State of Rhode Island

Pension Advisory Working Group
Pension Reform and Credit Ratings Implications

November 2, 2023

PRAG

Introduction

- Each of the 3 major agencies (Moody's, S&P and Fitch) generally look at several key indicators when assessing ratings:
  - Economy, Financial Performance, Governance and Long-Term Liabilities
- Each agency publishes analytical methodologies that provide guidance as to how their different criteria are used to evaluate State creditworthiness.
- Long-term Liabilities have become a particular focus for agencies over the last ten years, often aggregating debt, pensions and other long-term liabilities together for their analysis.
- Investment Grade ratings range from Aaa/AAA to Baa3/BBB-, with agencies considering these bonds from lowest risk to medium risk.
- The Outlook on a rating can be either Negative, Stable, or Positive. If Negative or Positive, the likelihood of a medium-term change in the rating is higher than if the rating is Stable.
- Generally, a decision of whether to downgrade a Negative or upgrade a Positive outlook back to Stable occurs within a two-year timeframe.

	Moody's	**S&P/Fitch**
Investment Grade	Aaa	AAA
	Aa1	AA+
	Aa2	AA
	Aa3	AA-
	A1	A+
	A2	A
	A3	A-
	Baa1	BBB+
	Baa2	BBB
	Baa3	BBB-

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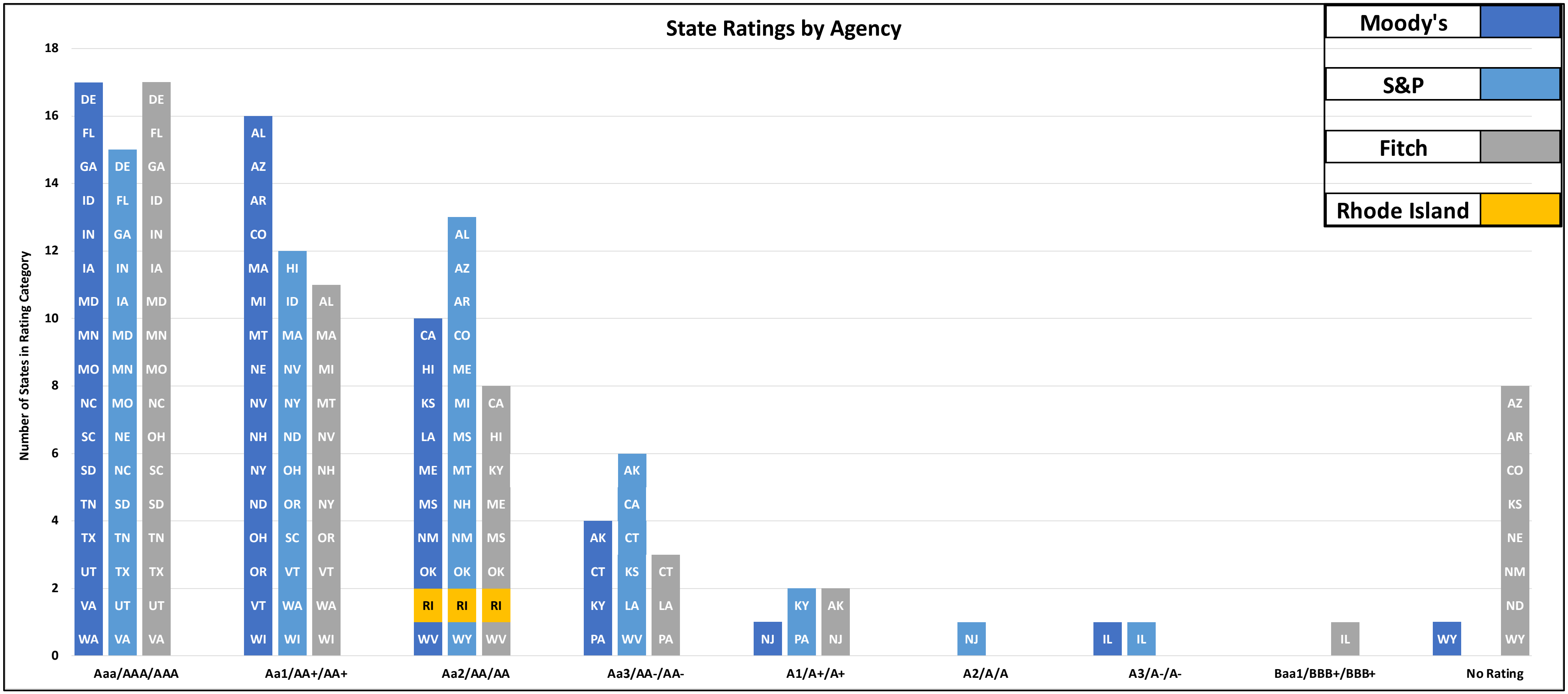
Sources: Moody's Investors Service, S&P Global Ratings, FitchRatings

