supported debt as way to have a high-level management of quasi-public agency moral obligation debt.

Appendix C – Part Three

Municipality Debt, Demographic and Economic Statistics, Debt and Pension Liability Ratios and State Reimbursements for School Projects

APPENDIX C
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Outstanding Municipality Debt

				Governmental Activities - Tax-Supported (FY2015)								Business Activities (FY2015)				
Obligor Name	Moody's	S&P	Fitch	General Obligation Bonds (FY2015)	Loans Payable (FY2015)	Capital Leases (FY2015)	Net Direct Debt	GO Debt Service (2016)	Loans Debt Service (2016)	Lease Payments (2016)	Total Debt Service (2016)	Enterprise Debt	Debt Service (FY2016)	Gross Direct Debt (FY2015)	Overlapping Debt	Overall Debt
Barrington	Aa1	AAA	NR	11,250,000	2,981,156	87,911	14,319,067	1,698,280	303,936	28,332	2,030,548	17,964,084	1,052,335	32,283,151	0	32,283,151
Bristol	Aa2	AA+	NR	29,078,334	1,400,933	463,418	30,942,685	2,818,721	na	na	3,157,654	36,041,885	2,318,363	66,984,570	13,333,440	80,318,010
Burrillville	Aa2	NR	AAA	16,992,655	0	0	16,992,655	2,547,729	0	0	2,547,729	1,033,000	0	18,025,655	2,290,714	20,316,369
Central Falls	Ba2	BBB	NR	6,665,000	8,195,000	21,244	14,881,244	2,483,035	na	na	2,483,035	26,372,183	0	41,253,427	0	41,253,427
Charlestown	Aa2	NR	NR	5,220,000	0	229,820	5,449,820	271,915	0	na	271,915	0	0	5,449,820	5,564,909	11,014,729
Coventry	A1	AA	NR	41,425,000	28,531	0	41,453,531	5,243,847	na	0	5,243,847	25,052,412	1,739,738	66,505,943	4,873,009	71,378,952
Cranston	A1	AA-	AA+	71,060,000	0	365,000	71,425,000	9,727,260	0	370,475	10,097,735	24,873,477	2,225,218	96,298,477	0	96,298,477
Cumberland	Aa3	AA	NR	22,155,000	23,576,715	1,631,769	47,363,484	3,547,041	1,723,215	562,173	5,832,429	40,151,784	421,276	87,515,268	5,679,230	93,194,498
East Greenwich	Aa1	AA+	NR	51,711,667	0	83,055	51,794,722	6,062,830	0	38,376	6,101,206	23,732,443	2,484,186	75,527,165	0	75,527,165
East Providence	A2	AA	NR	15,545,800	2,254,509	24,725,418	42,525,727	na	na	na	5,260,080	81,672,266	4,857,690	124,197,993	0	124,197,993
Exeter	NR	NR	NR	757,454	0	192,971	950,425	123,089	0	64,424	187,513	0	0	950,425	0	950,425
Foster	NR	NR	NR	0	0	80,421	80,421	0	0	43,864	43,864	0	0	80,421	14,473,985	14,554,406
Glocester	NR	AA+	NR	2,495,000	195,731	20,210	2,710,941	568,539	na	15,408	583,947	0	0	2,710,941	27,158,053	29,868,994
Hopkinton	Aa3	NR	NR	1,103,000	467,178	156,894	1,727,072	156,727	na	110,622	267,349	0	0	1,727,072	9,333,553	11,060,625
Jamestown	Aa1	NR	NR	8,305,591	0	0	8,305,591	1,054,663	0	0	1,054,663	8,318,818	955,310	16,624,409	0	16,624,409
Johnston	A3	AA-	NR	23,787,250	20,321	1,567,750	25,375,321	2,825,679	na	na	3,334,621	36,523,459	271,169	61,898,780	0	61,898,780
Lincoln	Aa2	NR	AA	29,900,000	0	229,049	30,129,049	4,145,906	0	109,390	4,255,296	41,264,678	449,616	71,393,727	2,116,242	73,509,969
Little Compton	NR	NR	NR	11,195,000	0	86,124	11,281,124	913,275	0	66,842	913,275	0	0	11,281,124	0	11,281,124
Middletown	Aa1	NR	NR	24,776,114	450,000	1,311,314	26,537,428	2,940,019	na	664,206	3,604,225	8,648,900	1,066,610	35,186,328	0	35,186,328
Narragansett	Aa2	AA+	NR	20,690,000	1,614,640	561,213	22,865,853	2,265,900	177,421	212,856	2,656,177	3,660,869	659,363	26,526,722	0	26,526,722
New Shoreham	NR	AA	NR	17,370,847	0	227,003	17,597,850	2,042,562	0	na	2,042,562	3,817,040	214,836	21,414,890	0	21,414,890
Newport	NR	AA+	NR	44,678,536	1,500,000	675,422	46,853,958	7,072,284	na	124,970	7,197,254	120,960,036	10,079,413	167,813,994	0	167,813,994
North Kingstown	Aa2	AA+	NR	41,985,660	0	0	41,985,660	5,651,208	0	0	5,651,208	12,204,625	1,137,289	54,190,285	0	54,190,285
North Providence	A2	AA-	NR	15,055,000	0	897,668	15,952,668	na	0	na	4,257,613	51,362,965	0	67,315,633	0	67,315,633
North Smithfield	Aa2	NR	NR	29,855,000	0	693,252	30,548,252	3,197,649	0	226,131	3,423,780	6,213,964	919,496	36,762,216	0	36,762,216
Pawtucket	A3	A	A+	51,158,658	230,000	8,987,680	60,376,338	5,234,705	na	na	5,234,705	211,674,146	8,454,366	272,050,484	0	272,050,484
Portsmouth	Aa2	AAA	NR	12,278,655	0	0	12,278,655	2,659,709	0	0	2,659,709	1,692,439	254,230	13,971,094	3,179,000	17,150,094
Providence	Baa1	BBB	A-	149,207,000	2,382,000	340,155,000	491,744,000	58,337,000	92,000	3,850,000	62,279,000	384,154,110	6,449,000	875,898,110	0	875,898,110
Richmond	Aa3	NR	NR	3,890,000	0	69,220	3,959,220	547,338	0	36,642	583,980	2,090,161	91,431	6,049,381	8,135,996	14,185,377
Scituate	NR	AA	NR	3,075,000	3,275,000	353,500	6,703,500	830,956	308,562	101,000	1,240,518	241,738	0	6,945,238	0	6,945,238
Smithfield	Aa2	AA	NR	13,390,000	0	461,110	13,851,110	2,159,751	0	na	2,159,751	8,505,769	590,521	22,356,879	0	22,356,879
South Kingstown	Aa1	NR	NR	12,511,000	0	0	12,511,000	2,377,933	0	0	2,377,933	1,744,978	210,474	14,255,978	1,759,744	16,015,722
Tiverton	A1	NR	AA	36,410,000	0	999,757	37,409,757	4,012,388	0	230,341	4,242,729	0	0	37,409,757	5,712,861	43,122,618
Warren	Aa3	NR	NR	13,628,560	0	0	13,628,560	1,563,794	0	0	1,563,794	4,746,594	0	18,375,154	8,544,282	26,919,436
Warwick	A1	AA-	NR	46,286,654	0	2,570,079	48,856,733	6,300,740	0	1,146,676	7,447,416	102,213,290	13,091,434	151,070,023	0	151,070,023
West Greenwich	NR	AA+	NR	5,915,000	96,593	0	6,011,593	na	na	0	560,304	192,737	0	6,204,330	2,955,925	9,160,255
West Warwick	Baa2	NR	BBB	23,118,000	0	62,483	23,180,483	na	na	na	2,519,923	27,638,479	2,423,742	50,818,962	0	50,818,962
Westerly	Aa3	AA	NR	55,225,000	24,373,250	2,516,178	82,114,428	6,004,737	na	na	6,004,737	3,944,877	728,245	86,059,305	1,317,314	87,376,619
Woonsocket	Ba3	NR	BBB	163,802,308	0	89,597	163,891,905	18,823,512	na	na	18,823,512	43,391,000	3,224,839	207,282,905	0	207,282,905

Note: City of Woonsocket general obligation debt includes $77.11 million of pension bonds.

