FLORIDA RETIREMENT SYSTEM

Despite Reforms, Remaining Challenges are Undermining FRS Member Retirement Security

Prepared by:
Pension Integrity Project at Reason Foundation
August 21, 2019—Preliminary Draft
A History of Weakening Solvency (2000-2018)

Source: Pension Integrity Project analysis of FRS actuarial valuation reports and CAFRs.
FRS Unfunded Liabilities are Growing Faster than the Florida Economy

Source: Pension Integrity Project Analysis of FRS valuation reports and CAFRs, Federal Reserve of St. Louis Data for the Florida gross domestic product.
How a Pension Plan is Funded

Actuarial Assumptions

- Inflation Rate
- Salary Growth
- Mortality / Longevity
- Interest Rate
- Disability Rate
- Retirement Rate
- Investment Rate of Return
- Discount Rate

Actuarially Calculated Defined Benefit Normal Cost

- Employee Normal Cost
- Employer Normal Cost
- Employee Total Contribution

Actuarially Calculated Unfunded Liability Amortization Payment

- 100% Employer Paid
- Actuarially Determined Employer Contribution
REVIEWING PRIOR REFORMS
Major Reforms to FRS

2000 – House Bill 2393

• Provided a defined, participant-directed contribution (DC) plan option to FRS members.
• One-year vesting for the portability of employer contributions.
• Based retirement benefits on market returns rather than a fixed benefit guarantee.
• Existing members given the option to switch future FRS participation into the DC plan without losing their already earned pension benefits.

2011 – Senate Bill 2100

• Created a new benefit tier for “special-risk” new hires.
• Renamed the FRS defined benefit plan the Florida Retirement System “Pension Plan”.
• Renamed the FRS defined contribution plan from the Public Employee Optional Retirement Program to the Florida Retirement System “Investment Plan.”
• Eliminated post-retirement increases on pension benefits earned after July 2011.
• Decreased both employer and employee contribution rates effective July 2012.
• Led to unfunded accrued liabilities decreasing from $16.7 billion to $15.6 billion.

2017 – Senate Bill 7022

• Defaults new employees hired after January 2018 into the FRS Investment Plan (DC plan) if no election taken after eight months of employment.
Previous FRS Reforms Have Not Put the Florida Retirement System on a Path to Sustainability

- The historic 10-year bull market has not helped FRS recover
  - The 2008 financial crisis weakened FRS’s funded status, but since then markets have recovered while pension funding has not

- Reducing benefits in 2011 reduced some costs at the expense of inflation protection for retirees, but it did not fundamentally address why pension debt continues to grow

- Defaulting new FRS members into the Investment Plan in 2018 was better aligned with workforce mobility trends and reduced future financial risk, but it did not address why pension debt has persisted for a decade

- For three straight years (2016, 2017 & 2018) FRS’s consulting actuary has warned that the assumed rate of return is not reasonable

- Additional reforms are necessary to ensure long-term solvency
Current Retirement Option Sets

**FRS Investment Plan**
*default option as of January 1, 2018*

**Type:**
- Defined Contribution Retirement Plan

**Employee Contribution:**
- 3%

**Employer Contribution:**
- 3.3% to member IP account
- 3.56% to legacy FRS Pension Plan unfunded liabilities

**Vesting:**
- 1 year

**Investment Options:**
- Investment Funds, Target Date Funds

**Default Investment Strategy:**
- Target Date Funds

**FRS Pension Plan**
*available to all new hires as of January 1, 2018*

**Type:**
- Final Average Salary Defined Benefit Pension Plan

**Final Average Salary:**
- Average of the 8 highest years

**Multiplier:**
- 3%

**Vesting:**
- 8 years

**Normal Retirement Eligibility:**
- Any age @ 33 YOS or vested by age 65

**Employer Contribution:**
- 3.09% for Normal Cost
- 4.30% for Unfunded Liability Payment (beginning FY2019-20)

**Employee Contribution:**
- 3%
FRS Remains Unsustainable Despite Recent Reforms

Problem #1 - FRS Defined Benefit Pension Plan Still Not on a Path to Solvency

• Challenge 1-A: Overly optimistic assumed rate of return creates unnecessary risk
• Challenge 1-B: Insufficient employer contributions inhibits plan assets from compounding growth over decades
• Challenge 1-C: Discount rate misaligned with risk, underpricing pension cost and undervaluing FRS unfunded liabilities