2023 Rhode Island Strengths and Rating Agency Concerns

	Moody's: Aa2 ("Stable") July 26, 2023 and October 12, 2023	S&P: AA ("Stable") October 12, 2023	Fitch: AA ("Positive") October 18, 2023
Strengths	• Institutionalized governance practices such as semi-annual consensus revenue estimating conferences and out-year budget planning. • Constitutional requirements and sound policies regarding spending caps, surplus set asides, and use of capital reserves have protected operating margins and reserves.	• Strong budget framework, good financial management, historically steady budget performance, outperforming annual budgets, and stable revenue growth. • Stable reserve and liquidity position, supported by statutory reserve requirement and new supplemental reserve in FY2024 funded by general revenue.	• Generally declining LT liability as % of personal income, improvements in debt management. • ***Growing financial relief from pension changes enacted more than a decade ago.*** • Prudent fiscal management, ***moderate long-term liability position***, and conservative budget management practices.
Concerns	• Long-term economic and demographic underperformance, with below-average long-term employment growth rates. • Above-average dependence on lottery and gaming revenues in saturated market. • ***High pension and debt liabilities, despite positive effects of reforms.***	• Adequate economic profile, GSP and labor market growth lagging the U.S. • Stagnating population growth trends though wealth and income indicators closely aligned with the U.S. average. • Moderate debt burden, ***improved but relatively low pension funding ratios*, with pension funding discipline that we view as only adequate**	• Rhode Island's economy, weighted toward education and health services, has grown slower than national trends over time. • Weaker demographic profile than most comparable states and to U.S. averages. • Below average long-term economic growth.

Sources: Moody's Investors Service, S&P Global Ratings, FitchRatings

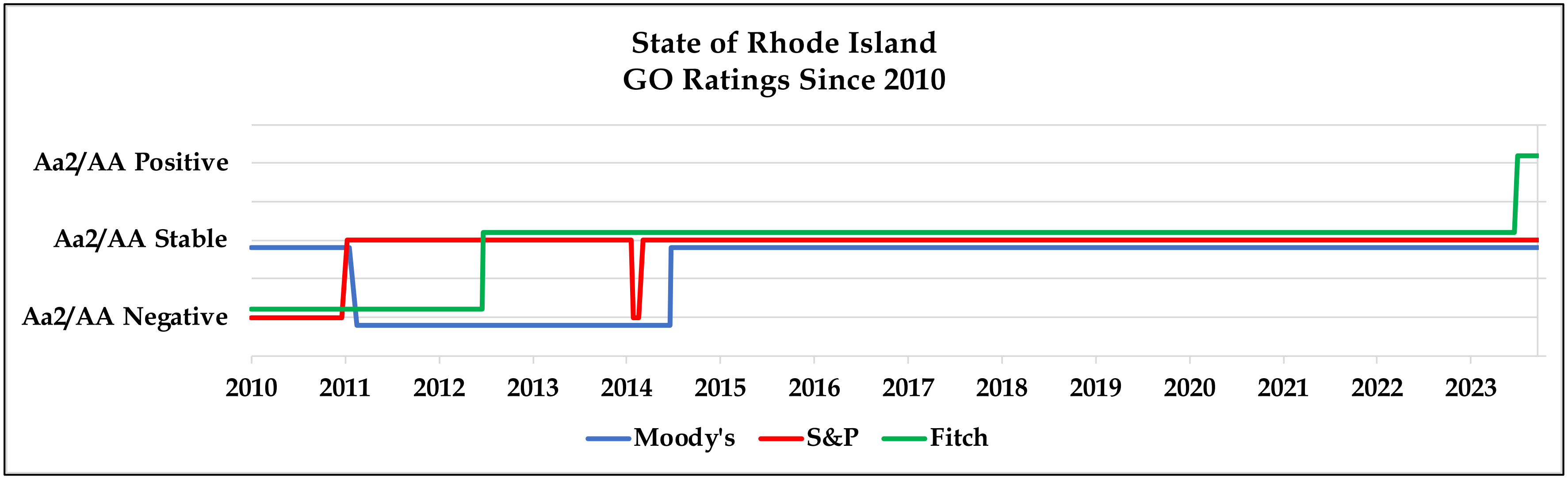
State Ratings by Agency



State of Rhode Island Current Ratings

- ‘Aa2’ by Moody’s (equivalent to an ‘AA’ rating), ‘Stable’ Outlook
- ’AA’ by S&P, ‘Stable’ Outlook
- ‘AA’ by Fitch, ‘Positive’ Outlook

