



FLORIDA

# Pension Debt Challenges for Equity in Education:

The Effect of Teacher Pension Debt Costs on  
K–12 Education Funding in Florida

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January 2023

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## Executive Summary

Rising teacher retirement costs are squeezing K–12 education budgets in Florida. Without a change to the way the state finances its public school employee retirement benefits, those costs will continue to exacerbate already existing education finance inequities and drain away resources necessary to help Florida's students.

**Finding #1:** An increasing share of state and local K–12 education spending has been siphoned off to cover pension costs, even after major changes to the Florida Retirement System in 2012:

- In 2020, 2.5% of Florida's school district expenditures on education funding ultimately went to FRS, more than double the amount paid in 2012, the year of Florida's last major cost cutting changes.
- School districts pay all FRS costs, so if we measure the \$1.2 billion spent on retirement costs as a share of just local revenue provided for K–12 spending that amount grows to 3.5% as of 2020.
- For context, in 2022 Florida K–12 employers spent \$1.43 billion on retirement costs, which was roughly \$600 million more than the \$830 million that the entire state of Florida received in federal funds to support economically disadvantaged students.

**Finding #2:** These growing pension costs are effectively education funding cuts. And these cuts disproportionately harm low-income communities in two ways:

- **Low-income communities have fewer resources to pay growing pension costs generally.** Low-wealth districts can only generate limited resources from local property taxes. Given these limited resources, even a slight increase in pension costs can have a much higher marginal cost for low-wealth communities than more affluent ones.
- **Rising *pension debt* costs are regressive and pass a greater burden to high-poverty districts.** In general, wealthier school districts can pay higher salaries and thus greater retirement benefits. Thus, these districts account for a greater share of FRS's unfunded liability. However, the costs of the unfunded liability are shared evenly across the state, putting a greater effective burden on high-poverty districts.

**Finding #3:** Despite steady increases in FRS contribution rates and strong investment returns in 2021, additional contributions from Florida school districts will be likely be required in the coming years unless the state legislature intervenes. Contribution rates are likely to increase when the State Board of Administration next lowers the FRS assumed rate of return, and investment losses in 2022 have already led to a proposal that the legislature increase future contribution rates during the 2023 legislative session. The question is how Florida will choose to distribute these additional costs and whether the legislature will ensure that they don't further exacerbate K–12 resource inequities.



## Prologue: Why Teacher Pension Debt Costs Matter for Students

*The Florida Legislature passed along a much larger than normal increase to FRS-participating organizations without a matching increase in funding... [as a result] districts will be forced to make additional programmatic budget reductions to offset the increase in FRS rates."*

— Florida Public School Superintendents (June 2020)

The problems that Florida school districts have faced during the pandemic have echoed those of other public schools across the country, with teachers and students in dire need of classroom and resource support. But, unlike schools in some other states, those in Florida face yearly uncertainty around how much of their budgets will have to be allocated toward (ever-increasing) pension fund costs. And that problem was exacerbated in 2020.

At the end of the 2019 fiscal year, before the pandemic was raging, the Florida Retirement System said it needed additional contributions because of previous shortfalls, leading the Florida legislature to consider a hike to contribution rates in 2020 for all participating employers, including public school districts. With the financial and logistical stress of the pandemic well underway as this hike loomed, the seven largest school districts in the state, representing nearly 1.5 million Florida students and their families (51% of the state's population), implored the governor to veto the bill.

"An (pension contribution) increase this large would be difficult at any time, but what makes it especially untenable now is the unprecedented financial uncertainty of our State, our Nation, and the world," the June 9, 2020, [letter](#) reads. "All are suffering due to the COVID-19 pandemic. As you are well aware, nearly all major sources of state sales tax revenue have been adversely impacted due to the pandemic. Our districts are extremely concerned about the uncertainty of Florida's sales tax revenue."

Not only did the bill go on to pass anyway — requiring \$123 million in cost increases from just the seven school districts alone who wrote the governor — but Florida school districts were forced to foot the bill for another round of hikes in the summer of 2021, once again hitting the bottom line for classrooms to the tune of an additional \$117 million.

### PENSION CONTRIBUTION HIKES FOR FLORIDA'S LARGEST SCHOOL DISTRICTS DURING THE FISCAL YEAR JULY 2020 TO JUNE 2021

	FY 2021 ACTUAL INCREASE
Broward County Public Schools	\$22.4 million
Duval County Public Schools	\$9.7 million
Hillsborough County Public Schools	\$17.7 million
Miami-Dade County Public Schools	\$28.4 million
Orange County Public Schools	\$14.1 million
Palm Beach County Public Schools	\$17.2 million
Polk County Public Schools	\$7.6 million

As the letter goes on to read, "Districts will be forced to make additional programmatic budget reductions to offset the increase in FRS rates," including the siphoning off of funds that could have been meaningfully put to work



during the ongoing pandemic to aid struggling students. To put these hikes into perspective, \$22.4 million is [more than 10%](#) of what Broward County spent on all support services for teachers and students in 2020.

But while the pandemic-induced uncertainties in Florida are much like those throughout the rest of the country, their problematic pension cost model isn't necessarily the norm. In [Connecticut](#) and Texas, for example, the state legislature covers all or a portion of pension costs, buffering some increases that are outside the school district's control — like pension fund investments not returning what they are aiming for.

School districts in Florida are doing what they can in the face of these challenges, however. Tracy Pierce of Duval County Public Schools told us, "Obviously increasing costs in any category is a headwind, but a strong economy and favorable funding decisions from the state can be a tailwind. Each year is a different story, and each year we work collaboratively with our board to make the best decisions for our students, staff, and community."

The lingering problem, though, is that district leaders are almost completely unaware of what pension cost headwinds are coming their way. Reasonably, such leaders are focused on what it means to manage the schools in their districts to do the best they can for their students. But, being dependent on the fortune of good economic years that generate tax revenues above expectations is not the foundation of a sustainable future. Notably, this is a concern district leaders have raised before.



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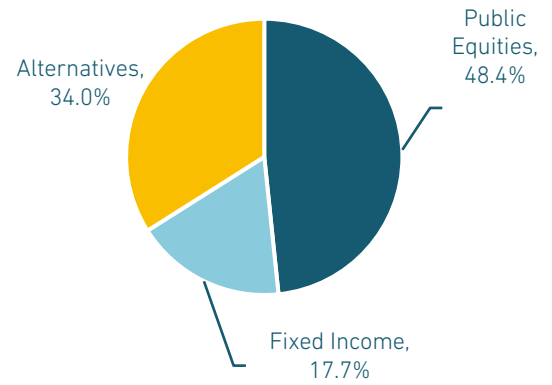
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# Snapshot of Retirement Benefits: Florida Retirement System

## FRS FINANCES, FY2022

	FRS TOTAL	K-12 EMPLOYER SHARE
Total Pension Liability (TPL)	\$217,434,441,000	\$72,905,768,067
Fiduciary Net Position (FNP)	\$180,226,404,807	\$60,429,913,532
Net Pension Liability (NPL)	\$37,208,036,193	\$12,475,854,536
GASB-Funded Ratio	82.89%	82.89%
Actuarially Accrued Liability (AAL)	\$217,434,000,000	\$72,905,440,000
Actuarially Value of Assets (AVA)	\$179,179,000,000	\$60,078,720,000
Unfunded Actuarially Accrued Liabilities	\$38,255,000,000	\$12,826,720,000
AVA-Funded Ratio	83.43%	83.43%
Years until Full Funding (FRS Estimate)	20 years	

## ASSET ALLOCATION, FY2022



\*NOTE: Definition of terms on the next page.

