
State of Rhode Island



Debt Affordability Study Phase Two

March 14, 2017

Debt Affordability



- Preserve flexibility of quasi-public agencies while ensuring viability and sustainability of quasi-public agencies' finances
- Review procedures and policies by the quasi-public agencies for debt issuance
- Review rating agency criteria for the type of bond issue
- Review debt affordability measures by peer agencies
- Determine appropriate debt affordability measures for each quasi-public agency

Phase Two – Quasi-Public Agencies



- Phase Two includes all Quasi-Public Agencies without tax-supported debt which includes appropriation backed debt or moral obligation debt with active draws.

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 Borrower	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

Narragansett Bay Commission (“NBC”)



- NBC issues debt on its own and through Rhode Island Infrastructure Bank (“RIIB”).
- Debt service on NBC's bonds is payable from the net revenues of the commission, which are on parity with RIIB loans.
 - The commission does not have any taxing authority; its revenues derive from user charges.
- As of June 30, 2016, NBC had approximately \$242.8 million of debt outstanding under the trust indenture in which NBC issues its own debt and a total of \$627.9 million when including loans through the RIIB.
- NBC’s fiscal year 2016 results and projected budget figures for fiscal year 2017 demonstrate continued strong operating performance.
- NBC is evaluating a large capital program to complete construction of a Combined Sewer Overflow Control Facilities program - PFMB intends to study the plan before NBC completes the financing to ascertain affordability.

Quasi-Public Agency	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current Debt Service Coverage Level (2015)
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 the debt service requirement for RIIB loans	1.4x 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.

Narragansett Bay Commission



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 to Capitalization
Narragansett Bay Commission	--/AA/--	NBC: 1.25x RIIB: 1.35x	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.

* 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).

Rhode Island Turnpike and Bridge Authority (“RITBA”)



- RITBA issues toll revenue bonds secured by net revenues all of which are derived from the Claiborne Pell Bridge Toll facility.
- As of June 30, 2016, RITBA had \$56.2 million of toll revenue bonds outstanding.
- Net Revenue for fiscal year 2016 represent a 28% increase over fiscal year 2015 thereby generating coverage in excess of 2.00x.

Quasi-Public Agency	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current MADS Debt Service Coverage 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

Rhode Island Turnpike and Bridge Authority



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 <i>AA rating category is unlikely based on asset size/geographical concentration.</i>			
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.

* Coverage levels from Fitch Ratings, “Peer Review of U.S. Toll Roads,” December 2016.

Rhode Island Resource Recovery Corporation



- The Rhode Island Resource Recovery Corporation has only issued revenue bonds through a private placement.
- Terms of the private placement include an ABT and rate covenant.
- As of June 30, 2016, the Rhode Island Resource Recovery Corporation had \$29.1 million of debt outstanding.
- 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.

Quasi-Public Agency	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current Debt Service Coverage 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

Rhode Island Resource Recovery Corporation



Rating Agency Criteria for Utilities

Standard & Poor's

As part of the Financial Risk Profile, S&P reviews and scores the following factors:

Debt Service		Debt to Capitalization		
<u>Score</u>	<u>Coverage</u>	<u>Days' Cash</u>	<u>Actual Cash</u>	<u>Capitalization</u>
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%

Rhode Island Department of Transportation



- Rhode Island Department of Transportation (“DOT”) issues GARVEE Bonds which are secured by Federal highway reimbursement and no pledge of State revenues.
- Following the issuance in October 2016, \$539.9 million of GARVEEs are currently outstanding.
- Standard ABT for GARVEE Bonds is 3.00x, which is what the Rhode Island GARVEE bonds have and the rating agencies view this as a strong additional bonds test.
- Some GARVEE issuers have a 4.0x ABT and one has a 5.0x ABT. For Rhode Island, a stronger ABT would severely hamper the ability to issue more GARVEEs and would not necessarily result in a higher rating.
- Based on projections, debt service coverage by Federal highway reimbursements is about 4.0x in 2017 and grows to 4.3x in 2020.