Rhode Island General Obligation Ratings Since 2010



- In May 2011, Moody's revised its outlook on Rhode Island **to** 'negative' **from** 'stable,' citing the, *"…potential impact of **rapidly escalating pension costs…(which are) set to double in two years**…raising the likelihood that it will…fail to achieve the fiscal breathing room needed to sustain a financial position commensurate with other Aa2-rated states."*

- In Moody's report in October 2011, they reported on the RIRSA of 2011 stating that *"…**pension reforms…would be credit positive for Rhode Island**…(however) consideration of the reforms is complicated by a state superior court ruling in September that an implied contract exists between the state and its employees that protects pension benefits…"*

- In July 2011, Fitch revised its outlook upwards to 'stable' from 'negative' noting that, *"…Pension funding levels are low and are a concern, **but the state is committed to addressing this issue in a special fall session**…"*

Moody's Scorecard and Pension Analysis

Moody's Rhode Island Scorecard

- Moody's uses four main indicators of criteria to issue its ratings: Economy (30%), Financial Performance (20%), Governance (20%), Leverage (30%)
- Scorecards are point-in-time and approximate, and don't consider every factor that may be relevant for each state, so ratings don't necessarily match scorecard outcomes.
- Leverage includes two calculations to form its score:
  - **Long-term Liabilities Ratio** (Debt + Adjusted Net Pension Liability (ANPL) + Adjusted Net OPEB Liability (ANOL) + Other LT Liabilities) / Own-Source Revenue
  - **Fixed Costs Ratio** (Adjusted Fixed Costs (including amount required to 'tread water' on Pension Liabilities) / Own-Source Revenue)
- In 2022, Leverage metrics for the State dropped due to the increase in:
  - The discount rate Moody's uses for Adjusted Net Pension Liability
  - Own-Source Revenues (the denominator of both ratios).
- The State scorecard indicates an 'Aa1' rating but is notched downward to 'Aa2' due to economic and demographic factors.

Exhibit 14

US states and territories rating methodology scorecard

State of Rhode Island

	Measure	Weight	Score
Economy			
Resident Income (PCI Adjusted for RPP / US PCI)	98.3%	15%	Aa
Economic Growth (5-year CAGR real GDP - 5-year CAGR US real GDP)	-1.0%	15%	Aa
Financial performance			
Financial performance	Aa	20%	Aa
Governance/Institutional Framework			
Governance/Institutional Framework	Aaa	20%	Aaa
Leverage			
Long-term liabilities ratio (adjusted long-term liabilities / own-source revenue)	162.6%	20%	Aa
Fixed-costs ratio (adjusted fixed costs / own-source revenue)	8.6%	10%	Aaa
Notching factors			
Very limited and concentrated economy			NA
Scorecard-Indicated Outcome			Aa1
Assigned rating			Aa2

Source: US Bureau of Economic Analysis, State annual financial reports, Moody's Investors Service

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Sources: Moody's Investors Service Credit Opinion dated July 26, 2023

Pension Liability Impact on Moody's Scorecard Rating

- We measured the Long-Term Liabilities Ratio assuming the Moody's Adjusted Net Pension Liability were based on assumed contributions without RIRSA of 2011 to see if there were differences in the metrics.
- The Long-Term Liabilities Ratio would grow slightly from 162.6% to 173.7%, remaining in the same 'Aa' category.

Long-Term Liabilities Ratio (Debt + ANPL + Adjusted Net OPEB + Other Long-term Liabilities) / Own-Source Revenue)	**Sub-factor Weight**	**Aaa**	**Aa**	**A**	**Baa**
WITH REFORM = 162.6%	20%	≤ 100%	**100% - 200%**	200% - 350%	350% - 500%.
WITHOUT REFORM = 173.7%	20%	≤ 100%	**100% - 200%**	200% - 350%	350% - 500%.