## PENSION CONTRIBUTIONS, FY2023

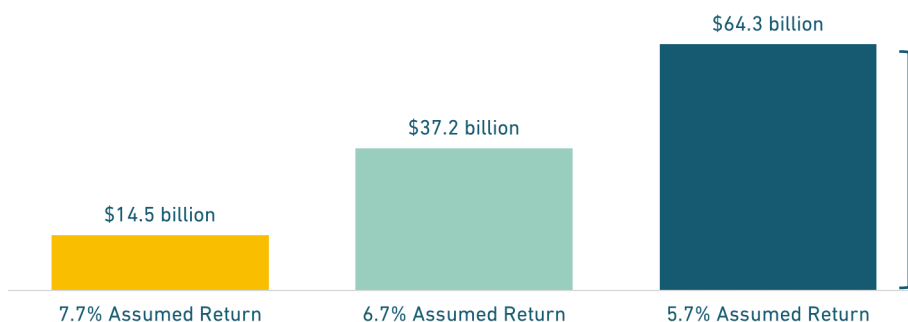
PENSION PLAN	
Employer Contribution	15.02% payroll
Member Contribution	3.00% payroll
INVESTMENT PLAN (FIP)	
Employer Contribution	6.3% payroll
Member Contribution	3% payroll
<b>Total Contributions, FY2022</b>	<b>\$5,018,188,802</b>
<b>Total Benefit Payments, FY 2022</b>	<b>\$11,209,575,370</b>

The larger the gap between contributions (inflows) and benefit payments (outflows), the more reliant a pension system is on generating large investment returns.

## FEATURES OF FRS

Multiplier	1.6% to 1.68%, depending on years of service	
Vesting	Pension Plan: 8 years Investment Plan: 1 year	
Cost-of-Living Adjustment	None	
Normal Retirement	65 with 8 years of service	
Social Security	Enrolled	
	FRS	NATIONAL AVERAGE
Assumed Rate of Return	6.7%	6.9%
Inflation Assumption	2.4%	2.5%
Member-to-Retiree Ratio	1.32	1.23

## ALTERNATIVE MEASURES OF FRS UNFUNDED LIABILITY BASED ON DIFFERENT INVESTMENT RETURN ASSUMPTIONS



The national average assumed rate of return has been falling every year for the past decade. The largest state retirement system, CalPERS, recently shifted below the national average to 6.8% and has signaled it will likely move toward 6% in the coming years. The third largest retirement system by assets, New York Common Fund, announced in the summer of 2021 that it was shifting to a 5.9% investment assumption.

Changing the investment assumption also changes the "discount rate" that FRS uses to measure the value of liabilities. Reducing discount rates increases in the net present value of liabilities (TPL or AAL), and vice versa. Looking at FRS's figures in this context gives perspective on how much larger the unfunded liabilities of FRS might actually be in the future when the assumed rate of return is reduced again.

Source: Figures formally reflect the sensitivity of the net pension liabilities to different discount rates. Data are from the GASB 100 basis points +/- tables provided by FRS.



## Intro: Teacher Pension Debt is Creating Challenges for Education Resource Equity

Rising teacher retirement costs are squeezing K–12 education budgets in Florida. Without a change to the way the state finances its public school employee retirement benefits, those costs will continue to exacerbate already existing education finance inequities and drain away resources necessary to help Florida's students.

School districts and other K–12 education employers across Florida enroll teachers and school employees in the Florida Retirement System (FRS).<sup>1</sup> In 2001, nearly \$690 million was contributed to FRS by K–12 employers to cover pension benefit costs. Two decades later, in 2022 that amount jumped to \$1.55 billion in employer contributions, both into the FRS Pension Plan and the defined contribution program called the "Florida Investment Plan" (FIP).

To put those dollars in context, the total amount that Florida received in federal funds to support economically disadvantaged students in 2022 was \$830 million — roughly \$600 less than what the state spent on the cost of retirement benefits.<sup>2</sup>

If these costs were just the normal effects of inflation, perhaps there'd be no concerns. Retirement benefits are a reasonable and important form of compensation. However, even adjusting for inflation retirement benefit costs have jumped 35.4%. And the main reason that costs are growing is because of the pension debt costs for FRS.

As June 2022, FRS has a \$37.2 billion unfunded liability — sometimes called pension debt or a funding shortfall — of which \$12.5 billion is related to teachers and public school employees served by FRS.<sup>3</sup> The primary cause of these unfunded liabilities is investments returning less than expected and teachers retiring later than expected (earning larger pensions than anticipated).

More than a quarter of annual FRS retirement costs are to try and pay this funding shortfall down. And those retirement costs are rising faster than K–12 funding.

Back in 2011 the state attempted to address FRS's unfunded liabilities, in part by eliminating future inflation adjustment of benefits and also by introducing member contributions. These changes didn't address the root cause of FRS pension debt and funding shortfalls just continued to accumulate. Between 2012 and 2020, retirement costs have increased for public schools an average of 18% per year — and unfortunately state and local funding for K–12 education rose only 2.2% a year.

The net effect is an increasing share of state and local K–12 education spending siphoned off to cover retirement costs. These growing pension costs are effectively education funding cuts. And these cuts disproportionately harm low-income communities in two ways:

- **Low-income communities have fewer resources to pay growing pension costs generally.** Low-wealth districts can only generate limited resources from local property taxes. Given these limited resources, even a slight increase in retirement costs can have a much higher marginal cost for low-wealth communities than for more affluent ones.

<sup>1</sup> FRS serves a wide range of public employees in Florida, beyond just K–12 employees, including all state agencies and numerous municipal employees. Several large cities and counties have their own independent retirement systems, but most small- to medium-sized municipalities participate in FRS. The analysis in this paper focuses only on the share of FRS liabilities and costs that are attributable to K–12 employers and their employees.

<sup>2</sup> [Florida Department of Education, "2021-2022 Title I A Allocation List."](#)

<sup>3</sup> Net pension liability data are reported in FRS "GASB 67 Disclosure as of June 30, 2022 Measurement Date."





- **Rising *pension debt* costs are regressive and pass a greater burden to high-poverty districts.** In general, wealthier school districts can pay higher salaries and thus greater retirement benefits. Thus, these districts account for a greater share of FRS's unfunded liability. However, the costs of the unfunded liability are shared evenly across the state, putting a greater burden on high-poverty districts.

Growing FRS retirement costs can create a problem for all school districts. They can disproportionately affect lower-resourced schools. And there is a particular inequity in the even distribution of those growing retirement costs since an outsized share of additional pension debt costs will be associated with wealthier school districts.

## “PENSION DEBT” IS THE PROBLEM

Steadily increasing unfunded liabilities — sometimes called pension debt or a funding shortfall — are the main factor driving the rising costs.

FRS was not always plagued by unfunded liabilities. The FRS funded status — the difference between its assets and the benefits it owes its members — was in the green at the turn of the 21st century. In 2001, FRS had a \$17.4 billion surplus, of which \$5.8 billion was attributable to teachers and public school employees.<sup>4</sup> The financial crisis contributed to a reversal of fortune, but investment losses weren't the only problem for FRS. As a result when Florida legislature attempted to solve for FRS funding problems in 2012 by reducing benefit values and introducing member contributions, the changes were insufficient to prevent future pension debt accumulation. Since 2012 unfunded liabilities have continued to accumulate within FRS.