Net Direct Debt: All debt of an issuer less self-supporting enterprise debt. Enterprise Debt: Debt for essential service utilities that is self-supporting from user fees. Overlapping Debt: Issuer's proportionate share of the debt of other local governmental units that either overlap or underlie it. Overall Debt: Net debt + Enterprise Debt + Overlapping Debt.

Municipality – Net Pension Liability and Demographic/Economic Statistics

				Pensions		Demographics/Economic Statistics				
Obligor Name	Moody's	S&P	Fitch	Net Pension Liability	Overall Debt + Pensions	Governmental Fund Revenues	Governmental Fund Expenditures	Population	Personal Income	Taxable Assessed Value
Barrington	Aa1	AAA	NR	40,447,827	72,730,978	71,228,849	71,690,844	16,310	1,592,991,872	2,920,827,036
Bristol	Aa2	AA+	NR	3,632,408	83,950,418	45,519,910	47,401,067	22,954	1,231,393,654	2,779,444,157
Burrillville	Aa2	NR	AAA	24,684,338	45,000,707	50,051,487	50,298,617	15,955	849,713,781	1,440,926,137
Central Falls	Ba2	BBB	NR	35,623,954	76,877,381	19,828,801	20,159,569	19,376	444,231,555	400,392,007
Charlestown	Aa2	NR	NR	3,040,325	14,055,054	27,184,408	26,442,304	7,827	456,444,781	2,310,582,454
Coventry	A1	AA	NR	132,096,776	203,475,728	101,410,120	106,151,962	35,014	1,763,149,138	3,217,528,723
Cranston	A1	AA-	AA+	367,469,373	463,767,850	282,386,525	284,617,071	80,387	3,902,202,870	6,789,734,897
Cumberland	Aa3	AA	NR	65,874,675	159,069,173	94,596,729	94,549,715	33,506	2,055,367,324	3,457,627,615
East Greenwich	Aa1	AA+	NR	34,570,652	110,097,817	64,553,685	64,937,979	13,146	1,123,664,826	2,295,007,887
East Providence	A2	AA	NR	50,975,676	175,173,669	157,126,101	146,532,869	47,037	2,152,826,793	3,824,830,967
Exeter	NR	NR	NR	0	950,425	14,038,504	14,058,101	6,425	356,681,047	823,936,514
Foster	NR	NR	NR	4,832,125	19,386,531	13,981,245	13,574,061	4,606	N/A	545,985,397
Glocester	NR	AA+	NR	6,993,427	36,862,421	27,828,156	27,039,766	9,746	535,020,314	926,453,714
Hopkinton	Aa3	NR	NR	2,289,184	13,349,809	24,480,856	24,796,789	8,188	438,445,878	852,674,706
Jamestown	Aa1	NR	NR	7,893,162	24,517,571	23,149,427	22,862,143	5,405	445,108,958	2,179,117,027
Johnston	A3	AA-	NR	231,992,614	293,891,394	108,058,725	106,861,374	28,769	1,528,855,845	2,264,511,642
Lincoln	Aa2	NR	AA	55,350,589	128,860,558	81,454,779	79,542,213	21,105	1,283,713,598	2,050,427,747
Little Compton	NR	NR	NR	6,783,195	18,064,319	13,393,025	13,011,605	3,492	N/A	1,888,036,899
Middletown	Aa1	NR	NR	32,717,042	67,903,370	66,802,466	72,544,660	16,150	848,199,618	2,593,097,228
Narragansett	Aa2	AA+	NR	63,213,103	89,739,825	59,530,281	59,599,076	15,868	1,047,294,863	4,506,548,896
New Shoreham	NR	AA	NR	3,307,716	24,722,606	13,387,920	13,152,337	1,051	N/A	1,674,915,396
Newport	NR	AA+	NR	127,118,734	294,932,728	109,699,083	108,675,918	24,672	1,509,461,963	5,985,006,479
North Kingstown	Aa2	AA+	NR	69,322,717	123,513,002	99,590,564	101,819,016	26,486	1,697,953,026	3,794,759,142
North Providence	A2	AA-	NR	43,342,895	110,658,528	99,464,236	100,348,443	32,078	1,623,692,693	2,160,222,000
North Smithfield	Aa2	NR	NR	19,204,973	55,967,189	42,777,128	41,609,120	11,967	756,081,663	1,508,659,420
Pawtucket	A3	A	A+	241,600,615	513,651,099	217,171,660	226,480,543	71,148	2,560,427,934	3,448,728,766
Portsmouth	Aa2	AAA	NR	65,573,431	82,723,525	63,776,594	65,480,830	17,389	1,144,515,477	3,076,103,172
Providence	Baa1	BBB	A-	1,089,055,000	1,964,953,110	763,899,000	787,313,000	178,042	6,481,180,624	11,053,091,000
Richmond	Aa3	NR	NR	596,326	14,781,703	23,991,508	23,811,951	7,708	468,276,119	883,964,542
Scituate	NR	AA	NR	2,914,006	9,859,244	35,059,352	34,885,091	10,329	720,397,186	1,541,787,480
Smithfield	Aa2	AA	NR	57,697,715	80,054,594	67,839,386	68,523,703	21,430	1,124,411,083	2,574,912,619
South Kingstown	Aa1	NR	NR	49,749,074	65,764,796	90,541,487	90,384,158	30,639	1,579,105,515	4,123,048,580
Tiverton	A1	NR	AA	21,366,529	64,489,147	50,415,815	55,322,367	15,780	901,435,148	1,945,050,139
Warren	Aa3	NR	NR	5,520,228	32,439,664	26,668,079	27,955,343	10,611	611,158,608	1,157,254,861
Warwick	A1	AA-	NR	387,338,603	538,408,626	303,190,264	313,493,806	82,672	4,488,281,568	8,954,268,641
West Greenwich	NR	AA+	NR	2,417,241	11,577,496	18,724,059	18,959,922	6,135	339,560,093	815,581,301
West Warwick	Baa2	NR	BBB	148,895,806	199,714,768	92,742,926	92,472,273	29,191	1,218,351,842	2,061,023,813 (a)
Westerly	Aa3	AA	NR	53,544,094	140,920,713	94,567,589	100,430,302	22,787	1,286,198,278	5,989,385,500
Woonsocket	Ba3	NR	BBB	126,087,184	333,370,089	147,453,145	142,137,086	41,186	1,496,918,627	1,638,383,940