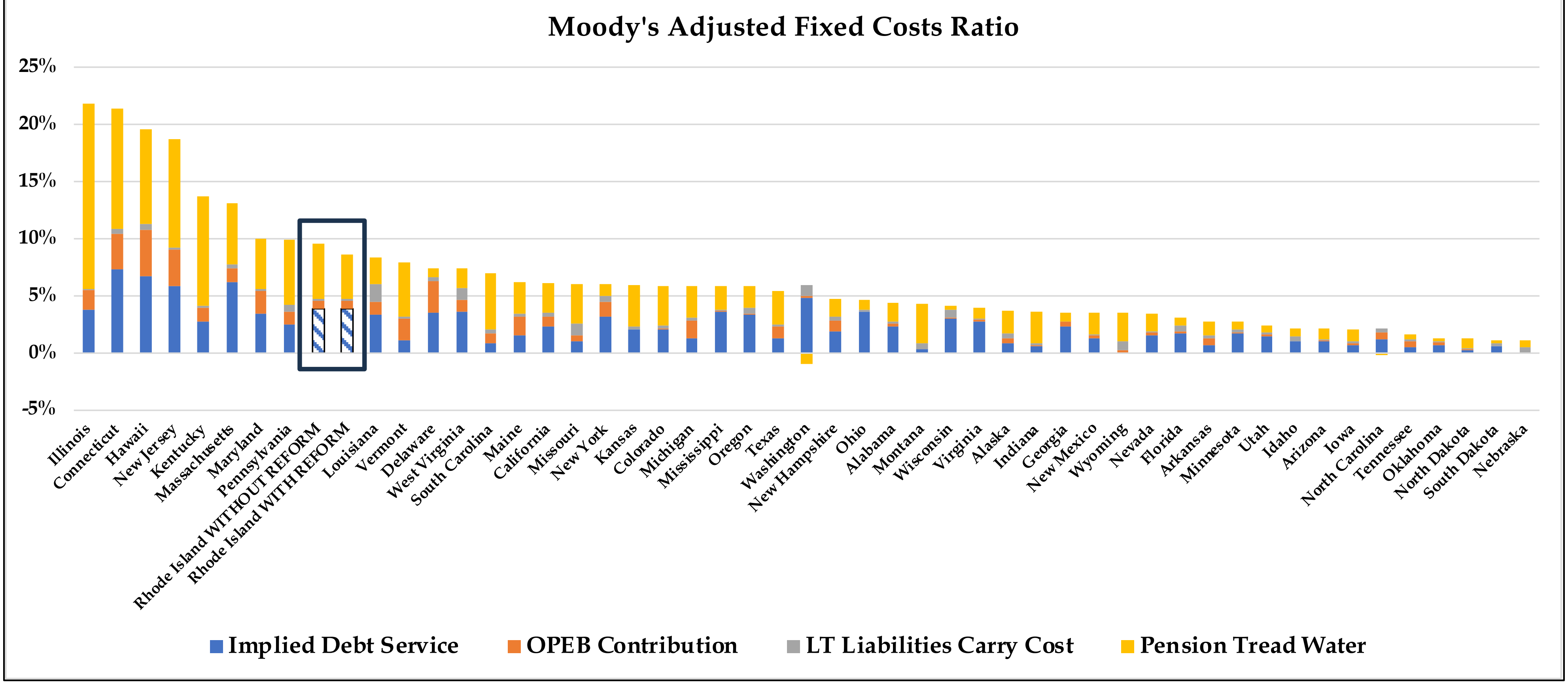
- The Fixed Costs Ratio would increase from 8.6% to 9.5%, remaining in the same 'Aaa' category.
- However, both ratios would be worse than with pension reform.

Fixed-Costs Ratio (Adjusted Fixed Costs / Own-Source Revenue)	**Sub-factor Weight**	**Aaa**	**Aa**	**A**	**Baa**
WITH REFORM = 8.6%	10%	**≤ 10%**	10 - 15%	15 - 20%	20 - 25%
WITHOUT REFORM = 9.5%	10%	**≤ 10%**	10 - 15%	15 - 20%	20 - 25%

Sources: PRAG Estimates based on Moody's Investors Service Sector Profiles dated Sep. 7, 2022 and Sep. 26, 2023.

Moody's Fixed Costs - With and Without Pension Reform

- If reform were not pursued by the State, assuming Implied Debt Service, OPEB Contribution and LT Liabilities Carry Cost are held constant, the Fixed Cost ratio would increase from 8.6% to 9.6%, still ranking 9th overall, however closer to Pennsylvania's 9.9% than Louisiana's 8.3%.