Among the reasons for pension debt in FRS has been that contribution rates were based on unrealistically high investment assumptions — a problem so severe that actuaries hired by FRS refused to formally sign-off on the reasonableness of annual reports for several years in a row.

The FRS funding shortfall today means teacher retirement is more costly for educators and employers. With greater levels of pension debt, the legislature has increased annual contribution rates for districts each year from 2012 through 2019 and then again from 2020 through 2023. In the 2022-23 fiscal year, educators enrolled in FRS's Pension Plan are contributing 3% of their salary, while their employers are chipping in 15.02% of payroll. Of that 15.02% of salary that employers are contributing to the FRS pension, nearly half (6.83% percentage points) is going to pay down the pension debt, meaning that more than two out of every five dollars paid into FRS is going to cover the funding shortfall.<sup>5</sup>

## PAPER OUTLINE

This paper systematically lays out how growing teacher retirement costs are creating a challenge to efforts aiming to improve education resource equity in Florida.

Part 1 shows generally ***How Teacher Retirement Costs Affect School Finances.***

Part 2 shows specifically that ***Pension Spending Has Exacerbated Existing Funding Inequities.***

Part 3 shows how ***Underperforming Investments Caused Pension Debt to Grow for Florida School Districts.***

Part 4 asks ***Who Will Pay Pension Costs Increases in the Future?***

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<sup>4</sup> Based on actuarially valued assets, as reported by FRS in their 2001 valuation report.

<sup>5</sup> Educators in the FIP contributed 3.3% and their employers paid another 3%.





A series of appendices provides data on the source of unfunded liabilities for the FRS Pension Plan, how teacher pension benefits work, and how growing retirement costs are also creating a challenge for the value of those retirement benefits.

It is very likely that additional FRS contribution rate increases are coming for Florida school districts. The State Board of Administration is likely to continue lowering the FRS assumed rate of return, which will trigger contribution rate hikes. Investment losses in 2022 have already led to a recommendation from FRS's actuarial advisors to ask the state legislature for increased contribution rates.<sup>6</sup>

And, rising retirement costs eat away at teachers' take-home pay and threaten to crowd out other education spending priorities.

Relieving the retirement cost pressure on school spending in the future will be difficult, but not impossible.

Doing so will require a greater understanding of the equity implications of pension underfunding to build the political will to make changes. The legislature, governor, and the State Board of Administration will need to adopt a number of significant changes including:

1. Adjusting how the pension funds measure their unfunded liabilities, including using a more reasonable assumed rate of return,
2. Modifying how the costs of the retirement system are paid for, and;
3. Addressing the regressive and inequitable distribution of retirement costs that are more associated with higher-paid, longer-tenured educators.

If ignored, the unfunded liability is only likely to grow with the impact being borne disproportionately by low-wealth communities and the teachers that serve them.

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<sup>6</sup> See the Florida Retirement System actuarial valuation for the fiscal year 2022.



# 1. How Teacher Retirement Costs Affect School Finances

The Florida Retirement System serves all public employees, not only teachers. Spending on teacher and other public school employee retirement accounts for approximately 33.53% of the total contributions to FRS.<sup>7</sup> This includes both the FIP and the Pension Plan.

(Throughout the rest of this paper we will refer only to “teachers” as a shorthand for all individuals employed by K–12 institutions, because in practice there are no differences between the FRS benefits available to educators and non-educators who work for public schools.)

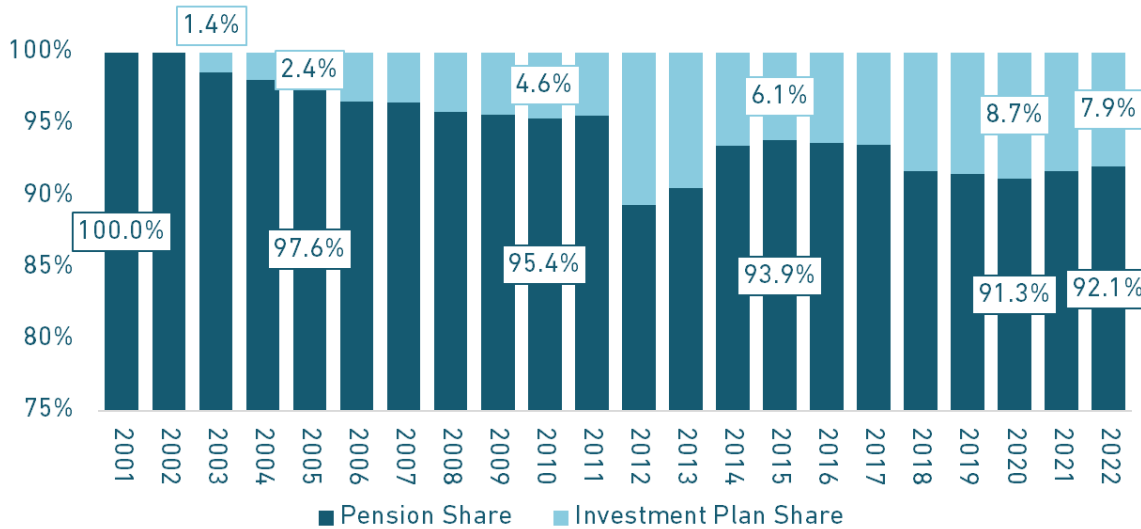
Florida automatically enrolls members of FRS, including teachers, into the state’s Investment Plan unless the individual voluntarily opts to join the pension plan. The Florida Investment Plan is a typical Defined Contribution retirement plan in which both the employee and the employer contribute a percentage of the employee’s salary. The value of a teacher’s retirement benefit in the FIP is based on the total contributions made and investment returns on those monies.

Those FRS members who choose to opt out of the FIP are instead enrolled in the state’s Defined Benefit (DB) Pension Plan. As with the FIP, teachers and employers both contribute a percentage of the teacher’s salary to the fund. However, the value of a teacher’s benefit is determined by a formula based on years of service and a measure of the teacher’s final average salary.

Since the FIP was first available to teachers and other state workers in 2003 it has grown in popularity, though it remains small relative to the size of the FRS Pension Plan. In 2022, only 7.9% of the contributions made by employers were for members of the FIP, as shown in Figure 1. In dollar terms, for K–12 employers this works out to be around \$1.43 billion for the Pension Plan and \$123.51 million into the FIP for teachers enrolled in the Defined Contribution plan — see Figure 2 (next page).