Problem #2 - FRS Defined Contribution Retirement Plan Not Built for Retirement Security

• Inadequate contribution rate shortchanging worker retirement security
PROBLEM #1

FRS PENSION PLAN STILL NOT ON A PATH TO SOLVENCY
Examining the Sources of Pension Debt
Actuarial Experience of FRS, 2008-2018

Source: Pension Integrity Project analysis of FRS actuarial valuations. Data represents cumulative unfunded liability by gain/loss category.
Driving Factors Behind FRS Pension Debt

1. **Underperforming investment returns** have been the largest contributor to the unfunded liability, adding $17 billion since 2008.

2. **Missed assumptions** have consistently diverged from actuarial expectations since 2008, contributing nearly $12 billion to the unfunded liability.

3. **Prudent changes in actuarial assumptions and methods** since 2008 to better reflect current market and demographic trends required the recognition of previously unrecognized pension cost and the acknowledgment of $8.3 billion to the unfunded liability.

4. **Insufficient contributions** contributed $1.2 billion to FRS unfunded liability since 2008.
CHALLENGE 1-A: ASSUMED RATE OF RETURN

- **Unrealistic Expectations:** Despite the recent change to 7.4%, the *Assumed Investment Return* for FRS continues to expose taxpayers to significant investment underperformance risk.

- **Underpricing Contributions:** The use of an unrealistic *Assumed Return* has likely resulted in underpriced *Normal Cost* and an undercalculated *Actuarially Determined Contribution*.
Challenge 1-A: Underperforming Assets

Investment Return History, 1996-2018

10-year average returns are consistently below the plan’s return assumptions

---

Average Market Valued Returns

- **15-Years (2003-2018):** 7.86%
- **10-Years (2008-2018):** 6.85%
- **5-Years (2013-2018):** 8.7%

Source: Pension Integrity Project analysis off FRS actuarial valuation reports and CAFRs.
Challenge 1A: Underperforming Assets

Investment Returns Have Underperformed

- FRS historically assumed an investment return rate as high as 8.00% before lowering the assumption to 7.75% in 2004 but began adjusting the assumption annually in 2014 to reach the current 7.4% in response to significant market changes.

- FRS expanded investments in high-risk holdings in a search for greater investment returns over the past decade.

- The FRS Pension Plan investment portfolio’s trends have not matched long-term assumptions:

<table>
<thead>
<tr>
<th>Average Market Valued Returns</th>
<th>Average Actuarially Valued Returns</th>
</tr>
</thead>
</table>

Note: Past performance is not the best measure of future performance, but it does help provide some context to the problem created by having an excessively high assumed rate of return.

Source: Pension Integrity Project analysis of FRS actuarial valuation reports. Average market valued returns represent geometric means of the actual time-weighted returns.
New Normal: Markets Have Recovered Since the Crisis—FRS Funded Ratio Has Not

Source: Pension Integrity Project analysis of FRS actuarial valuation reports and Yahoo Finance data.
New Normal: The So-Called Recovery Has Already Happened, the Market Has Changed

The “new normal” for institutional investing suggests that achieving even a 6% average rate of return is optimistic.

1. Over the past two decades there has been a steady change in the nature of institutional investment returns.
   • 30-year Treasury yields have fallen from around 8% in the 1990s to consistently less than 3% today.

2. McKinsey & Co. forecast the returns on equities will be 20% to 50% lower over the next two decades compared to the previous three decades.
   • Using their forecasts, the best case scenario for a 70/30 portfolio of equities and bonds similar to FRS is likely to earn around 5% return.