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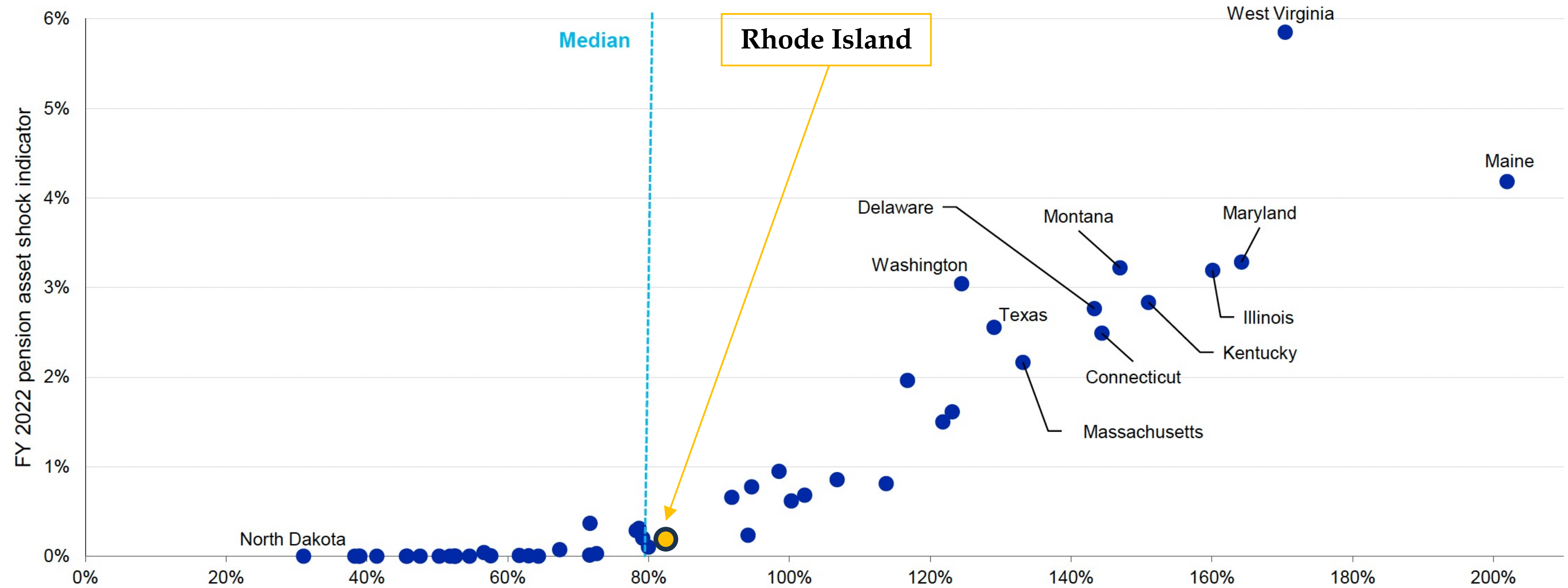
Source: GRS, Final Plan Designs Full Projections File, 6% Scenarios, 10/30/2023, Moody's Investors Service

Moody's - Pension Size Increases Sensitivity to Investment Returns

Pension assets: States continue to have relatively low risks of large pension investment losses relative to budget

Exhibit 9

States with a larger relative size of pension assets are more sensitive to investment losses



Sources: Moody's Investors Service Sector Profile dated September 26, 2023.

S&P Methodology and Scorecard

S&P U.S. State Rating Methodology

– S&P's State Rating Methodology includes five main categories that S&P analyze using various metrics and score on a scale from 1 (strongest) to 4 (weakest).

– S&P averages the scores of the five main categories to arrive at an anchor score. A state rating is then determined by applying the positive and negative overriding factors and holistic analysis as detailed below.

Government Framework	Financial Management	Economy	Budgetary Performance	Debt and Liability Profile
• Fiscal Policy Framework • System Support • Intergovernmental Funding	• Financial Management Assessment • Budget Management	• Demographic Profile • Economic Structure • Wealth and Income Indicators • Economic Development	• Budget Reserves • Liquidity • Tax/revenue Structure • Revenue Forecasting • Service Levels • Structural Performance	• Debt Burden • Pension Liabilities • OPEB Risk Assessment

Anchor

Holistic Analysis
(One-Notch Adjustment, Subject to Any Applicable Rating Cap)

Overriding Factors
- System Support
- Willingness to Support Debt
- Liquidity and Capital Market Access
- High Level of Expected Future Debt/Liabilities
- Weak Structural Budget Performance
- High Level of Contingent Liquidity Risk

State Rating

Source: S&P Global Ratings, U.S. State Ratings Methodology dated October 17, 2016.

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S&P's Rhode Island Scorecard

- S&P gives the State a total score of '1.8' which corresponds to an 'AA+' rating.
- However, they have notched down the rating to 'AA' due to:
  - The state's recent history of tepid economic and demographic growth as the broader U.S. economy expands;
  - Steeper cyclical economic contractions relative to the nation during recessions;
  - A relatively low pension and OPEB funding position;
  - Higher service demands compared with those of other states; and
  - Moderate debt and liability burden compared with that of higher-rated peers.
- These factors could make it more difficult for Rhode Island to sustain structural budgetary performance and force one-time budget solutions or substantial reserve drawdowns.