FIGURE 1: MORE THAN 90% OF EMPLOYER CONTRIBUTIONS TO FRS ARE FOR THE PENSION PLAN

*Employer Contributions to FRS, 2001–2022*



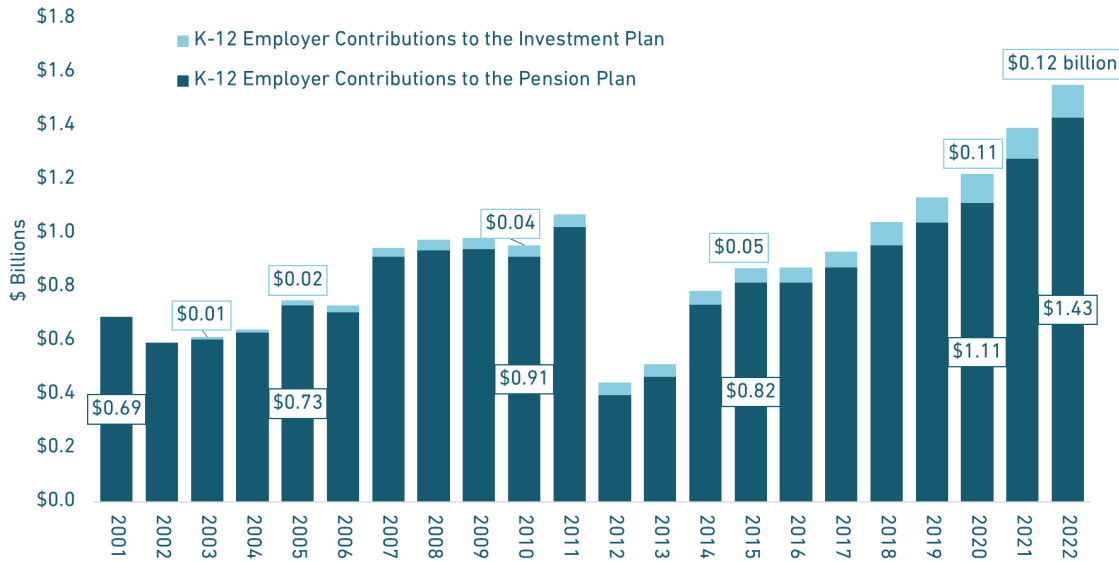
Source: Equable Institute analysis of public plan valuation reports and annual comprehensive financial reports (ACFRs).

<sup>7</sup>This is Equable’s estimate based on “GASB 68” reporting where FRS shows the share of total contributions that are attributable to K–12 institutions. The exact number varies slightly from year to year.



FIGURE 2: THE MAJORITY OF SCHOOL-BASED CONTRIBUTIONS TO FRS ARE FOR THE PENSION PLAN

*Actual Contributions to FRS by K-12 Employers, by Retirement Plan Type, 2001-2022*

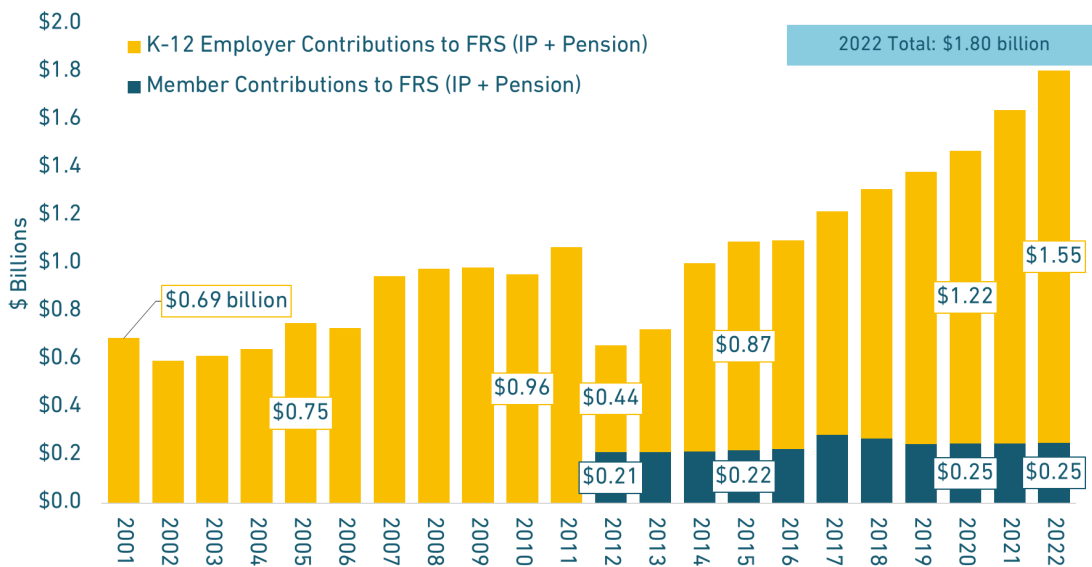


Source: Equable Institute analysis of public plan valuation reports and ACFRs. Figures are not adjusted for inflation.

Spending on teacher retirement, including both the FIP and Pension Plan, increased rapidly in Florida. As Figure 3 shows, between 2001 and 2022, nominal contributions to FRS increased by 161.9% — from \$689.6 million to \$1.81 billion. After adjusting for inflation, total spending on teacher retirement from employers and members still increased 57.3%. But the more staggering increase came between 2012, after FRS introduced required member contributions and reduced benefits in an effort to control costs, and 2022, as inflation-adjusted employer contributions increased 112.5% in only ten years. (We discuss the reasons why in Appendices A and B).

FIGURE 3: TOTAL RETIREMENT CONTRIBUTIONS ALMOST TRIPLED FROM 2001 TO 2022

*Actual Contributions Paid, Member Plus Employer, 2001-2022*



Source: Equable Institute analysis of public plan valuation reports and ACFRs; Totals are not adjusted for inflation. Member contributions started in 2012.



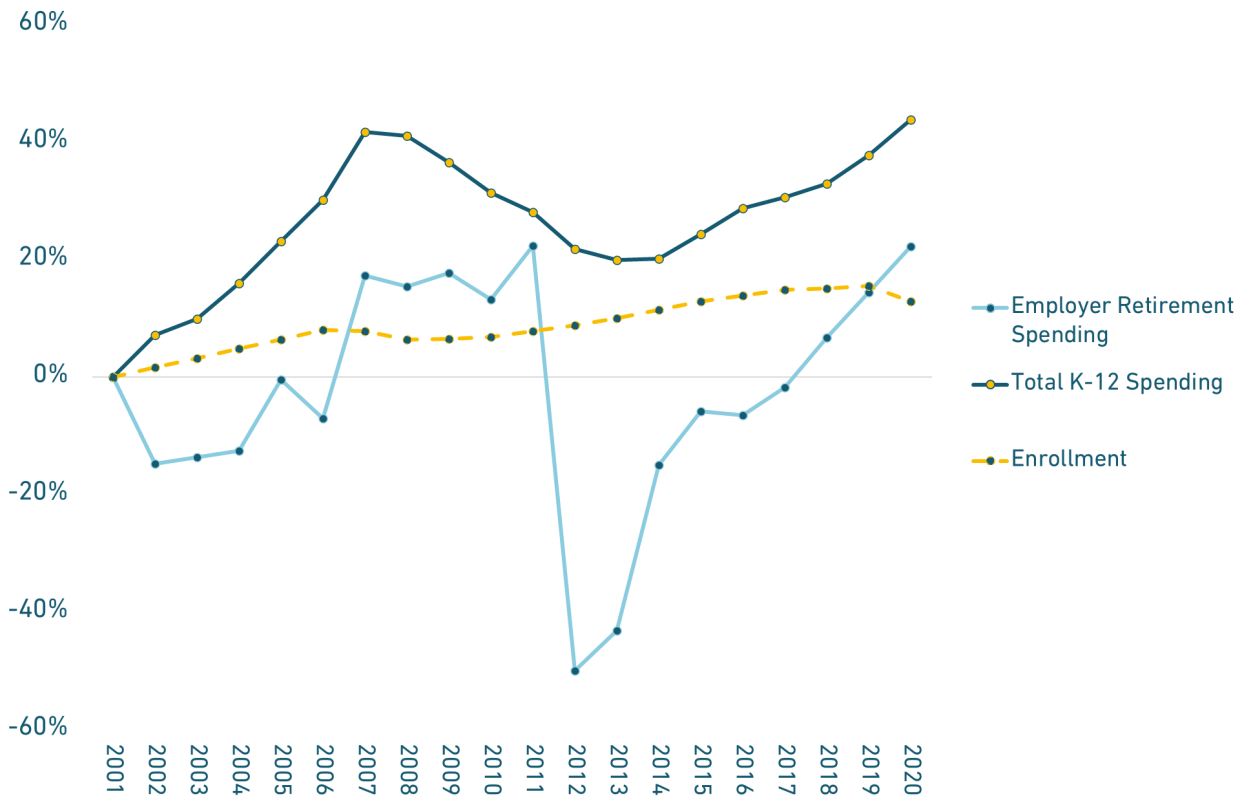
While increased retirement benefit costs are not ideal, they are not inherently a problem — for example, they could be an intended effect based on a policy of increasing retirement benefits for the purposes of enhancing employee welfare or for the purposes of recruiting/retention. But where these growing costs become an issue for public education specifically is their growth relative to general K–12 spending.