Underlying Borrower	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current MADS Debt Service Coverage 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

Rhode Island Department of Transportation

Grant Anticipation Revenue Bonds



Rating Agency Criteria for GARVEEs

Moody's	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.		
Standard & Poor's	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		
Issuer	Ratings (M/S/F)	Additional Bonds Test	Debt Service Coverage*
Rhode Island	A2/AA/--	3.0x	4.5x
Delaware	A1/AA/--	3.0x	13.3x
District of Columbia	A2/AA/--	3.0x	12.8x
Georgia	A2/AA-/A+	3.0x	6.6x
Idaho	A2/--/A+	3.33x	4.5x
Kentucky	A2/AA/A+	4.0x	6.5x
Maine	A2/--/A+	3.0x	8.5x
Michigan	A2/AA/--	3.0x	7.7x
Mississippi	Aa3/AA/--	\$375mm**	6.6x
Montana	A2/AA/--	3.0x	24.6x
New Hampshire	A2/AA/--	3.0x	8.2x
North Carolina	A2/AA/A+	3.0x	9.9x
Ohio	Aa2/AA/--	5.0x	7.9x
Oklahoma	A2/--/A+	3.0x	21.6x
Washington	A2/AA/--	3.5x	6.3x
West Virginia	A2/AA/--	3.0x	41.4x

* 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/legregs/directives/notices/n4520240/n4520240_t1.cfm

**The State of Mississippi's GARVEE bond programs has an aggregate debt limitation rather than one based on coverage.

Rhode Island Airport Corporation



- The Rhode Island Airport Corporation’s \$266.0 million Airport Revenue Bonds were downgraded in June 2016 by Moody’s from A3 to Baa1.
- These bonds are also rated by Fitch and Standard & Poor’s at BBB+.
- As cited by Moody’s debt service coverage for RIAC has ranged from 1.14x in 2011 to 1.23x in 2015. Moody’s reports the debt service coverage median in 2015 for all airports as 1.60x and 1.52x for airports rated Baa1.
- One factor Moody’s cited that could cause the rating to go up is “maintenance of net revenue DSCRs [debt service coverage ratios] above 1.5 times.”
- The Corporation’s fiscal year 2016 results are generally consistent with to slightly weaker than fiscal year 2015 results.

Underlying Borrower	Indenture Required Additional Bonds Test	Recommendations for Debt Affordability Measure	Current Debt Levels
Rhode Island Airport Corporation	<p><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+)</p> <p><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+/-)</p>	1.75x coverage when including the Coverage Account Ending Balance and debt per enplaned passenger to \$100.	1.76x coverage and \$137 per enplaned passenger

Rhode Island Airport Corporation



Rating Agency Criteria for Airports

Fitch Ratings	<p>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:</p> <p>BBB: Net Debt to Cash Flow Available for Debt Service (CFADS)): $\leq 4x$ BB: Net Debt to Cash Flow Available for Debt Service (CFADS)): $\geq 4x$</p>				
Moody's Investors Service	<p>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:</p>				
	Rating Category	Aaa	Aa	A	Baa
	Debt Service Coverage	$\geq 2.5x$	$1.75x - 2.5x$	$1.3x - 1.75x$	$1.1x - 1.3x$
Debt per O&D Enplaned Passenger	$< \$25$	$\$25 - \50	$\$50 - \75	$\$75 - \100	
Standard & Poor's	<p>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:</p> <p><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.</p> <p><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.</p>				

Rhode Island Airport Corporation



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	<u>Airport Revenue:</u> Baa1/BBB+/BBB+ <u>Special Facility:</u> 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.

Rhode Island Health and Educational Building Corporation



- RIHEBC issues debt with municipalities as the underlying borrower through the Public Schools Revenue Bond Financing Program, whereby the general obligation of the municipality secures the debt.
 - As of June 30, 2015, RIHEBC had \$479.5 million of debt outstanding in the Public Schools bond program.
 - Debt affordability measures for these municipalities is considered in Phase Three.
- RIHEBC issues debt for public universities either in a pooled program or on a stand-alone basis for the University of Rhode Island.
- As of June 30, 2016, RIHEBC had the following amounts outstanding for public higher education debt:
 - \$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

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 Health and Educational Building Corporation



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:					
	<u>Score</u>		<u>Burden</u>			
	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 Bonds¹	Aa3/A+/-	1.00x	N/A	7.5%	3.9%	7.0x
University of Rhode Island – Auxiliary Enterprise Revenue Bonds¹	A1/A+/-	1.20x	1.5x	7.5%	3.9%	7.0x
University of Connecticut	Aa2/AA-/-	1.25x	7.2x	14.9%	12.54%	7.2x
University System of New Hampshire	Aa3/AA-/-	N/A	2.9x	12.7%	9.06%	4.5x
University of Massachusetts	Aa2/AA-/AA	1.00x	1.7x	11.0%	6.83%	9.4x
University of Vermont & State Agricultural College	Aa3/A+/-	N/A	2.8x	12.7%	5.04%	5.5x

Source: Statistics provided from recently published rating reports.