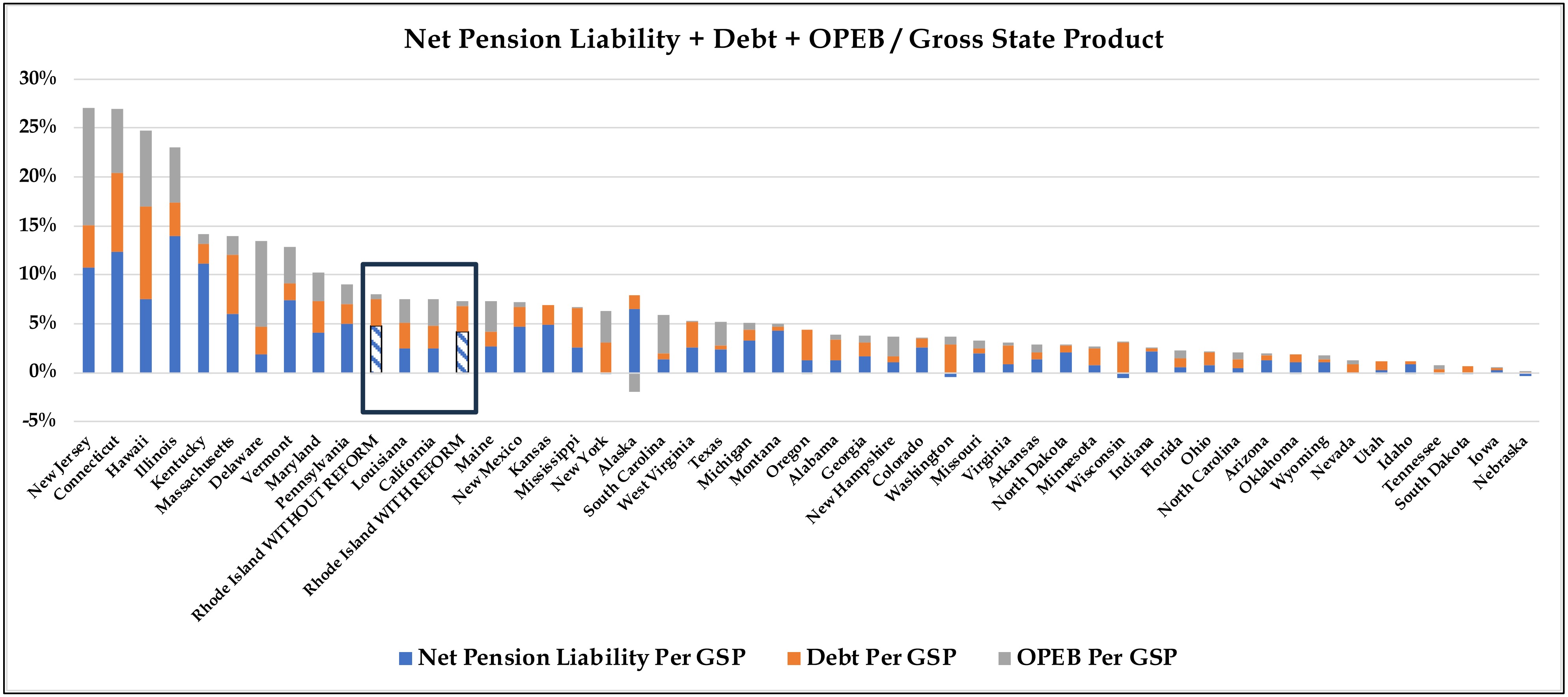
State of Rhode Island General Obligation S&P Scorecard

S&P Category	Score
1. Government Framework	1.2
2. Financial Management	1.5
3. Economy	2.5
4. Budgetary Performance	1.7
5. Debt and Liability Profile	2.3
S&P Category	**Score**
Overall Composite Score	1.8
Anchor Rating	*AA+*
Score Range for Current Anchor Rating	1.6-1.8
Overiding Factors:	Notch Down
Scorecard Rating	*AA*
Current Rating	*AA*

Source: S&P Global Ratings Report dated July 24, 2023.

S&P's Liability Burden - With and Without Pension Reform

- If reform were not pursued by the State, assuming Debt and OPEB are held constant, the (Net Pension Liability + Debt + OPEB) / Gross State Product ratio would increase from 7.3% to 8.0%, moving the State behind Louisiana and California.