3. FRS actuary Milliman Inc. believes the 7.4% investment return assumption prescribed by the FRS Actuarial Assumption Conference does not meet acceptable accounting standards.
   • “The prescribed assumption conflicts with our professional judgment regarding what would constitute a reasonable assumption for the purpose of the measurement as discussed in ASOP 27.”  (FRS 2018 Actuarial Valuation, p1)
FRS Asset Allocation (2001-2018)

Expanding Risk in Search for Yield

Source: Pension Integrity Project analysis of FRS actuarial valuation reports and CAFRs.
New Normal: Forecasts for Future Returns are Significantly Lower than Past Returns

The past 30 years saw returns that exceeded the long-run average

- Historical real returns
- Last 100 years average return

The next 20 years could be more challenging

- Growth-recovery scenario
- Slow-growth scenario

<table>
<thead>
<tr>
<th></th>
<th>US equities</th>
<th>European equities</th>
<th>US bonds</th>
<th>European bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last 30</td>
<td>7.9%</td>
<td>7.9%</td>
<td>5.0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Next 20</td>
<td>4.0–6.5%</td>
<td>4.5–6.0%</td>
<td>0–2.0%</td>
<td>0–2.0%</td>
</tr>
</tbody>
</table>

New Normal: More Risky FRS Asset Allocation Resulting in Higher Standard Deviation of Returns

FRS Reform Assessment and Solvency Analysis

August 21, 2019

Source: Pension Integrity Project Monte Carlo model based on FRS asset allocation and reported expected of returns by asset class. Based on 2018 estimates.
According to Milliman Inc., FRS’s consulting actuary:

✓ The current 7.4% return assumption “[…] *conflicts with our judgment regarding what would constitute a reasonable assumption for the purpose of the measurement […]*”

✓ Models developed in 2018 by Milliman Inc. and Aon Hewitt indicate a less than 35% chance of FRS actual long term future returns meeting or exceeding 7.40%.

Source: FRS Actuarial Valuation as of July 1, 2018, page 1-2
FRS Actuaries on Current Return Assumption

There is notable disagreement regarding the investment return assumption:

- Florida statutes indicate that the FRS Actuarial Assumption Conference holds the statutory authority to determine the investment return assumption for purposes of developing actuarially calculated contribution rates.

- Evidence suggests the FRS Actuarial Assumption Conference has been slow to adopt prudent assumptions, likely leading FRS to underestimate its unfunded liability.

- The 7% return assumption recommended by FRS’ consulting actuaries (Milliman Inc.) differs from the 7.4% investment return assumption chosen by the 2018 FRS Actuarial Assumption Conference.

- Models developed in 2018 by Milliman and Aon Hewitt show the average annual long-term future returns in the 6.4-6.7% range.

Sources: Florida CAFR 2018 pg.74; Section 216.136(10)
Probability Analysis: Measuring the Likelihood of FRS Achieving Various Rates of Return

<table>
<thead>
<tr>
<th>Possible Rates of Return</th>
<th>Probability of FRS Define Pension Plan Achieving a Given Return Based On:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FRS Forecast</td>
</tr>
<tr>
<td>8.0%</td>
<td>28%</td>
</tr>
<tr>
<td>7.4%</td>
<td>37%</td>
</tr>
<tr>
<td>7.0%</td>
<td>43%</td>
</tr>
<tr>
<td>6.5%</td>
<td>53%</td>
</tr>
<tr>
<td>6.0%</td>
<td>61%</td>
</tr>
<tr>
<td>5.5%</td>
<td>69%</td>
</tr>
<tr>
<td>5.0%</td>
<td>76%</td>
</tr>
</tbody>
</table>

Source: Pension Integrity Project Monte Carlo model based on FRS asset allocation and reported expected returns by asset class. Forecasts of returns by asset class generally by BNYM, JPMC, BlackRock, Research Affiliates, and Horizon Actuarial Services were matched to the specific asset class of FRS. Probability estimates are approximate as they are based on the aggregated return by asset class. For complete methodology contact Reason Foundation. RVK is the internal FRS investment consultant. FRS Forecast based on 2017 Horizon 20-year forecast. Probabilities projected in Horizon 20-Year Market Forecast column reflect 2018 reported expected returns. Horizon is an external consulting firm that surveyed capital assumptions made by other firms.
Probability Analysis: Measuring the Likelihood of FRS Achieving Various Rates of Return

FRS Forecast

- A probability analysis of FRS historical returns over the past 20 years (1999-2018) indicates only a modest chance (33%) of hitting the plan’s 7.4% assumed return.
- While long-term capital market forecast project a near 50% chance of achieving the FRS investment return target, the capital assumptions produced by the plan’s own consulting actuary Milliman Inc. and Aon Hewitt indicate a less than 35% chance of FRS actual long-term future returns meeting or exceeding 7.40%.