Municipality – Other Debt and Pension Ratios

				Other Debt Ratios							Other Pensions Ratios	
Obligor Name	Moody's	S&P	Fitch	Overall Debt to Assessed Value	Net Direct Debt to Revenues	Moody's Score	Debt to Personal Income	Net Direct Debt to Revenues	Governmental Funds DS to Expenses	S&P Score	Net Pension Liability to Assessed Value	Moody's Score
Barrington	Aa1	AAA	NR	1.11%	0.20x	Aaa	2.0%	20.1%	2.8%	1	1.4%	Aa
Bristol	Aa2	AA+	NR	2.89%	0.68x	A	6.5%	68.0%	6.7%	3	0.1%	Aaa
Burrillville	Aa2	NR	AAA	1.41%	0.34x	Aa	2.4%	34.0%	5.1%	2	1.7%	Aa
Central Falls	Ba2	BBB	NR	10.30%	0.75x	A	9.3%	75.0%	12.3%	4	8.9%	Baa
Charlestown	Aa2	NR	NR	0.48%	0.20x	Aaa	2.4%	20.0%	1.0%	1	0.1%	Aaa
Coventry	A1	AA	NR	2.22%	0.41x	Aa	4.0%	40.9%	4.9%	2	4.1%	A
Cranston	A1	AA-	AA+	1.42%	0.25x	Aaa	2.5%	25.3%	3.5%	1	5.4%	Baa
Cumberland	Aa3	AA	NR	2.70%	0.50x	Aa	4.5%	50.1%	6.2%	2	1.9%	Aa
East Greenwich	Aa1	AA+	NR	3.29%	0.80x	A	6.7%	80.2%	9.4%	4	1.5%	Aa
East Providence	A2	AA	NR	3.25%	0.27x	Aaa	5.8%	27.1%	3.6%	1	1.3%	Aa
Exeter	NR	NR	NR	0.12%	0.07x	Aaa	0.3%	6.8%	1.3%	1	0.0%	Aaa
Foster	NR	NR	NR	2.67%	0.01x	Aaa	NA	0.6%	0.3%	1	0.9%	Aaa
Glocester	NR	AA+	NR	3.22%	0.10x	Aaa	5.6%	9.7%	2.2%	1	0.8%	Aaa
Hopkinton	Aa3	NR	NR	1.30%	0.07x	Aaa	2.5%	7.1%	1.1%	1	0.3%	Aaa
Jamestown	Aa1	NR	NR	0.76%	0.36x	Aa	3.7%	35.9%	4.6%	2	0.4%	Aaa
Johnston	A3	AA-	NR	2.73%	0.23x	Aaa	4.0%	23.5%	3.1%	1	10.2%	Baa
Lincoln	Aa2	NR	AA	3.59%	0.37x	Aa	5.7%	37.0%	5.3%	2	2.7%	A
Little Compton	NR	NR	NR	0.60%	0.84x	A	NA	84.2%	7.0%	3	0.4%	Aaa
Middletown	Aa1	NR	NR	1.36%	0.40x	Aa	4.1%	39.7%	5.0%	2	1.3%	Aa
Narragansett	Aa2	AA+	NR	0.59%	0.38x	Aa	2.5%	38.4%	4.5%	2	1.4%	Aa
New Shoreham	NR	AA	NR	1.28%	1.31x	A	NA	131.4%	15.5%	5	0.2%	Aaa
Newport	NR	AA+	NR	2.80%	0.43x	Aa	11.1%	42.7%	6.6%	2	2.1%	Aa
North Kingstown	Aa2	AA+	NR	1.43%	0.42x	Aa	3.2%	42.2%	5.6%	2	1.8%	Aa
North Providence	A2	AA-	NR	3.12%	0.16x	Aaa	4.1%	16.0%	4.2%	1	2.0%	Aa
North Smithfield	Aa2	NR	NR	2.44%	0.71x	A	4.9%	71.4%	8.2%	4	1.3%	Aa
Pawtucket	A3	A	A+	7.89%	0.28x	Aaa	10.6%	27.8%	2.3%	1	7.0%	Baa
Portsmouth	Aa2	AAA	NR	0.56%	0.19x	Aaa	1.5%	19.3%	4.1%	1	2.1%	Aa
Providence	Baa1	BBB	A-	7.92%	0.64x	Aa	13.5%	64.4%	7.9%	3	9.9%	Baa
Richmond	Aa3	NR	NR	1.60%	0.17x	Aaa	3.0%	16.5%	2.5%	1	0.1%	Aaa
Scituate	NR	AA	NR	0.45%	0.19x	Aaa	1.0%	19.1%	3.6%	1	0.2%	Aaa
Smithfield	Aa2	AA	NR	0.87%	0.20x	Aaa	2.0%	20.4%	3.2%	1	2.2%	A
South Kingstown	Aa1	NR	NR	0.39%	0.14x	Aaa	1.0%	13.8%	2.6%	1	1.2%	Aa
Tiverton	A1	NR	AA	2.22%	0.74x	A	4.8%	74.2%	7.7%	3	1.1%	Aa
Warren	Aa3	NR	NR	2.33%	0.51x	Aa	4.4%	51.1%	5.6%	2	0.5%	Aaa
Warwick	A1	AA-	NR	1.69%	0.16x	Aaa	3.4%	16.1%	2.4%	1	4.3%	A
West Greenwich	NR	AA+	NR	1.12%	0.32x	Aaa	2.7%	32.1%	3.0%	2	0.3%	Aaa
West Warwick	Baa2	NR	BBB	2.47%	0.25x	Aaa	4.2%	25.0%	2.7%	1	7.2%	Baa
Westerly	Aa3	AA	NR	1.46%	0.87x	A	6.8%	86.8%	6.0%	3	0.9%	Aaa
Woonsocket	Ba3	NR	BBB	12.65%	1.11x	A	13.8%	111.1%	13.2%	4	7.7%	Baa

SUMMARY OF FIRE DISTRICTS

		FY15 Debt Service Payment**					
Fire District	Debt Limit	Principal	Interest	Total	Long-Term Debt FY15***	FY15 Approved Budget	Long-Term Debt as % of FY15 Budget*
Albion	$50,000	N/A	N/A	$138,530	1,437,904	1,060,074	135.64%
Ashaway	3% of assessed	30,740	109,610	140,350	2,518,859	477,200	527.84%
Bonnet Shores	None	-	-	-	N/A	275,486	N/A
Bradford	<9% of assessed	19,992	7,608	27,600	67,972	119,656	56.81%
Buttonwoods	20,000	-	-	-	N/A	105,179	N/A
Central Coventry	1/2 of annual budget	106,775	25,590	132,365	3,119,178	5,810,549	53.68%
Charlestown	5,000,000	N/A	N/A	224,672	NR	753,471	UNK
Chepachet	None	27,955	4,045	32,000	86,518	570,069	15.18%
Coventry	500,000	NR	NR	169,000	464,896	2,810,800	16.54%
Cumberland	250,000	NR	NR	NR	1,389,457	1,610,950	86.25%
Cumberland Hill	25% of budget	NR	NR	NR	2,137,739	2,015,700	106.05%
Dunn's Corners	None	N/A	N/A	106,667	1,081,662	896,347	120.67%
Exeter	200,000	-	-	-	N/A	1,231,196	N/A
Harmony	3% of assessed	NR	NR	19,874	158,993	616,552	25.79%
Harrisville	None	NR	NR	87,448	2,160,817	1,440,341	150.02%
Hope Valley-Wyoming	None	NR	NR	135,111	783,174	740,938	105.70%
Hopkins Hill	1,000,000	-	-	-	N/A	1,115,650	N/A
Indian Lake Shores	Value of taxed property	-	-	-	N/A	38,245	N/A
Kingston	970,000	NR	NR	207,876	1,348,482	683,358	197.33%
Lime Rock	1,000,000	-	-	-	N/A	2,332,147	N/A
Lonsdale	100,000	UNK	UNK	UNK	UNK	617,260	UNK
Manville	None	-	-	-	N/A	330,078	N/A
Misquamicut	100,000	-	-	-	N/A	674,667	N/A
Nasonville	3% of assessed	-	-	-	N/A	499,730	N/A
North Cumberland	None	50,305	8,516	58,821	1,118,168	1,784,143	62.67%
North Tiverton	None	96,825	142,304	239,129	4,542,881	4,198,880	108.19%
Oakland-Mapleville	3% of assessed	10,976	25,718	36,694	512,533	458,089	111.89%
Pascoag	2,500,000	66,580	52,420	119,000	1,286,574	1,280,993	100.44%
Pojac Point	1,500	-	-	-	N/A	75,000	N/A
Portsmouth Water & Fire	None	269,634	113,042	382,676	2,789,000	4,063,224	68.64%
Quinnville	125,000	-	-	-	N/A	87,365	N/A
Quonochontaug Central	1.5% of assessed	7,916	6,484	14,400	117,544	262,560	44.77%
Ricmond Carolina	1% of assessed	105,143	63,100	168,243	1,286,263	495,092	259.80%
Saylesville	2,000,000	71,181	41,152	112,333	678,338	731,033	92.79%
Shady Harbor	3% of assessed	4,750	6,252	11,002	123,500	156,705	78.81%
Shelter Harbor	None	-	-	-	N/A	214,363	N/A
Stone Bridge	2,274,167	20,635	7,676	28,311	1,169,980	968,009	120.86%
Union	10,000,000	177,618	47,172	224,790	411,262	3,157,207	13.03%
Valley Falls	50% of previous year budget	NR	NR	NR	1,033,866	1,793,239	57.65%
Watch Hill	TAN limit of $100,000	31,496	50,464	81,960	948,224	1,032,644	91.82%
Weekapaug	75,000	-	-	-	N/A	393,400	N/A
West Glocester	630,000	-	-	-	N/A	409,436	N/A
Westerly	1% of assessed	-	-	-	N/A	1,296,720	N/A
Western Coventry	2,000,000	36,806	58,461	95,267	1,288,935	577,167	223.32%