Source: GRS, Final Plan Designs Full Projections File, 6% Scenarios, 10/30/2023, S&P Global Ratings

Fitch Ratings Criteria

Fitch Key Rating Driver Assessment Applied to Rhode Island

Revenue Framework 'a'	Fitch anticipates that Rhode Island's revenues will grow on a nominal basis over the long term given Fitch's expectations for slow economic growth in the state. The state has complete legal control over its revenue system through mechanisms such as base-broadening and the ability to levy new taxes and fees and to adjust rates.
Expenditure Framework 'aa'	The state maintains ample expenditure flexibility with low carrying costs and the broad expense-cutting ability common to most U.S. states. Medicaid remains a key expense driver and a focus of expenditure-control efforts. Moderate revenue growth prospects temper Fitch's assessment of the natural pace of spending relative to expected revenue growth, with growth in spending likely to exceed new revenue formation in the absence of policy action.
Long-term Liability Burden 'aa'	**Rhode Island's long-term liabilities are moderate but well above the median for U.S. states. Pension obligations exceed outstanding debt, driven in part by past funding practices and the state carrying a sizable share of teacher liabilities. Pensions stabilized following statutory benefit and assumption changes a decade ago that were validated in court, and <u>recent trends suggest a potentially material improvement in the long-term liability trajectory.</u>**
Operating Performance 'aaa'	Rhode Island has high gap-closing capacity, wide-ranging budgetary management powers and a strong commitment to maintaining a prudent fiscal reserve through economic cycles. Policy measures implemented over the past decade have positioned the state effectively to deal with moderate economic downturns while maintaining a high level of financial flexibility.

Source: FitchRatings, New Issue Report dated October 18, 2023.

Debt Affordability

Debt Affordability

- In 2016, the General Assembly enacted legislation that requires the Public Finance Management Board (PFMB) to undertake a debt affordability study every two years to recommend limits of indebtedness for all issuers of public debt in the State.
- For the State, the debt affordability study considers not only all tax-supported debt of the State but also pension and OPEB liabilities of the State.
- The Recommended Long-Term Liability Affordability Measures in the 2021 Debt Affordability Study are summarized below:

Criteria	Debt Affordability Study Recommended Limit	FY 2022 Levels
Debt Service on Tax-Supported Debt to General Revenues	7.00%	5.17%
Net Tax-Supported Debt as Percentage of Personal Income	4.00%	3.14%
Rapidity of Repayment over 10 Years	At least 50% in 10 years	68.5%
Net Tax-Supported Debt Service + Pension ARC + OPEB ADC as a Percentage of General Revenues	18.00%	13.73%
Net Tax-Supported Debt + Pension Liability (UAAL) + OPEB Liability as a Percentage of Personal Income	12.00%	8.44%
Pension ARC and OPEB ADC Funding	Fund 100% of Pension ADC, OPEB ADC	100%

- The debt affordability study also includes a calculation of the additional debt capacity that the State has for new State tax-supported debt over the next ten-year period while keeping within the recommended limits.
- The debt capacity calculation incorporates projections for General Revenues, Personal Income, Pension and OPEB liabilities.

Debt Capacity – 2021 Debt Affordability Study

- In the 2021 Debt Affordability Study, the State was estimated to have approximately $3.3 billion in available bonding capacity through 2033.

	Additional Debt Capacity Through 2033 @ 5.00% Interest, 20 Year Term Debt, Pension and OPEB Ratios						
Fiscal Year	Additional Debt Capacity Through 2033**	Debt Service on Additional Debt Capacity***	Total Debt Service to Revenues Recommended Limit: 7.0%	Total Debt to Personal Income Recommended Limit: 4%	10-Year Payout Recommended Minimum: 50%	Tax-Supported DS + Pension ARC + OPEB ADC to Revenues Recommended Limit: 18%	Tax-Supported Debt + Pension + OPEB UAAL to Personal Income Recommended Limit: 12%
2022	0	0	5.17%	3.14%	69%	13.73%	8.44%
2023	736,835,000	0	6.29%	2.98%	72%	14.85%	7.92%
2024	193,865,000	59,125,547	**7.00%**	3.88%	61%	15.54%	8.43%
2025	297,970,000	74,681,776	6.93%	3.96%	57%	15.45%	8.14%
2026	268,455,000	98,591,660	**7.00%**	3.89%	57%	15.50%	7.69%
2027	504,620,000	120,133,183	6.87%	3.77%	58%	15.39%	7.10%
2028	308,810,000	160,625,198	6.83%	**4.00%**	57%	15.43%	6.91%
2029	302,755,000	185,404,911	6.70%	**4.00%**	59%	15.24%	6.57%
2030	241,330,000	209,698,756	**7.00%**	**4.00%**	61%	15.49%	6.13%
2031	72,665,000	229,063,699	**7.00%**	3.91%	64%	15.58%	5.60%
2032	230,210,000	234,894,527	**7.00%**	3.65%	68%	15.54%	4.95%
2033	150,185,000	253,367,173	**7.00%**	3.54%	71%	15.50%	4.47%
2034	0	265,418,406	**7.00%**	3.36%	74%	15.55%	3.91%
2035	0	265,418,406	6.78%	3.03%	78%	10.28%	3.29%
2036		265,418,406	6.50%	2.71%	81%	10.01%	2.87%
2037		265,418,406	6.33%	2.41%	85%	9.72%	2.46%
2038		265,418,406	6.12%	2.12%	88%	7.98%	2.12%
	3,307,700,000	2,952,678,457					