Short-Term Market Forecast

- Returns over the short to medium term can have significant negative effects on funding outcomes for mature pension plans with large negative cash flows like FRS.
- Analysis of capital market assumptions publicly reported by the leading financial firms (BlackRock, BNY Mellon, JPMorgan, and Research Affiliates) suggests that over a 10-15 year period, FRS returns are likely to fall short of their assumption.

Long-Term Market Forecast

- Longer-term projections typically assume FRS investment returns will revert back to historical averages.
  - The “reversion to mean” assumption should be viewed with caution given historical changes in interest rates and a variety of other market conditions that increase uncertainty over longer projection periods, relative to shorter ones.
- Forecasts showing long-term returns near 7.4% likely also show a significant chance that the actual long-term average return will fall far shorter than expected.
  - For example, according to the BlackRock’s 20-year forecast, while the probability of achieving an average return of 7.4% or higher is about 52%, the probability of earning a rate of return below 5% is about 21%.
Benefits of Making Prudent Assumptions

Recognition of More Accurate Debt Levels

Lowered Assumed Rate of Return from 7.75% to 7.65% in 2014
Lowered Assumed Rate of Return from 7.60% to 7.50% in 2017
Lowered Assumed Rate of Return from 7.50% to 7.40% in 2018

Source: Pension Integrity Project Analysis of FRS valuation reports.

Unfunded Liability, Actuarial Value (in $Millions)

- Aligning Assumptions
- With Realistic Expectations
- Spotlights Systemic Risk

RISK ASSESSMENT

• How resilient is FRS to volatile market factors?
Current FRS Baseline: Normal Cost + Amortization

What Happens if FRS Hits its Investment Target?

Discount Rate: 7.40%, Assumed Return: 7.40%, Actual Return: 7.40%, Amo. Period: 30-Year, Closed

Source: Pension Integrity Project actuarial forecast of FRS. Scenario assumes that the state pays 100% of the actuarially determined contribution each year.
FRS Scenario 1:

What Happens if FRS Underperforms?

Discount Rate: 7.40%, Assumed Return: 7.40%, Actual Return: 6.00%, Amo. Period: 30-Year, Closed

6% average return (FY2019-2051) would require $44.5 billion additional employer contributions (Inflation Adjusted)

Source: Pension Integrity Project actuarial forecast of FRS Scenario assumes that the state pays 100% of the actuarially determined contribution each year. Figures are rounded and adjusted for inflation.
FRS Scenario 2:
What if the Next 20 Years are the Same as the Last 20?
Discount Rate: 7.40%, Assumed Return: 7.40%, Actual Return: Same as Last 20 Years, 7.40% Following Years

Returns identical to the previous 20 years would require $51.6 billion more in employer contributions (Inflation Adjusted)

Source: Pension Integrity Project actuarial forecast of FRS Scenario assumes that the state pays 100% of the actuarially determined contribution each year. Figures are rounded and adjusted for inflation.
FRS Scenario 3:
What if the Next 10 Years are the Same as the Last 10?
Discount Rate: 7.40%, Assumed Return: 7.40%, Actual Return: Same as Last 10 Years, 7.40% Following Years

Returns identical to the previous 10 years would require $35.8 billion more in employer contributions (inflation Adjusted)

Source: Pension Integrity Project actuarial forecast of FRS Scenario assumes that the state pays 100% of the actuarially determined contribution each year. Figures are rounded and adjusted for inflation.
What Happens if FRS Experiences Another Crisis?

A financial crisis identical to 2008-2012 would require $69.6 billion more in employer contributions (Inflation Adjusted)

Source: Pension Integrity Project actuarial forecast of FRS Scenario assumes that the state pays 100% of the actuarially determined contribution each year. Figures are rounded and adjusted for inflation.
### Sensitivity Analysis: Normal Cost Comparison Under Alternative Assumed Rates of Return

(Amounts to be Paid in 2018-19 Contribution Fiscal Year, % of projected payroll)