And the increase in Florida teacher retirement costs have quite dramatically outpaced the growth in K–12 spending across the state, as shown in Figure 4. Employer spending on FRS increased an average of 18 percentage points every year from 2012 to 2020. By contrast, state and local K–12 spending over the same time period only increased an average of 2.2 percentage points a year.

This explosive change stands in sharp contrast to 2001 to 2011, when the increase in K–12 actually outpaced retirement spending. Taken as a whole, teacher retirement spending did not keep pace with the increase in state and local K–12 spending over the past two decades; however, since 2012, teacher retirement spending has grown more than eight times faster.

**FIGURE 4: TEACHER RETIREMENT SPENDING GREW MORE THAN EIGHT TIMES THE RATE AS K–12 SPENDING FROM 2012 TO 2020**

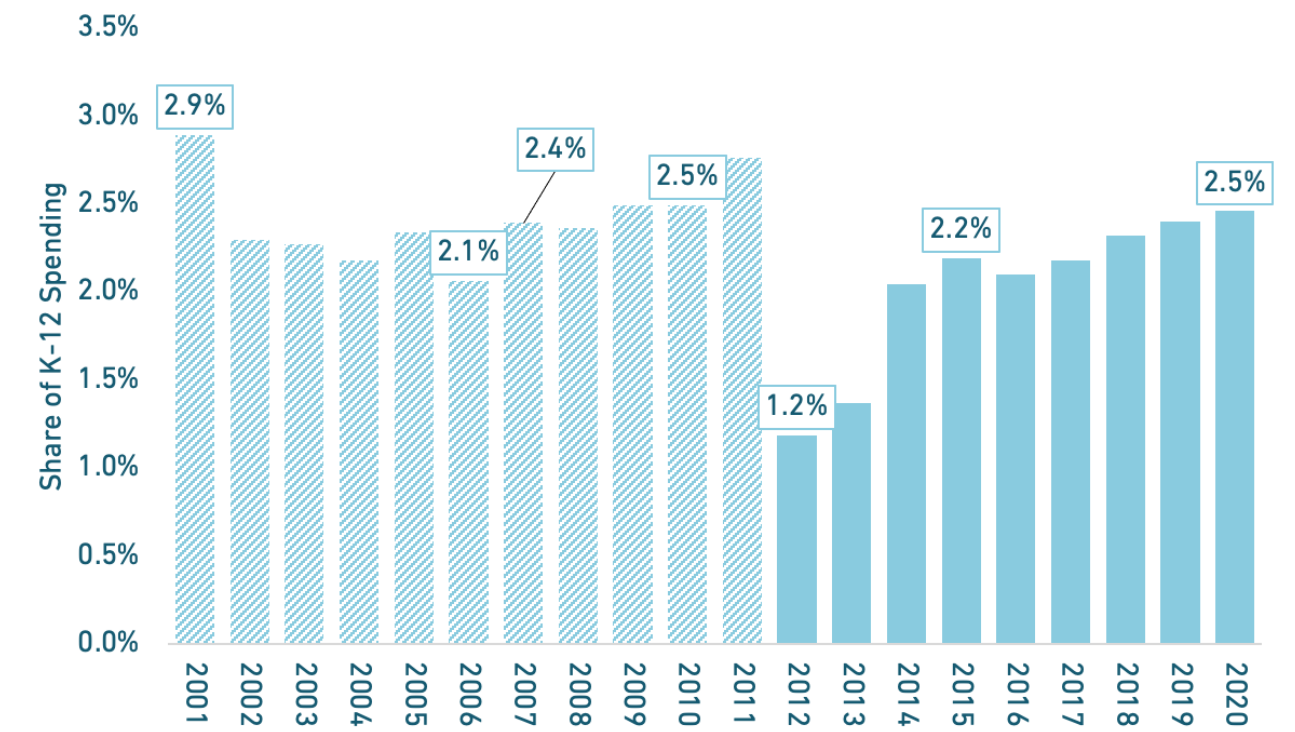
*Growth in Total K–12 Expenditures and Actual Employer Contributions Paid, 2001–2020*



Source: Equable Institute analysis of public plan valuation reports and ACFRs. Student enrollment totals are from the National Center for Education Statistics, public schools, 2019–20, excludes adult education. Financial figures are adjusted for inflation.



FIGURE 5: FLORIDA PUBLIC SCHOOL RETIREMENT COSTS ARE CONSUMING TWICE AS MUCH AS 2012  
*Actual Employer Pension and Investment Plan Contributions as a Share of Total K-12 Spending, 2001-2020*



Source: Equable Institute analysis of public plan valuation reports and ACFRs. These figures are based on expenditures data adjusted for inflation.  
 Note: Employer contributions includes both state and employer spending.