* From Division of Municipal Finance: For "Tier" Classification purposes, Outstanding debt/FY15 annual budget ratio is used to determine if the outstanding debt is greater than 3x the amount of the FY15 budget.

** Source: RI Division of Municipal Finance, based on FY15 RI Fire District Adopted Budget Survey (based on self-reported data)

*** Source: RI Division of Municipal Finance, FD-4 report; audit report

Cumberland, Cumberland Hill, North Cumberland and Valley Falls fire districts have since merged into a single Cumberland Fire District as of 7/1/2016

Central Coventry's long term liabilities include receivership claims of $2,806,014

Other Special Districts

				Governmental Activities							
Special Districts	Moody's	S&P	Fitch	GO Bonds (FY2015)	Loans Payable (FY2015)	Capital Leases (FY2015)	Total Outstanding (FY2015)	GO Debt Service (2016)	Loans Debt Service (2016)	Lease Payments (2016)	Total Debt Service (2016)
Bristol-Warren Regional SD	Aa3	NR	NR	20,400,000	0	0	20,400,000	3,176,216	0	0	3,176,216
Bristol Cnty Wtr Auth	NR	NR	NR	15,188,776	7,121,692	0	22,310,468	2,876,757	606,113	0	3,482,870
Burrillville Hsg Auth	NR	A+	NR								
Chariho Regional School District	Aa3	NR	NR	17,904,000	1,009,160	27,467	18,940,627	na	na	na	1,298,445
Coventry Hsg Auth	NR	AA-	NR								
Cumberland Hsg Auth	NR	AA-	NR								
Exeter-West Greenwich Regional S.D.	A1	NR	NR	700,000	4,340,000	398,685	5,438,685	205,231	528,550	198,179	931,960
Foster-Glocester School District	Aa3	NR	NR	0	41,725,000	0	41,725,000	0	5,083,298	0	5,083,298
Kent County Water Authority	Aa3	AA-	NR	14,495,000	0	0	14,495,000	2,149,800	0	0	2,149,800
North Providence Hsg Auth	NR	AA-	NR								
Pascoag Util Dist	NR	A-	NR	1,033,000	0	0	1,033,000	76,555	0	0	76,555
Pawtucket Hsg Auth	NR	A+	NR	4,610,000	0	2,053,179	6,663,179	253,550	0	N/A	253,550
Providence Hsg Dev Corp	NR	AA-	NR	9,635,000	0	10,322,040	19,957,040	1,138,844	0	1,046,565	2,185,409
Providence Pub Bldg Auth	NR	BBB-	NR	306,682,004	0	463,644,081	770,326,085	36,147,448	0	23,755,846	59,903,294
Providence Redev Agy	NR	BBB-	NR	Included in City of Providence tax-supported debt.							
Providence Wtr Supply Brd	NR	AA-	NR	78,174,019	0	0	78,174,019	6,448,718	0	0	6,448,718
Woonsocket Hsg Auth	NR	A+	NR	6,130,000	0	0	6,130,000	775,850	0	0	775,850

Allocation of Narragansett Bay Commission Debt

NBC Debt Outstanding 6/30/16	NBC RIIB Debt Outstanding 6/30/16	Total NBC Debt Outstanding
242,820,000	385,089,111	627,909,111

Municipality	% of Revenues FY2016*	NBC Debt	NBC RIIB Debt	Total
Central Falls	4.20%	10,198,440	16,173,743	26,372,183
Cranston	0.19%	461,358	731,669	1,193,027
Cumberland	5.76%	13,986,432	22,181,133	36,167,565
East Providence	3.60%	8,741,520	13,863,208	22,604,728
Johnston	5.44%	13,209,408	20,948,848	34,158,256
Lincoln	5.69%	13,816,458	21,911,570	35,728,028
North Providence	8.18%	19,862,676	31,500,289	51,362,965
Pawtucket	18.04%	43,804,728	69,470,076	113,274,804
Providence	48.73%	118,326,186	187,653,924	305,980,110
Smithfield	0.09%	218,538	346,580	565,118
Other	0.08%	194,256	308,071	502,327
Total	100.00%	242,820,000	385,089,111	627,909,111