<table>
<thead>
<tr>
<th>Assumed Return (FYE 2018 Baseline)</th>
<th>Gross Normal Cost</th>
<th>Employer Normal Cost</th>
<th>Employee Normal Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.4%</td>
<td>7.68%</td>
<td>4.68%</td>
<td>3.0%</td>
</tr>
<tr>
<td>7.0%</td>
<td>8.4%</td>
<td>5.4%</td>
<td>3.0%</td>
</tr>
<tr>
<td>6.5%</td>
<td>9.39%</td>
<td>6.39%</td>
<td>3.0%</td>
</tr>
<tr>
<td>6.0%</td>
<td>10.51%</td>
<td>7.51%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

Note: These alternative gross normal cost figures should be considered approximate guides to how much more normal cost should be under different discount rates. Any policy changes should be based on more precise normal cost forecasts using detailed plan data. Alternative normal cost rates based reported liability sensitivity from the FYE 2018 FRS CAFR.

Source: Pension Integrity Project forecasting analysis based on FRS actuarial valuation reports.
30-year Employer Contribution Forecast

All Paths to a 7.4% Average Return are Not Equal

Long-Term Average Returns of 7.4%

If a pension plan hits its assumed rate of return on average, the timing of investment returns can have a major impact on a plan’s actuarially required contributions over the long term.

Source: Pension Integrity Project actuarial forecast of FRS plan. Strong early returns (TWRR = 7.4%, MWRR = 8.4%), Even, equal annual returns (Constant Return = 7.4%), Mixed timing of strong and weak returns (TWRR = 7.4%, MWRR = 7.4%), Weak early returns (TWRR = 7.4%, MWRR = 6.7%) Scenario assumes that FRS pays the actuarially required rate each year. Years are plan’s fiscal years.
30-year Employer Contribution Forecast

If FRS Performs as Expected, Rates Can Still Vary
Based on Long-term Average Returns of 7.4%

Even with long-term expected returns of 7.4%, employer contribution rates can vary greatly depending on returns of each individual year.

Source: Pension Integrity Project actuarial forecast of FRS plan based on FRS return and risk assumptions.
Range of Reasonable Outcomes represents the 50% of possible outcomes closest to the median.
30-year Employer Contribution Forecast

If FRS Underperforms, Expect Higher Contribution Rates
Based on More Conservative Long-term Average Expected Returns

Source: Pension Integrity Project actuarial forecast of FRS plan using the return and risk assumptions of the Monte Carlo analysis. Conservative returns are 5.56%, which are the result of combining the long-term capital market assumptions from four prominent financial firms (see slide 15).
30-year Funded Ratio Forecast

Funded Ratios are Expected to Improve

Based on Long-term Average Returns of 7.4%

With long-term returns of 7.4%, FRS is likely to improve its funding over the next 30 years.

Source: Pension Integrity Project actuarial forecast of FRS plan based on FRS return and risk assumptions. Range of Reasonable Outcomes represents the 50% of possible outcomes closest to the median.
30-year Funded Ratio Forecast

How Do Missed Returns Impact Funded Ratios?

More conservative return assumptions show FRS is less likely to achieve full funding over the next 30 years.

If returns are more conservative, then FRS is less likely to achieve full funding over the next 30 years.

Source: Pension Integrity Project actuarial forecast of FRS plan using the return and risk assumptions of the Monte Carlo analysis. Conservative returns are 5.56%, which are the result of combining the long-term capital market assumptions from four prominent financial firms (see slide 15).
CHALLENGE 1-B: INSUFFICIENT EMPLOYER CONTRIBUTIONS

- Since 2002, FRS pension contributions have fallen short of the level FRS actuaries have calculated is needed to ensure solvency, resulting in a need for much higher contributions today.
- Methods for paying off unfunded liabilities have made the existing pension debt problems worse.
Imprudent Funding Policy is Creating Structural Underfunding for FRS

1. From 2011-2013, FRS employer contributions failed to meet the actuarially determined contribution (ADC) increasing the Unfunded Actuarial Liability by $2.45 billion

2. In 7 of the past 17 years, employer contributions have been less than the interest accrued on the pension debt (i.e. negative amortization), which allowed for the unfunded liability to grow in absolute terms

3. The 30-year period is greater than the Society of Actuaries’ recommended funding period of 15 to 20 years, resulting in higher overall costs for the plan
   • Due to the long 30-year closed amortization schedule used to pay off the annual unfunded liability employer pension contributions have not always kept up with the interest accrued on the pension debt
Actuarially Determined Employer Contribution History, 2001-2018

Actual v. Required Contributions

Source: Pension Integrity Project analysis of FRS actuarial valuation reports and CAFRs.
Negative Amortization: Understanding the Current Funding Policy

- From 2011-2013, FRS employer contributions failed to meet the actuarially determined contribution (ADC) increasing the Unfunded Actuarial Liability by $2.45 billion.