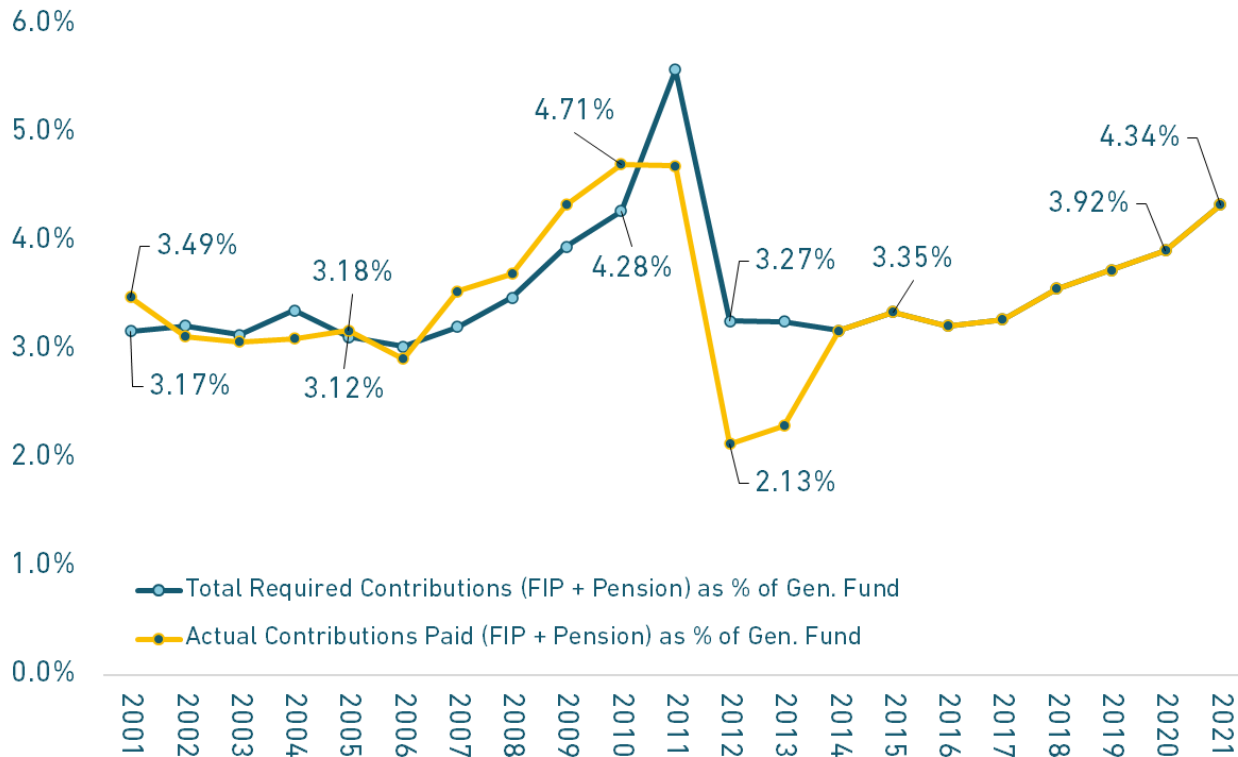
Because teacher retirement costs in Florida are growing faster than school budgets and money allocated to education, the effect has been a hidden education funding cut. This is particularly true since 2012.

Figure 5 above shows the share of state and local K-12 spending consumed by public school employee retirement costs. The share drops notably in 2012 after a significant reduction in FRS benefits lowered overall costs, combined with the introduction of a 3% of payroll member contribution rate. Together, those reduced employer costs temporarily. However, beginning in 2013, the share of total K-12 spending going to retirement began steadily increasing as a result of the introduction and growth of unfunded liabilities. By 2020, 2.5% of all K-12 expenditures went to FRS. That amounts to a 15% decrease from 2001 to 2020, but a 107.1% increase from 2012 to 2020.

As a raw percentage, Florida's 2.5% investment of its total K-12 expenditures on teacher retirement may seem rather trivial. But that amounts to nearly \$1.3 billion. Had Florida been better able to constrain rising retirement costs since 2012 – principally due to growing debt – and maintained teacher retirement spending at 1.2% of its K-12 education budget, Florida's schools would have had an additional \$659.5 million in available funding in 2020.

Since 2012, local K-12 spending has only grown 27% while state K-12 spending has increased only 0.33% - both of which pale against the 144.4% increase in retirement costs. This shows (Figure 4 above) that spending on pensions is growing far more quickly than K-12 funding. In other words, efforts to make greater investments in schools are being blunted by the burgeoning costs of pensions.

FIGURE 6: RETIREMENT SPENDING HAS NEARLY DOUBLED AS A SHARE OF FLORIDA'S GENERAL FUND  
*Required and Actual FRS Contributions as a Share of Florida's General Fund, 2001–2021*



Source: Equable Institute analysis of public plan valuation reports and ACFRs. General Fund Expenditures are drawn from the National Association of State Budget Officers' Annual State Expenditure Reports.

To put the cost of FRS into further perspective, Figure 6 shows teacher retirement spending as a share of Florida's General Fund expenditures, including both the teacher FIP and Pension Plan. The dark blue line shows how much *should have* been spent funding the state teacher retirement system had the state been responsibly funding the Pension Plan, as a percentage of Florida's General Fund expenditures. The yellow line shows how much was actually spent on the Pension Plan and FIP — total spending on teacher retirement — as a share of the General Fund.

The funds actually paid to FRS increased from 3.49% of the General Fund's budget in 2001 to 4.34% in 2021. Since 2014 the state and districts have paid the full actuarially required pension bill, which limits future costs, again costing 4.34% of the General Fund Budget in 2021 – almost 25% more than what was paid to FRS in 2001.

## PART 1 SUMMARY

Teacher retirement costs in Florida have risen faster than K–12 spending, crowding out other potential investments in education. While the hidden cuts to education spending from teacher retirement costs fell in 2012 (due to increased member contributions and decreased benefits), since then hidden cuts trendlines have been growing.



## 2. Pension Spending Has Exacerbated Existing Funding Inequities

Despite an across-the-board rise in state-level teacher pension spending, the effects of that increase are inequitably felt across the state, with low-wealth communities bearing the brunt of the burden.

The rise in the share of state funding dedicated to teacher pensions adversely affects low-wealth schools and districts in two distinct ways:

- (1) Low-income communities have fewer resources to pay growing pension costs.
- (2) Rising pension debt costs are regressive and pass a greater burden to high-poverty districts.

### LOW-INCOME COMMUNITIES HAVE FEWER RESOURCES TO PAY GROWING PENSION COSTS

Local school districts assume the entire employer contribution to FRS. As a result of rising costs and contribution rates over the past two decades, districts spend an increasing portion of their budgets on retirement costs. This disproportionately affects lower-wealth districts, which are less able to raise additional revenues to offset those costs. In effect, contributions to the FRS act as a flat tax and treat teachers' salary that each district in Florida needs to pay as the same regardless of context.

For an economically disadvantaged district, with higher rates of poverty that generates only limited resources from local taxes, spending an increasing amount on pensions — even if just a 1.5% to 2% of payroll increase — has a much higher marginal cost than it does in a wealthy district generating considerable local revenues. To use an everyday example, a \$100 parking ticket costs a lot more to a minimum wage worker than it does to a corporate executive. In this same way, increasing district pension costs similarly burdens low-wealth communities more than it does affluent ones.

This problem is made worse by how Florida's schools are funded. The state does not directly allocate supplemental funding based on either a district's count or concentration of student poverty.<sup>8</sup> In other words, state revenues do not counterbalance higher-poverty districts' reduced capacity to generate any additional revenues needed to offset the rising costs of teacher retirement benefits.

Consider that from 2001 to 2009, FRS did not have any unfunded liability costs because the system was running a surplus. Additionally, teachers did not contribute to the pension system until 2012. However, as the unfunded liability increased over the past decade, total contributions to FRS have also grown as more and more of the employer contribution has been needed to pay down the debt.

In 2012, less than \$1 in \$5 dollars of the employer contribution was allocated to pay down FRS's unfunded liability. That amount grew meaningfully over the following years, peaking in 2019 and, as of 2021, more than \$2 of every \$5 paid by employers is intended to pay down the unfunded liability (see Figure 7, next page).<sup>9</sup>

All of this has led to less money available for the classroom to help students.

<sup>8</sup> Florida does fund a Supplemental Academic Instruction allocation, which is intended to provide additional resources to elementary schools for students at risk of falling behind. In FY2021, the fund distributed slightly more than \$700 million. While this may aid high-poverty elementary schools, this funding stream is not additional resources to support the educational needs of students living in poverty.