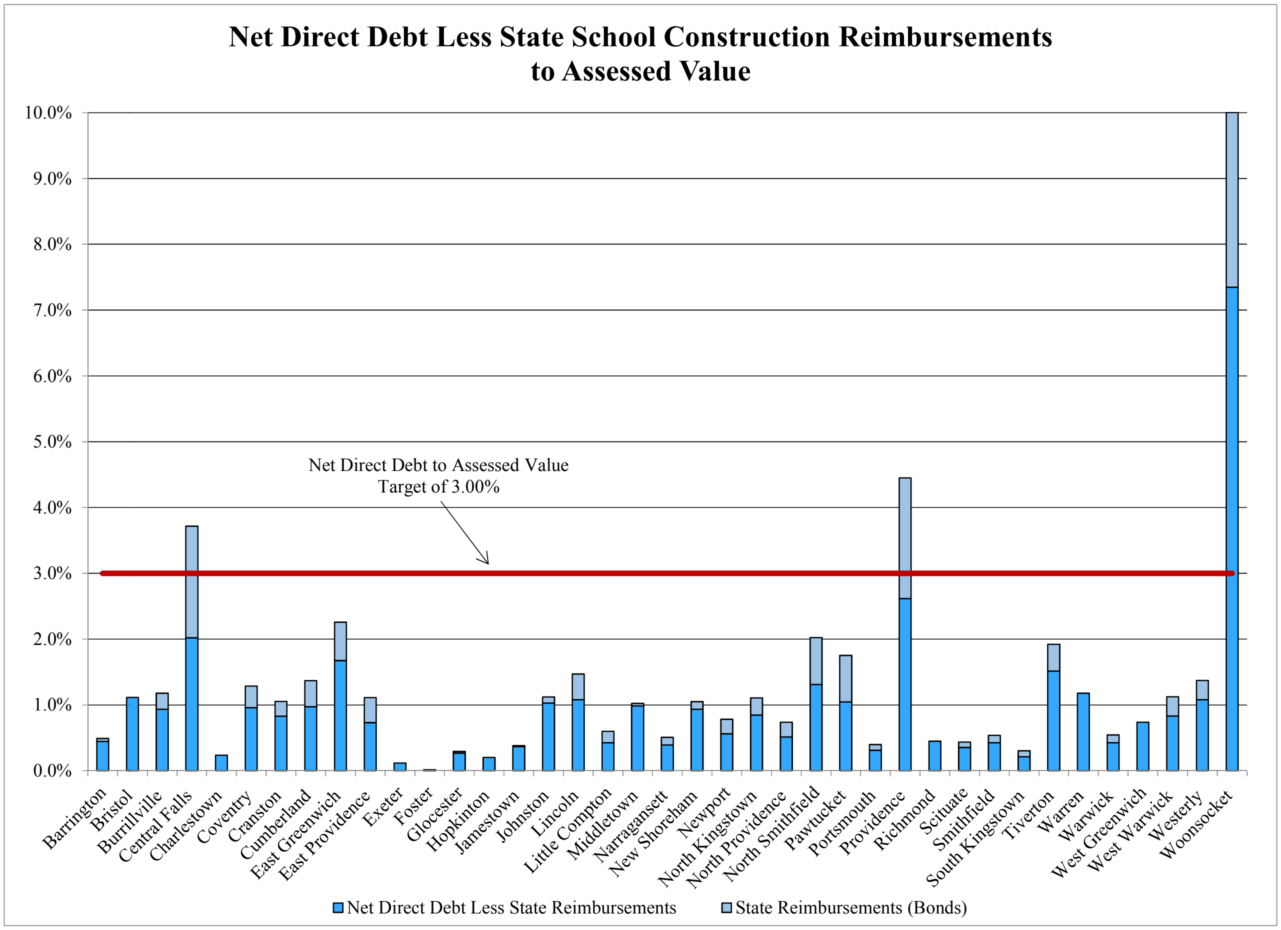
* From Narragansett Bay Commission

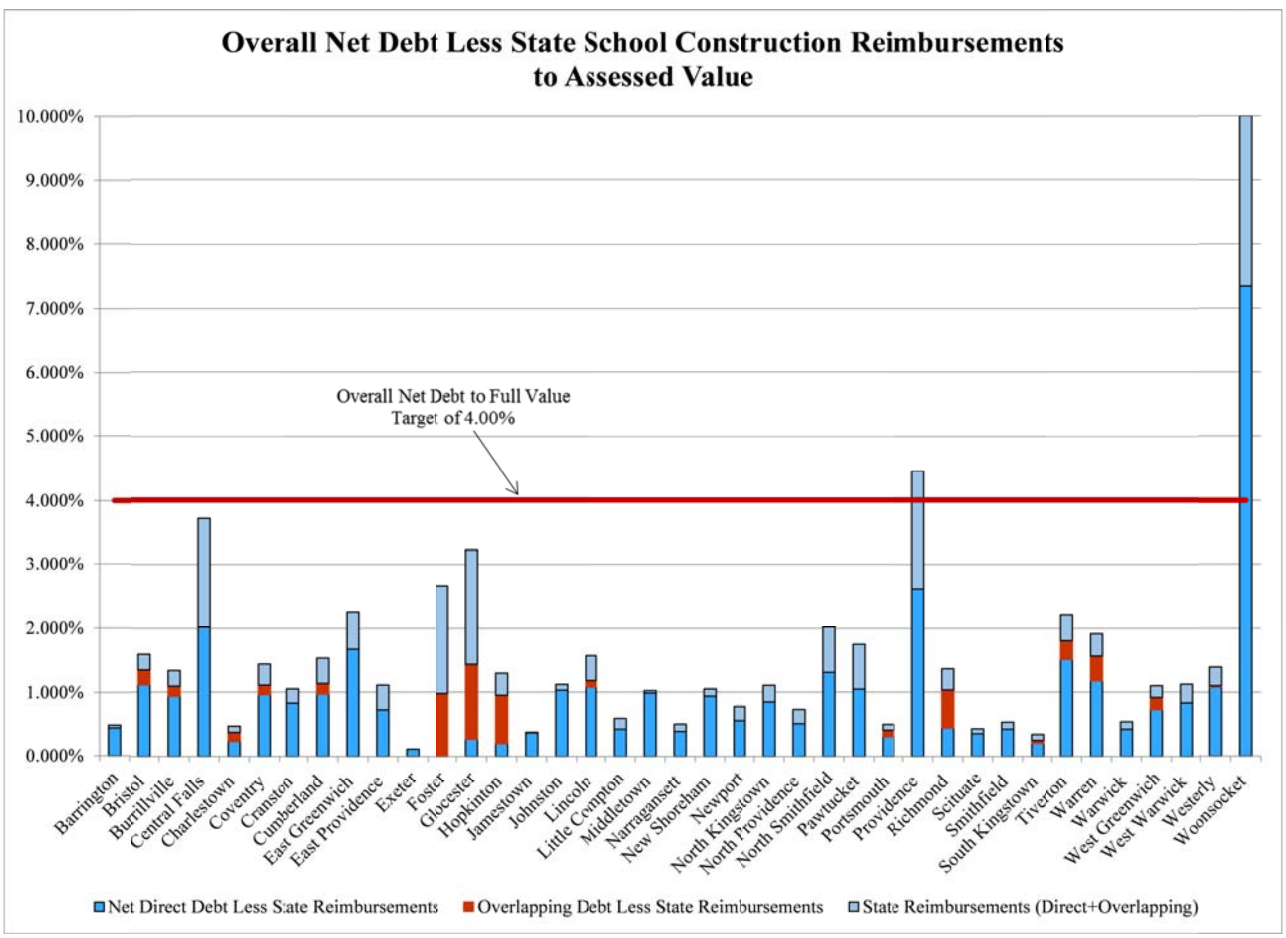
State Reimbursements for School Building Projects (FY2015-FY2030) – Bonds Only

State Housing Aid - Construction Entitlements (Bonds)