- Starting in the 1998 actuarial valuation, the Legislature required all UAL bases in existence at that time to be considered fully amortized, since the Plan was in a surplus position.

- As part of the funding policy selected by the Florida Legislature, the actuarially calculated contribution rate is based on a “layered” approach that includes closed 30-year charge and credit bases for the amortization of the UAL.

- The Unfunded Actuarial Liability (UAL) is amortized as a level percentage of projected payroll on which UAL Rates are charged in an effort to maintain level contribution rates as a percentage of payroll during the specified amortization period if future experience follows assumptions.

Source: FRS actuarial valuation reports.
FRS Negative Amortization Growth, 2009-2018
Interest on the Debt v. Accrued Liability Payments

Negative Amortization has added over $5.68 billion in unfunded liabilities since 2009.

Source: Pension Integrity Project actuarial analysis of FRS plan valuation reports and CAFRs
CHALLENGE 1-C: DISCOUNT RATE AND UNDERVERVALUING DEBT

- The discount rate undervalues the measured value of existing pension obligations
FRS Discount Rate Methodology is Undervaluing Liabilities

1. The “discount rate” for a public pension plan should reflect the risk inherent in the pension plan’s liabilities:

   • Most public sector pension plans — including FRS — use the assumed rate of return and discount rate interchangeably, even though each serve a different purpose.

   • The Assumed Rate of Return (ARR) adopted by FRS estimates what the plan will return on average in the long run and is used to calculate contributions needed each year to fund the plans.

   • The Discount Rate (DR), on the other hand, is used to determine the net present value of all of the already promised pension benefits and supposed to reflect the risk of the plan sponsor not being able to pay the promised pensions.
2. Setting a discount rate too high will lead to undervaluing the amount of pension benefits actually promised:
   • If a pension plan is choosing to target a high rate of return with its portfolio of assets, and that high assumed return is then used to calculate/discount the value of existing promised benefits, the result will likely be that the actuarially recognized amount of accrued liabilities is undervalued.
   • Milliman, argues the discount rate for calculating the total pension liability should be equal to the 7.00 percent rate of return assumption.

3. It is reasonable to conclude that there is almost no risk that Florida would pay out less than 100% of promised retirement income benefits to members and retirees:
   • State law requires protect pension benefit payouts. Florida State Statutes § 121.011-121.40; 121.4501-121.5912 & Florida Administrative Code 60S-4

4. The discount rate used to account for this minimal risk should be appropriately low:
   • The higher the discount rate used by a pension plan, the higher the implied assumption of risk for the pension obligations.
## FRS Pension Debt Sensitivity

**FYE 2018 Net Pension Liability Under Varying Discount Rates**

<table>
<thead>
<tr>
<th>Discount Rate</th>
<th>Funded Ratio (Market Value)</th>
<th>Unfunded Liability</th>
<th>Total Pension Liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.4% Discount Rate (Current Baseline)</td>
<td>86.7%</td>
<td>$25.5 billion</td>
<td>$186.0 billion</td>
</tr>
<tr>
<td>7% Discount Rate (GASB Reported)</td>
<td>84.3%</td>
<td>$30.1 billion</td>
<td>$191.3 billion</td>
</tr>
<tr>
<td>6% Discount Rate</td>
<td>74.6%</td>
<td>$55 billion</td>
<td>$216.2 billion</td>
</tr>
<tr>
<td>5% Discount Rate</td>
<td>65.7%</td>
<td>$84 billion</td>
<td>$245.2 billion</td>
</tr>
</tbody>
</table>

Source: Pension Integrity Project analysis of FRS GASB Statements. Market values shown are fiduciary net position, and unfunded liabilities shown here are net pension liabilities. Figures are rounded.
Change in the Risk Free Rate Compared to FRS Discount Rate (2001-2018)

The "Alternative Discount Rate Scenario" imagines that FRS linked the discount rate to changes in the 30-year Treasury yield, starting in the year 2001.