1. Debt of URI is jointly secured with other RIHEBC pooled Higher Education Revenue Bonds (both Education and General Revenue Bonds and Auxiliary Enterprise Revenue Bonds) which includes debt service of all State Colleges (URI, Rhode Island College and the Community College of Rhode Island)..

Rhode Island Infrastructure Bank (“RIIB”)



- The Rhode Island Infrastructure Bank currently administers four core pooled loan programs and a number of smaller programs.

Loan Programs	Debt Outstanding (2016)
Water Pollution Control Revenue Bonds	\$486,640,000
Safe Drinking Water	\$163,835,000
Municipal Road and Bridge Revolving Loan Fund	Newly Established
Efficient Buildings Fund	Newly Established

- Bonds have been issued in multiple series leveraging both the clean water state revolving loan fund and drinking water state revolving loan fund.
- The Water Pollution Control Revenue Bonds and Safe Drinking Water bond programs provide subsidized financing to governmental entities throughout the State for eligible wastewater and drinking water projects, respectively.
- RIIB’s largest clean water borrower and three largest drinking water revenue borrowers have their respective rate structures subject to the approval of the Public Utilities Commission and further require the approval of the Division of Public Utilities & Carriers to issue debt.

Quasi-Public Agency	Recommendations for Debt Affordability Measure	Current Debt Levels
Rhode Island Infrastructure Bank	<p>Require all prospective borrowers to maintain a minimum of 1.25x debt service coverage on loans and maintain RIIB’s asset to liabilities ratios at a minimum of 1.5x.</p> <p>Provide notice to PFMB of any rating action</p>	Asset to liabilities ratio of 1.5x for Clean Water and 1.6x for Drinking Water.

Rhode Island Infrastructure Bank



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

Rhode Island Housing and Mortgage Finance Corporation



- 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 have been refinancing the outstanding bonds with bonds issued under their other bonding programs.
 - They anticipate all of the outstanding moral obligation debt to be retired in four to five years.

Quasi-Public Agency	Recommendations for Debt Affordability Measure	Current Debt Level
Rhode Island Housing and Mortgage Finance Corp.	Target minimum PADR of 1.10x based on Moody's rating criteria for Aaa rating. Provide notice to PFMB of any rating action	PADR of 1.19x (Single-Family) and 1.12x (Multi-Family)

Rhode Island Housing and Mortgage Finance Corporation



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
	<u>Cash Flow Projections:</u> 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.
	<u>Historical Financial Performance:</u> 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.

Issuer	Single-Family			Multi-Family		
	Ratings (M/S/F)	PADR (2015)	Profitability (2015)	Ratings (M/S/F)	PADR (2015)	Profitability (2015)
Rhode Island Housing Authority	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.

Rhode Island Student Loan Authority (“RISLA”)



- There are two distinct pooled loan programs administered by the Rhode Island Student Loan Authority (“RISLA”): (i) a Federal Family Educational Loan Program (FFELP), and (ii) a state-based Supplemental Loan Program.
- These financings are undertaken to finance origination of student loans, and provide liquidity for lenders.
- The loans are used as collateral for repayment of the debt and the rating agencies and markets require over-collateralization of the debt instruments with the loans.
- The loan repayments by students, parents, the guarantor, the insurer or the re-insurer pay debt service on the bonds or notes.
- Since July of 2010, FFELP Loans no longer were being originated, and therefore, since no new bonds, except refunding bonds can be issued.

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%

Rhode Island Student Loan Authority



Rating Agency Criteria for Student Loan Bonds

Fitch Ratings	<p>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.</p> <p>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.</p> <p>Reviews Overcollateralization: Difference between asset balance and outstanding bonds.</p> <p>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).</p>
Standard & Poor's	<p>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.</p>

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.