*** Maximum annual capacity to remain within liability limits. Assumes full amount issued in year shown with debt service starting in following year.*

**** Debt service on Additional Debt Capacity is shown through 2038, but debt service is over 20 years for each issuance.*

Capacity is for all tax-supported debt (G.O., COPs and other tax-supported debt)

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Debt Capacity – Without Pension Reform, Actual Contributions

- Assuming actual contributions remain the same with and without pension reform, GRS provided estimated Annual Required Contribution (ARC) and Unfunded Actuarial Accrued Liability (UAAL) for State Employees and Teachers for the same projection period as the 2021 Debt Affordability Study.
- We applied the projected ARC and UAAL without the pension reform to the 2021 Debt Affordability Study model to determine how the borrowing capacity and debt affordability metrics of the State would be impacted.
- Based on these projections, the State would currently exceed the Recommended Long-Term Liability Affordability Measures:
  - Tax-Supported Debt Service + Pension ARC + OPEB ADC to Revenues: Exceeds 18% through 2028
  - Tax-Supported Debt + Pension UAAL + OPEB UAAL to Personal Income: Exceeds 12% through 2025

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* Source: GRS for Pension Advisory Working Group estimates of Pension ARC and UAAL for State Employees and Teachers without pension reform. State Police and Judges remain the same as the 2021 Debt Affordability Study.

Debt Capacity – Without Pension Reform, Actual Contributions

- The State's debt capacity decreases **from $3.3 billion to $257 million** with the Tax-Supported Debt Service + Pension ARC + OPEB ADC to Revenues constrained at 18%.

	Additional Debt Capacity Through 2033 @ 5.00% Interest, 20 Year Term Debt, Pension and OPEB Ratios						
Fiscal Year	Additional Debt Capacity Through 2033**	Debt Service on Additional Debt Capacity***	Total Debt Service to Revenues Recommended Limit: 7.0%	Total Debt to Personal Income Recommended Limit: 4%	10-Year Payout Recommended Minimum: 50%	Tax-Supported DS + Pension ARC* + OPEB ADC to Revenues Recommended Limit: 18%	Tax-Supported Debt + Pension* + OPEB UAAL to Personal Income Recommended Limit: 12%
2022	0	0	5.17%	3.14%	69%	**19.25%**	**14.88%**
2023	0	0	6.29%	2.98%	72%	**20.33%**	**14.09%**
2024	0	0	5.78%	2.86%	69%	**19.85%**	**13.33%**
2025	0	0	5.43%	2.76%	64%	**19.49%**	**12.60%**
2026	0	0	5.07%	2.41%	66%	**19.13%**	11.62%
2027	0	0	4.57%	2.08%	69%	**18.68%**	10.69%
2028	180,530,000	0	3.81%	1.83%	71%	**18.06%**	9.97%
2029	0	14,486,194	3.53%	1.82%	71%	17.92%	9.48%
2030	0	14,486,194	3.43%	1.63%	75%	17.98%	8.79%
2031	0	14,486,194	3.14%	1.45%	79%	17.86%	8.09%
2032	70,840,000	14,486,194	3.09%	1.29%	84%	**18.00%**	7.40%
2033	0	20,170,579	2.92%	1.20%	85%	17.99%	6.77%
2034	0	20,170,579	2.78%	1.05%	88%	**18.00%**	6.05%
2035	0	20,170,579	2.62%	0.91%	90%	17.97%	5.33%
2036	0	20,170,579	2.41%	0.78%	91%	17.95%	4.61%
2037	5,905,000	20,170,579	2.29%	0.66%	92%	17.95%	3.88%
2038		20,644,412	2.15%	0.55%	93%	**18.00%**	3.16%
	257,275,000	179,442,084					

*** Maximum annual capacity to remain within liability limits. Assumes full amount issued in year shown with debt service starting in following year. *** Debt service on Additional Debt Capacity is shown through 2038, but debt service is over 20 years for each issuance.*
Capacity is for all tax-supported debt (G.O., COPs and other tax-supported debt)

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* Source: GRS for Pension Advisory Working Group estimates of Pension ARC and UAAL for State Employees and Teachers without pension reform. State Police and Judges remain the same as the 2021 Debt Affordability Study.