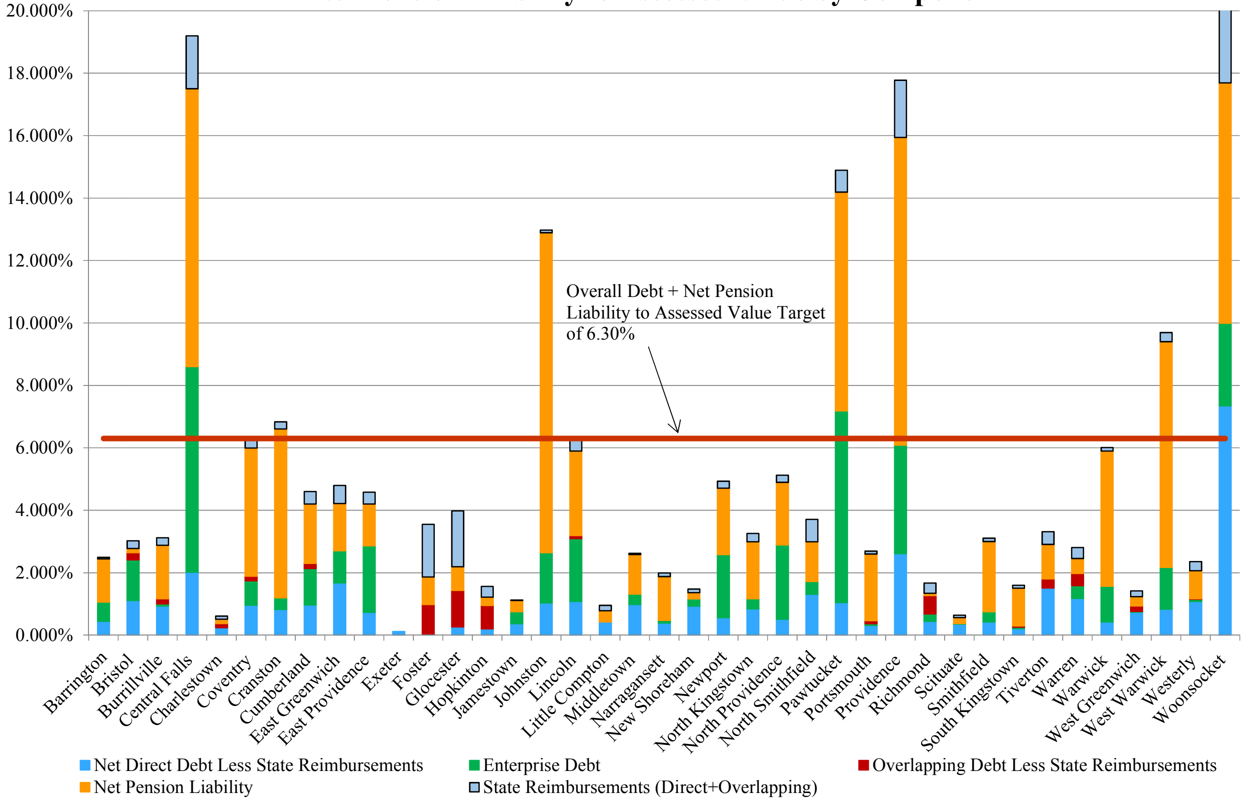
District	Total (2015-2030)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Barrington	1,311,177	$241,809	241,809	241,809	215,250	215,250	155,250	0	0	0	0	0	0	0	0	0	0
Bristol Warren	10,425,546	$949,667	979,242	1,008,816	1,035,491	742,739	772,198	748,874	784,363	816,953	855,342	471,047	492,852	477,271	290,691	0	0
Burrillville	3,517,245	$828,316	638,947	215,309	212,276	209,244	206,211	203,179	203,179	200,146	200,146	200,146	200,146	0	0	0	0
Central Falls	6,788,974	$1,136,436	1,131,070	1,131,070	1,126,506	1,126,506	564,325	66,635	71,078	75,519	79,962	84,404	93,289	102,174	0	0	0
Chariho	8,202,326	$573,744	579,844	592,044	601,194	610,344	619,493	631,693	646,943	662,193	680,493	399,197	409,697	421,947	245,000	257,250	271,250
Coventry	10,572,112	$1,057,936	1,078,743	1,057,395	1,070,831	1,037,202	1,037,656	1,038,110	1,056,194	517,352	228,195	232,083	232,083	232,083	232,083	232,083	232,083
Cranston	15,146,860	$1,285,732	1,325,823	1,205,969	1,452,321	1,258,907	1,164,999	1,097,320	1,133,441	938,275	957,866	979,406	769,257	430,137	450,862	467,612	228,933
Cumberland	13,787,932	$971,745	1,005,687	1,035,920	1,028,524	912,188	934,538	961,729	984,469	1,026,131	1,023,075	1,111,130	1,139,600	826,593	826,603	0	0
East Greenwich	13,341,399	$857,550	799,765	809,943	826,212	844,515	850,341	846,591	830,153	854,556	880,993	826,786	849,156	867,458	859,781	864,294	673,305
East Providence	14,610,532	$1,173,973	1,249,068	1,207,539	1,146,174	1,177,480	1,203,161	1,095,356	1,021,407	1,142,144	1,176,806	982,915	378,824	392,195	405,565	421,163	436,762
Exeter-West Greenwich	2,769,487	$281,876	281,876	281,876	281,876	183,078	183,078	183,078	183,078	183,078	183,078	108,703	108,703	108,703	108,703	108,703	0
Foster	0	$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foster-Glocester	25,574,489	$1,826,894	1,951,755	2,098,929	2,244,323	2,378,094	2,516,965	1,834,727	1,568,274	1,634,172	1,711,123	1,377,430	1,439,053	1,505,338	726,833	760,579	0
Glocester	200,298	$17,046	17,046	17,056	14,915	14,915	14,915	14,915	14,915	14,915	14,915	14,915	14,915	14,915	0	0	0
Jamestown	258,204	$43,034	43,034	43,034	43,034	43,034	43,034	0	0	0	0	0	0	0	0	0	0
Johnston	2,027,513	$240,366	190,017	215,878	249,112	216,224	216,223	216,223	108,523	144,825	144,409	85,713	0	0	0	0	0
Lincoln	7,987,558	$603,745	716,226	625,587	493,500	514,500	534,000	556,500	585,000	615,000	645,000	673,500	697,500	727,500	0	0	0
Little Compton	3,246,529	$103,549	179,276	185,101	174,755	176,697	180,580	186,405	192,230	201,939	209,706	217,473	225,240	236,890	248,540	258,249	269,899
Middletown	960,991	$119,842	119,842	119,842	119,842	119,842	119,842	71,477	71,477	71,477	27,508	0	0	0	0	0	0
Narragansett	5,231,708	$298,354	307,354	267,000	279,000	292,500	306,000	321,000	337,500	351,000	366,000	381,000	400,500	420,000	441,000	463,500	
New Shoreham	1,938,000	$132,750	153,750	156,750	161,250	164,250	168,750	171,750	176,250	182,250	183,750	189,750	33,750	15,750	15,750	15,750	15,750
Newport	13,172,014	$904,755	904,755	902,555	1,078,055	961,055	961,055	961,055	961,055	689,900	689,900	692,979	692,979	692,979	692,979	692,979	692,979
North Kingstown	9,874,106	$863,872	731,753	736,316	733,274	736,316	694,433	683,941	690,025	690,108	692,471	700,075	706,159	713,763	167,200	167,200	167,200
North Providence	4,860,584	$911,689	894,708	408,500	408,500	408,500	408,500	408,500	408,500	408,500	194,687	0	0	0	0	0	0
North Smithfield	10,769,361	$605,185	631,487	660,407	688,812	726,593	756,454	789,610	845,206	798,265	840,498	880,640	941,205	782,287	822,712	0	0
Pawtucket	24,273,494	$1,144,261	1,332,187	1,342,076	1,546,088	1,620,610	1,614,394	1,567,569	1,578,739	1,591,333	1,744,169	1,758,767	1,749,546	1,591,438	1,615,886	1,403,795	1,072,636
Portsmouth	2,759,805	$332,922	309,916	331,916	327,437	312,025	297,013	190,680	161,554	123,995	123,995	108,588	108,588	15,588	15,588	0	0
Providence	202,514,565	$15,289,441	8,042,461	10,856,769	16,873,905	16,262,057	16,108,958	15,150,648	15,511,391	15,713,191	16,372,770	14,620,263	14,005,937	14,648,233	11,165,558	1,433,372	459,611
Scituate	1,213,762	$118,878	89,596	91,096	94,096	95,596	58,500	61,500	64,500	67,500	70,500	73,500	76,500	79,500	84,000	88,500	0
Smithfield	2,854,892	$186,000	186,000	240,141	327,983	200,174	200,174	200,174	200,174	200,174	200,174	118,954	118,954	118,954	118,954	118,954	118,954
South Kingstown	3,835,981	$547,791	556,841	465,663	491,143	459,282	438,586	266,801	116,801	115,262	102,104	67,250	59,552	48,774	33,377	33,377	33,377
Tiverton	7,963,420	$445,257	461,721	483,084	417,491	521,978	536,840	554,578	577,171	602,594	629,517	661,170	689,793	666,831	464,425	250,970	0
Warwick	10,767,920	$954,520	947,464	827,459	1,070,752	903,582	845,015	818,986	755,932	696,599	600,988	559,796	487,864	469,607	276,226	276,497	276,633
West Warwick	6,024,901	$691,377	706,891	800,972	773,185	550,470	551,892	553,315	515,388	419,617	63,834	65,256	68,102	62,594	65,439	66,862	69,707
Westerly	17,455,635	$1,484,364	1,365,759	1,235,264	1,254,764	1,275,764	1,298,265	1,320,765	1,339,365	1,367,865	1,399,365	1,432,365	791,865	587,865	434,000	434,000	434,000
Woonsocket	43,542,866	$2,291,613	2,351,254	2,409,133	2,500,902	2,570,725	2,667,702	2,772,438	2,824,822	2,894,379	2,672,178	2,521,398	2,672,682	2,831,724	3,002,403	3,184,719	3,374,794