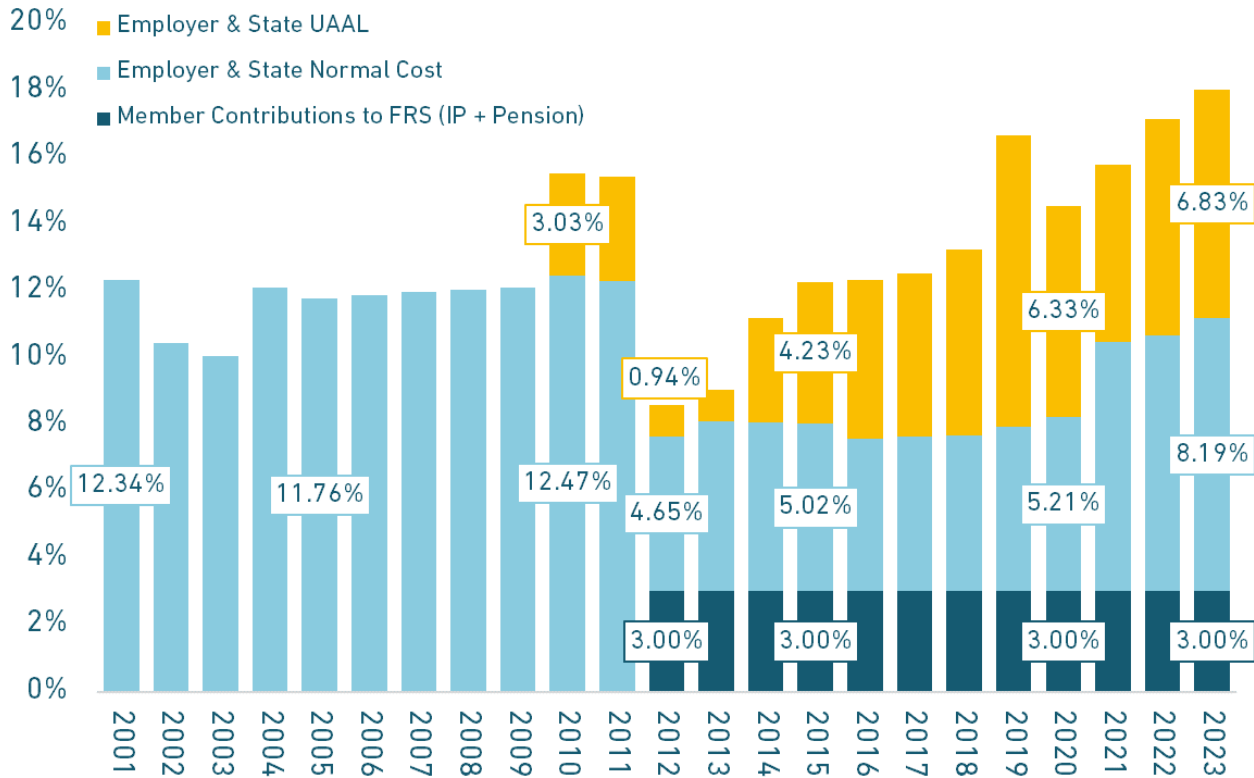
<sup>9</sup> In practice, the state should actually be contributing *more* to pay down the unfunded liability, as it has kept its pension debt payments relatively low by using unrealistic investment assumptions to calculate the value of promised benefits.





FIGURE 11: UNFUNDED LIABILITY COSTS WILL CONSUME 45.5% OF EMPLOYER PENSION CONTRIBUTIONS DURING FISCAL 2023

Contribution Rates (Normal Cost and UAAL Payments) 2001–2023



Source: Equable Institute analysis of public plan valuation reports and ACFRs.

## RISING PENSION DEBT COSTS ARE REGRESSIVE AND PASS A GREATER BURDEN TO HIGH-POVERTY DISTRICTS

Contributions to the pension fund, from both teachers and their employers, are based on salary. The higher a teacher’s salary, the more she and her employer contribute to the fund. Given that more experienced educators earn higher salaries, this structure is designed to reward teachers who remain in the profession for their entire career.

In general, wealthier communities can afford to pay teachers higher salaries, as well as the corresponding higher costs of their retirement benefits, as higher salaries result in greater FRS pension liabilities. In other words, districts that pay larger salaries are responsible for a greater share of the total pension liability at FRS. However, the pension debt costs associated with underfunding that liability are shared evenly by districts across the state through evenly distributed contribution rates. This means that economically disadvantaged communities pay – to some extent – the retirement costs of educators earning higher salaries in wealthier districts.

To be clear, the problem of shared unfunded liability costs is not the fault of districts that pay higher teacher salaries. It is the result of state policy.



First, the state sets contribution rates and other aspects of FRS funding, which contribute to rising debts. Districts have no control over the operation of FRS and therefore do not determine whether the system's debts increase or decrease. Second, when FRS's pension debt increases requiring additional funding, the state doesn't appropriate supplemental funds to districts to cover any of the rising debt costs, despite being at least partially responsible for causing them through policy decisions made at the state level.

There are several strategies Florida could pursue to disrupt these patterns. For one, the state could make its own contribution to FRS to cover the burgeoning debt cost. This would reduce the burden on local districts and limit costs over the long term. The state could address the problem of burdening economically disadvantaged districts with more than their share of the debt cost by developing a funding structure that ties a district's share of the overall debt cost to their contribution to FRS's liability. This would reduce or eliminate the issue of low-income districts subsidizing retirement costs in wealthier ones.

As it stands right now, we know these effects exist. But additional research is needed to further quantify and assess how pension spending in Florida is yet another way that low-income students are shortchanged.

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## PART 2 SUMMARY

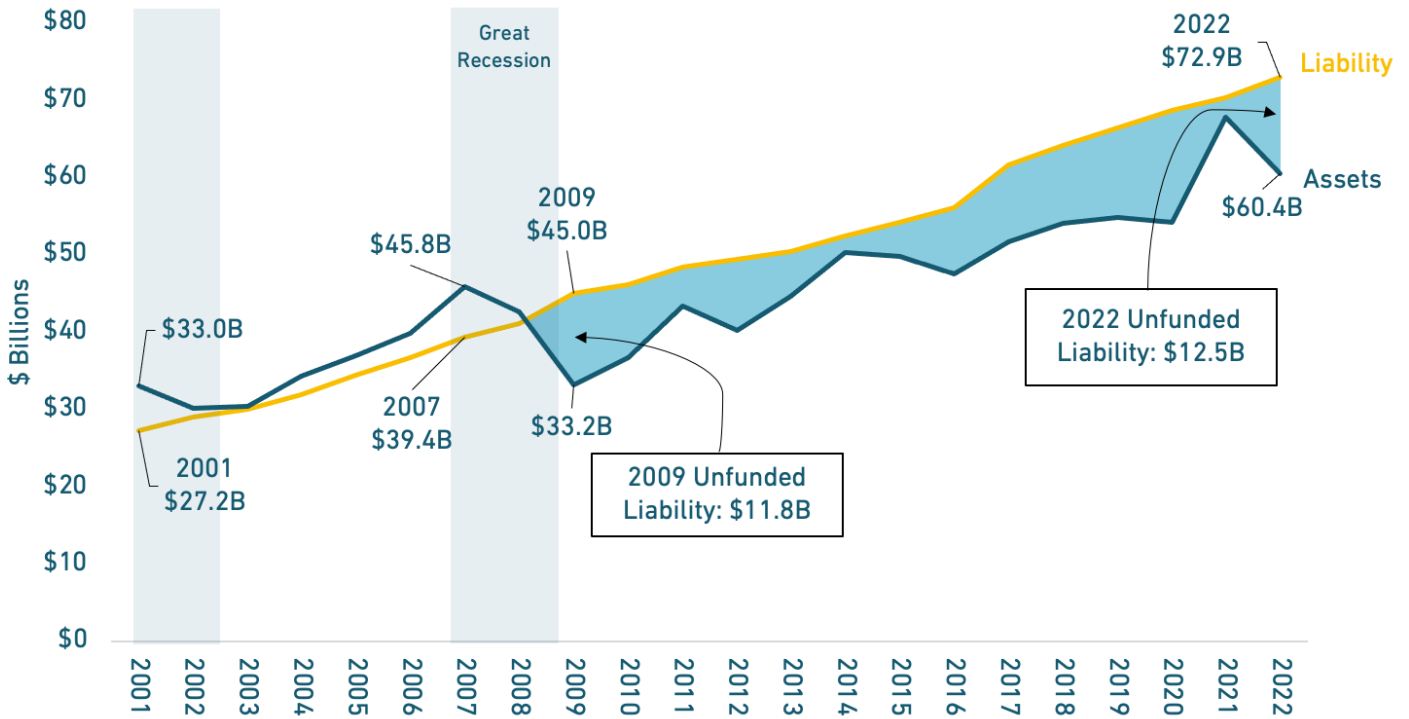
Growing FRS retirement costs can create a problem for all school districts. They can disproportionately affect lower-resourced schools. And the growing retirement cost implications are also not distributed evenly from district to district. Already facing significant funding challenges, the students in Florida's low-wealth districts experience the most harm from resource reductions that are primarily driven by benefits earned in wealthier school districts.



