

---

# State of Rhode Island



## Rating Agency Pension and Debt Ratios

*October 27, 2016*

# Debt Affordability – Rating Agency Liability Ratios



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			
Pension Funded Ratio			✓
Pension Funding Levels	✓		✓
Unfunded Pension Liabilities Per Capita			✓
Pension Liabilities to Personal Income			✓
3-Yr Avg Pension Liability to Revenues		✓	
Debt + Unfunded Pension Liability to Personal Income	✓		

# Fitch Debt Ratio



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

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.*

# Fitch – Net Pension Liability



- Considers defined benefit pension plans only
- Evaluates pension plans for which the government has responsibility
- To improve comparability among plans, Fitch uses the reported unfunded liability and makes an 11% adjustment in actuarial liability for every 1% variance between 7% and the plan's investment return assumption

# Moody's Debt Ratios



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%	80% - 120% (RI = 84%)	120% - 180%	Greater than 180%

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

# Moody's – Net Pension Liability



- Assigns liabilities to other participating governments in cases where state's reported liabilities are inclusive of all the sponsoring entities of multiple-employer cost-sharing plans.
- Uses a market-determined discount rate.
- Resulting adjusted net pension liability is averaged over a three year period
- Average adjusted net pension liability divided by state's most recent total governmental fund revenues.

# Moody's – Adjusted Net Pension Liability



## Applying Moody's Adjustments to a Government's Pension Liability Indicative Calculation Example

Indicative Calculation Example  
(\$000)

Reported AAL	\$50,000,000
Asset Market or Fair Value	\$40,000,000
Assumed investment rate of return	8.00%
Valuation date	6/30/2010
Citibank Pension Liability Index at valuation date	5.47%
Government A contributions to plan / Total employer contributions to plan (i.e. Government A's proportional share)	17.0%
AAL projected forward 13 years at 8.00%	\$135,981,186
Discounted at 5.47%	\$68,045,989
Adjusted net pension liability (ANPL)	\$28,045,989
Government A's 17% share of ANPL	\$4,767,818
Government A's amortization of ANPL	\$397,975

# Standard & Poor's Debt Ratios



Indicator	Score:1	Score: 2	Score: 3	Score: 4
<b>Debt per Capita</b>	Below \$500	\$500 - \$2,000 (RI = \$1,672)	\$2,000 - \$3,500	Above \$3,500
<b>Debt to Personal Income</b>	Below 2%	2% - 4% (RI = 3.3%)	4% - 7%	Above 7%
<b>Debt Service to General Government Spending</b>	Below 2%	2% - 6%	6% - 10% (RI = 7.2%)	Above 10%
<b>Debt to Gross State Product</b>	Below 2%	2% - 4% (RI = 3.2%)	4% - 7%	Above 7%
<b>Debt Amortization (10 Years)</b>	80% - 100%	60% - 80% (RI = 79%)	40% - 60%	Less than 40%
<b>Pension Funded Ratio</b>	90% or above	80% - 90%	60% - 80%	60% or below (RI = 59.3%)
<b>Pension Funding Discipline</b>	Pension contribution is actuarially based and full funding of ARC. Total plan contributions > service cost + interest cost + amortization component (RI funding for last 19 years)	Pension contribution is NOT actuarially based and ARC is not fully funded. Total plan contributions > service cost + interest cost + amortization component	Pension contribution is actuarially based and full funding of ARC. Total plan contributions <= service cost + interest cost + amortization component	Pension contribution is NOT actuarially based and ARC is not fully funded. Total plan contributions <= service cost + interest cost + amortization component
<b>Unfunded Pension Liabilities per Capita</b>	Positive Adjustment: At or Below \$500 Negative Adjustment: At or above \$3500			
<b>Unfunded Pension Liabilities to Personal Income</b>	Positive Adjustment: At or Below 2% Negative Adjustment: At or above 7%			
<b>OPEB Risk Assessment</b>	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



# S&P Global – Net Pension Liability



- Uses pension liabilities derived from pension plan and state CAFRs reporting under GASB 67/68 standards, GASB 67 consultant reports and available GASB 68 allocation reports.
- Combines information across multiple pension plans to calculate the state's aggregated plan to the total pension liability (pension funded ratio) and funding progress.
- Uses cost-sharing multiple employer plan CAFRs or GASB 67 reports and uses the state's proportionate share of plan liabilities to calculate the state's net pension liabilities.