This link would have served to adjust the FRS discount rate based on changes in one measure of a so-called "risk free" rate of return.

Such a link would have meant a consistent 251 basis point spread between the FRS discount rate and the Treasury yield. As the risk free rate rose and fell, so too would the FRS discount rate.

Source: Pension Integrity Project analysis of FRS actuarial valuation reports and Treasury yield data from the Federal Reserve.
PROBLEM #2

FRS DEFINED CONTRIBUTION PLAN NOT BUILT FOR RETIREMENT SECURITY
FRS Defined Contribution Plan Overview

• The FRS defined contribution retirement plan—the FRS Investment Plan—is the state’s current default (as of 2018)
  ✓ Members are vested after one year of service in the FRS Investment Plan.

• Employees may choose to receive their account balance at the end of employment as a lump sum or take periodic withdrawals either on demand or by a pre-determined payout schedule

• The FRS Investment Plan has shown consistent growth since its introduction in 2002
  ✓ FRS Defined Contribution Plan members currently account for nearly 20% of total FRS membership and 23% of total FRS payroll.

• The Legislature can increase or decrease the amount employers and employees contribute to plan members’ accounts

Source: FIS Investment Plan Investment Summary 2019
FRS Membership Allocation

Defined Contribution Plan made the default option as of 2018

Source: Pension Integrity Project analysis of FRS CAFR reports
Change in FRS Payroll Share: DB+DC Plans

Defined Benefit Pension Plan
Defined Contribution Plan

Defined Contribution Plan made the default option as of 2018

Source: Pension Integrity Project analysis of FRS CAFR reports
FRS Investment Plan Funding

- Current FRS Investment Plan contribution breakdown:

<table>
<thead>
<tr>
<th>From Employee:</th>
<th>From Employer:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0% to member Investment Plan account</td>
<td>3.3% to member Investment Plan account</td>
</tr>
<tr>
<td></td>
<td>+ 3.56% to legacy FRS Pension Plan unfunded liabilities</td>
</tr>
</tbody>
</table>

- Best practice says employers should continue making payments towards their legacy pension debt as if all new hires were still entering the Pension Plan.
Inadequate Contribution Rates are Jeopardizing Retirement Security

- The aggregate 6.3% FRS Investment Plan contribution rate falls far below industry standards for retirement benefit adequacy.

- Industry leaders, retirement experts and independent studies consistently estimate 10% to 15% of annual income to be required to provide adequate retirement income.
  - For regular plan members alone contribution rates need to rise at least 400 basis points to provide retirement security.
  - Higher contribution rates may be required for older workers to achieve adequate savings for retirement due to chronic underfunding.
FRAMEWORK FOR SOLUTIONS & REFORM
Objectives of Good Reform

- **Keeping Promises:** Ensure the ability to pay 100% of the benefits earned and accrued by active workers and retirees
- **Retirement Security:** Provide retirement security for all current and future employees
- **Predictability:** Stabilize contribution rates for the long-term
- **Risk Reduction:** Reduce pension system exposure to financial risk and market volatility
- **Affordability:** Reduce long-term costs for employers/taxpayers and employees
- **Attractive Benefits:** Ensure the ability to recruit 21st Century employees
- **Good Governance:** Adopt best practices for board organization, investment management, and financial reporting
Practical Policy Framework

1. **Adopt better funding policy, risk assessment, and actuarial assumptions**
   - Lower the assumed rate of return to align with independent actuarial recommendations.
   - These changes should aim at minimizing risk and contribution rate volatility for employers and employees.

2. **Establish a plan to pay off the unfunded liability as quickly as possible.**
   - The Society of Actuaries Blue Ribbon Panel recommends amortization schedules be no longer than 15 to 20 years.
   - Reducing the amortization schedule would save the state billions in interest payments.

3. **Review current plan options to improve retirement security**
   - Consider increasing default contributions, expanding annuity options, auto-escalation of contribution rates and other DC best practices within the FRS Investment Plan.
Questions?

Pension Integrity Project at Reason Foundation

Raheem Williams, Policy Analyst
raheem.williams@reason.org

Steven Gassenberger, Policy Analyst
steven.gassenberger@reason.org

Len Gilroy, Senior Managing Director
leonard.gilroy@reason.org