Source: RI Department of Elementary and Secondary Education


Net Direct Debt Less State School Construction Reimbursements to Assessed Value
10.0%
9.0%
8.0%
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
Net Direct Debt to Assessed Value Target of 3.00%
Barrington
Bristol
Burrillville
Central Falls
Charlestown
Coventry
Cranston
Cumberland
East Greenwich
East Providence
Exeter
Foster
Glocester
Hopkinton
Jamestown
Johnston
Lincoln
Little Compton
Middletown
Narragansett
New Shoreham
Newport
North Kingstown
North Providence
North Smithfield
Pawtucket
Portsmouth
Providence
Richmond
Scituate
Smithfield
South Kingstown
Tiverton
Warren
Warwick
West Greenwich
West Warwick
Westerly
Woonsocket
Net Direct Debt Less State Reimbursements
State Reimbursements (Bonds)

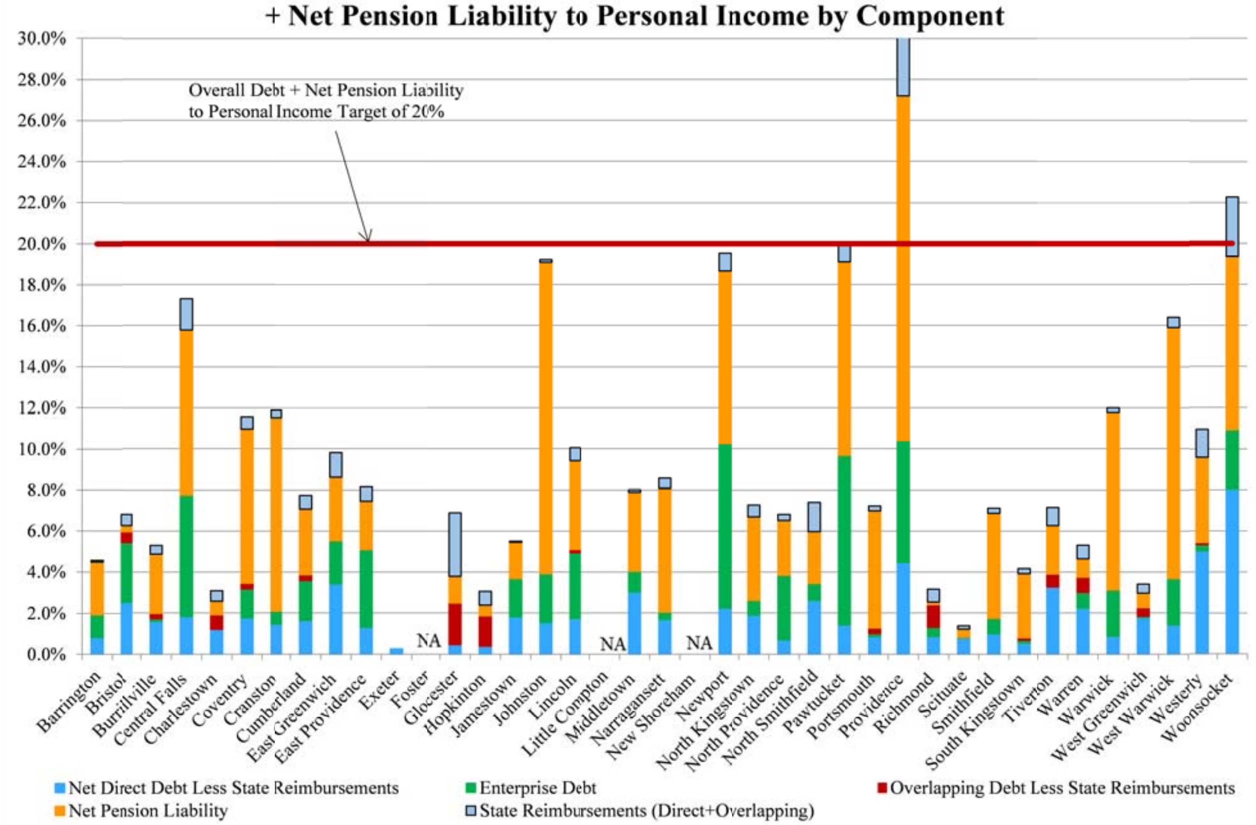

Overall Net Debt Less State School Construction Reimbursements to Assessed Value
10.000%
9.000%
8.000%
7.000%
6.000%
5.000%
4.000%
3.000%
2.000%
1.000%
0.000%
Overall Net Debt to Full Value Target of 4.00%
Barrington
Bristol
Burrillville
Central Falls
Charlestown
Coventry
Cranston
Cumberland
East Greenwich
East Providence
Exeter
Foster
Glocester
Hopkinton
Jamestown
Johnston
Lincoln
Little Compton
Middletown
Narragansett
New Shoreham
Newport
North Kingstown
North Providence
North Smithfield
Pawtucket
Portsmouth
Providence
Richmond
Scituate
Smithfield
South Kingstown
Tiverton
Warren
Warwick
West Greenwich
West Warwick
Westerly
Woonsocket
Net Direct Debt Less State Reimbursements
Overlapping Debt Less State Reimbursements
State Reimbursements (Direct+Overlapping)

Overall Debt Less State School Construction Reimbursements + Net Pension Liability to Assessed Value by Component



Overall Debt includes (1) Net Direct Debt: All debt of an issuer less self-supporting enterprise debt; (2) Enterprise Debt: Debt for essential service utilities that is self-supporting from user fees; (3) Overlapping debt: Issuer's proportionate share of the debt of other local governmental units that either overlap or underlie it.

Overall Debt Less State School Construction Reimbursements + Net Pension Liability to Personal Income by Component



Overall Debt includes (1) Net Direct Debt: All debt of an issuer less self-supporting enterprise debt; (2) Enterprise Debt: Debt for essential service utilities that is self-supporting from user fees; (3) Overlapping debt: Issuer's proportionate share of the debt of other local governmental units that either overlap or underlie it.

GLOSSARY OF TERMS

Glossary of Terms

1. Additional bonds test (ABT) – A provision typically included in a bond resolution or indenture that established the terms under which any proposed new bonds can be issued. The terms specified are usually in the form of meeting a pre-established debt service coverage level and compliance with other security features of the transaction.
2. Amortization – The repayment schedule (in regular installments) over a period of time used to retire the applicable debt.
3. Appropriation debt (pledge) - Debt secured by contractual agreements which, while not considered General Obligations of the Issuer, are still subject to annual appropriation by the Issuer or an Obligated Party.
4. Arbitrage - Simultaneous purchase and sale of an asset to profit from a difference in the price. It is a trade that profits by exploiting the price differences of identical or similar financial instruments on different markets or in different forms. For tax-exempt bonds, Issuers using tax-exempt proceeds are generally not able to keep investment earnings in amount higher than the yield on the tax-exempt bonds. Negative arbitrage is the term related to the difference between a lower investment yield on a refunding escrow compared to the yield on tax-exempt refunding bonds. Higher negative arbitrage indicates a less efficient escrow.
5. Bond resolution – A legal document approved by the issuer that allows bonds to be issued and sold for a specific purpose and defines the rights and responsibilities of each party to a bond contract -- the issuer and the bondholder.
6. Call provisions - Allows the issuer to redeem and retire the bonds in advance of their stated maturity; typically comes with a time window within which the bond can be called, with a specific price to be paid to bondholders, and any accrued interest defined within the provision.
7. Capital lease - Contract entitling a renter to temporary use of an asset, and such a lease has economic characteristics of asset ownership.
8. Conduit debt – Debt issued by a state or local governmental entity for the purpose of providing capital financing for a specific third party that is not a part of the issuer's financial reporting entity; the government issuer has no obligation for such debt beyond the resources provided by a lease or loan with the third party on whose behalf they are issued.
9. Contingent debt or Contingency liability - Debt or liability that can become an obligation of the Issuer or Obligated party, which is dependent on uncertain future developments.
10. Debt affordability - The willingness and ability of the Issuer to pay the debt service when due, taking into account existing revenue and future resources and other issuer needs and constraints, as well as and the capacity of the underlying population to afford the cost of borrowing
11. Debt capacity - Maintaining an ability to access the capital markets and borrow money within the requirements set forth in an issuer's bond resolution or indenture.
12. Debt service - The amount of money required to make principal and interest payments on outstanding debt and loans.
13. Debt structure - The duration and timing of principal and interest payments; typically refers to characteristics such as the maturity dates, the principal repayment terms and the call provisions.
14. Defeasance – When a borrower sets aside cash to pay off the bonds so that the outstanding debt and cash offset each other on the balance sheet and do not need to be recorded.
15. Draw schedules - Detailed payment plan (often monthly) for funding a project.

16. Enterprise debt - Municipal debt that is secured by fees charged in the exchange for goods services provided, usually associated with public utilities, revenue generating recreation, transportation and other business activities.
17. GARVEE - Grant Anticipation Revenue Vehicle; a security structure most often used in transportation finance for which the revenue source is future expected Federal-aid reimbursements.
18. General obligation - Municipal bonds backed by the full faith and credit of the issuing jurisdiction rather than the revenue from a given project; for government entities that have taxing power.
19. Gross Direct Debt - The sum of the total bonded debt and any short-term debt of the issuer. This debt includes: (i) general obligation bonds; (ii) other obligations such as loan agreements secured by taxes; (iii) capital lease obligations that are secured by lease rental or contract payments subject to appropriation; (iv) special assessment obligations; and (v) any enterprise debt
20. Guaranteed debt - Debt which was guaranteed by an entity, to be paid if the issuer and/or obligated party defaults due to insolvency or bankruptcy.
21. Guaranteed investment contracts (GICs) - Financial service company contracts that guarantee the owner principal repayment and a fixed or floating interest rate for a predetermined period of time.
22. Interest rate swaps - An agreement between two counterparties in which one stream of future interest payments is exchanged for another based on a specified principal or notional amount; usually involve the exchange of a fixed interest rate for a floating rate, or vice versa.
23. Moral obligation debt - Represents a promise by a government obligor to seek future appropriations for debt service payments, typically in order to make up deficits in a reserve fund should it fall below its required level. There is no legal requirement to appropriate funds to make the payment.
24. Net tax supported debt - Long-term and short-term indebtedness payable from tax revenues less self-supporting debt.
25. Net Direct debt - Gross direct debt less all self-supporting debt. Net Direct Debt excludes enterprise bonds (water, sewer, solid waste and electric revenue bonds), where enterprise fund revenues cover debt service by at least 1.0x for at least the last three fiscal years.
26. Obligated party - An entity that is responsible for the repayment of the bonds.
27. Official Statement - Discloses material information on a new issue including the purposes of the issue, how the securities will be repaid, and the financial, economic and demographic characteristics of the State. It must fully disclose all facts that would be of interest to potential investors evaluating the bonds; the ultimate responsibility for the document rests with the Issuer or the Obligated party.
28. Original issue discount - Discount from par value at the time a bond is issued; it is the difference between the stated redemption price at maturity and the actual issue price.
29. Original issue premium – Premium from par value at the time a bond is issued; amount a bond is priced higher than its par value at the time a bond is issued.
30. Other post-employment benefits (OPEB) - Retirement benefits other than pension; can include healthcare benefits, insurance premiums, and deferred-compensation arrangements.
31. Overall Debt - Gross direct debt plus the issuer's applicable share of the total debt of all overlapping jurisdictions.
32. Overall Net Debt - Net direct debt plus the issuer's applicable share of the net direct debt of all overlapping jurisdictions. Excludes enterprise bonds (water, sewer, solid waste and electric revenue bonds), where enterprise fund revenues cover debt service by at least 1.0x for at least the last three fiscal years.

33. Overlapping debt - The issuer's proportionate share of the debt of other local governmental units that either overlap it (the issuer is located either wholly or partly within the geographic limits of the other units) or underlie it (the other units are located within the geographic limits of the issuer).
34. Pooled bond program - Municipal bond offering in which a sponsor sells an issue of bonds with proceeds used by two or more parties, usually municipalities or other tax-exempt organizations.
35. Private placements - Bonds that are not publicly offered and sold directly to qualified investors; i.e. bank loans, bank funding agreements, direct investor purchase securities and master lease programs.
36. Quasi-public entities - Corporation in the public sector that is established by a higher-level unit of government that has a public mandate to provide a given service.
37. Rate covenant - Legal commitment by a revenue bond issuer to maintain rates, fees, charges, etc. at levels necessary to generate sufficient revenues to exceed projected debt service in order to provide "debt service coverage".
38. Ratings agency - Moody's Investors Service, Standard & Poor's (S&P) and Fitch Ratings are the three most prominent national agencies that provide credit ratings for municipal bonds.
39. Refunding – Process of retiring or redeeming an outstanding bond issue at maturity by using the proceeds from a new debt issue with the objective of ensuring significant reduction in interest expense for the issuer.
40. Revenue bonds - Debt service is payable solely from the revenues derived from; a dedicated revenue source, operating businesses or the facilities acquired or constructed with proceeds of the bonds, or under a loan or financing agreement.
41. Self-supporting debt - Bonds that have dedicated non-tax revenues sufficient to fully repay the required debt service amounts.
42. Sinking fund - Fund formed by periodically setting aside money for the gradual repayment of a debt; a means of repaying funds borrowed through a bond issue through periodic payments to a bond trustee who retires part of the issue by redeeming the bonds.
43. Special district - A political subdivision established to provide a single public service (as water supply or fire services) within a specific geographic area.
44. State revolving loan fund - A fund administered by a state or state agency for the purpose of providing low-interest loans, usually for investments in water and sanitation infrastructure.
45. Takedown - The price at which underwriters obtain securities to be offered to the public usually calculated on a dollar per bond basis and fluctuates with the size of a transaction.
46. True interest cost (TIC) - The actual cost of issuing a bond, expressed as yield percentage, including underwriting fees and costs, as well as factors related to the time value of money.
47. Trust Indenture - An agreement in the bond contract made between a bond issuer and a trustee that represents the bondholder's interests by highlighting the rules and responsibilities that each party must adhere to.
48. Unfunded actuarial accrued liability (UAAL) - The amount of retirement that is owed to pension participants in future years that exceed current assets and their projected growth; the difference between the actuarial values of assets (AVA) and the actuarial accrued liabilities (AAL) of a plan.
49. Variable rate debt - Any type of debt instrument that does not have a fixed rate of interest over the life of the instrument.
50. Weighted average maturity - weighted average amount of time until the debt matures; a reflection of the rapidity with which the principal of an issue is expected to be paid.