### 3. Underperforming Investments Caused Pension Debt to Grow for Florida School Districts

FIGURE 7: THE TEACHER SHARE OF FRS'S UNFUNDED LIABILITY REACHED \$12.5 BILLION IN 2022

*Estimated Public School Employer Share of FRS Market Valued Assets and Actuarially Accrued Liability, 2001–2022*



Source: Equable Institute analysis of public plan valuation reports and ACFRs.

The funding shortfall for FRS did not emerge until the financial crisis and it has grown between 2009 and 2022. Even during the bull market after the financial crisis, unfunded liabilities continued to accumulate — partially because the legislature didn't always properly fund the Pension Plan and partially because the FRS board overestimated what returns they could actually earn.

Figure 7 shows that FRS ran a surplus from 2001 to 2008, as the system held more in assets than accrued benefit liabilities to members. That changed dramatically during the Great Recession. From 2007 to 2009, FRS went from a \$19.3 billion surplus to a \$35.2 billion deficit — \$11.8 billion of which was specific to teachers and public school employees (shown in the figure). Yet, despite increasing its assets by 63% from 2009 to 2020, FRS's unfunded liability has only continued to grow. In 2020, before the full effects of the pandemic set in, the public school employer share of FRS unfunded liabilities had grown to \$14.5 billion.

While the once-in-a-generation investment returns of 2021 reduced the plan's pension debt significantly, investment losses in 2022 reversed a large portion of those gains. As of June 2022, FRS reports \$37.2 billion in unfunded liabilities, of which \$12.5 billion is for teachers and public school employers.



Unfortunately, the situation is likely to get worse, as the current reported level of unfunded liabilities is based on the assumption of earning 6.7% investment returns in the coming years — the prospect of which is at best 50/50 and probably much lower probability than that, depending on your outlook on future financial markets.<sup>10</sup> FRS's own "sensitivity" analysis shows that if they used a more realistic 5.7% assumed rate of return, the current total \$37.2 billion reported level of unfunded liabilities is actually closer to \$65 billion.<sup>11</sup>

FRS's unfunded liability can also be thought of on a per-student basis. Table 1 shows the debt distributed across the total K–12 enrollment in Florida from 2001 to 2020. During that period, per-pupil spending increased approximately \$4,026 — from \$14,695 in 2001 to \$18,721 in 2020. At the same time, a student's "share" of the pension debt jumped from -\$2,360 (FRS had a surplus) in 2001 to more than \$5,200 by 2020.

Put another way, the pension debt is large enough that the state would need to shut down the K–12 education system for nearly three and a half months and funnel every dollar intended for public education into FRS to completely pay down the debt.

TABLE 1: FRS'S UNFUNDED LIABILITY AMOUNTS TO MORE THAN \$5,000 PER STUDENT

*Per Student Total K–12 Funding and Pension Debt, 2001–2020*

YEAR	TOTAL K–12 SPENDING PER STUDENT	PER STUDENT SHARE OF PENSION DEBT	PENSION DEBT AS % OF PER STUDENT FUNDING
2001	\$14,695	Fully Funded	Fully Funded
2002	\$15,501	Fully Funded	Fully Funded
2003	\$15,647	Fully Funded	Fully Funded
2004	\$16,258	Fully Funded	Fully Funded
2005	\$17,004	Fully Funded	Fully Funded
2006	\$17,719	Fully Funded	Fully Funded
2007	\$19,320	Fully Funded	Fully Funded
2008	\$19,496	Fully Funded	Fully Funded
2009	\$18,848	\$4,484	23.79%
2010	\$18,066	\$3,567	19.75%
2011	\$17,454	\$1,885	10.80%
2012	\$16,452	\$3,389	20.60%
2013	\$16,029	\$2,121	13.24%
2014	\$15,849	\$742	4.68%
2015	\$16,184	\$1,551	9.58%
2016	\$16,608	\$3,006	18.10%
2017	\$16,698	\$3,489	20.90%
2018	\$16,970	\$3,548	20.91%
2019	\$17,515	\$4,040	23.06%
2020	\$18,721	\$5,206	27.81%

Source: Total K–12 education spending data are drawn from U.S. Census Bureau, 2020 Annual Surveys of State and Local Government Finances. Unfunded liability data are drawn from public plan valuation reports and ACFRs. All spending figures are adjusted for inflation.

<sup>10</sup> Investment analysts for Florida's State Board of Administration said in October 2022 there was a 50/50 chance of 6.57% return over the forthcoming decade and a similar chance of 7% returns over the next 20-years, but that a more realistic outlook might be closer to 6.1% investment returns, which would also be more consistent with the assumption changes of peer retirement systems. See "[2022 FRS Actuarial Assumption Estimating Conference](#)," Milliman, October 20, 2022.

<sup>11</sup> Sensitivity analysis from Florida Retirement System, fiscal year 2022 actuarial valuation.



Table 2 shows that actual per-pupil funding gradually eroded from 2012 to 2020 due to rising retirement costs outpacing growth in K–12 spending. Employers paid \$199 in retirement costs per student in 2012, but by 2020 that amount had more than doubled to \$464 (see column “Total Retirement Cost”).

The actual amount of money spent on education per student isn’t really the normal amount reported, which is shown in the column “Total K–12 Spending.” It is that amount, minus “Total Retirement Cost” — the balance of which is shown in the far right column. It is a roughly 11% hidden education funding cut total per pupil spending. These figures suggest that rising pension debt creates real costs for students.

**TABLE 2: PENSION COSTS PER STUDENT MORE THAN DOUBLED FROM 2012 TO 2020**

*Per-Student K–12 and Pensions Spending, by Source, 2001–2020 (figures rounded)*

YEAR	DISTRICT PENSION COST	DISTRICT FIP COST	TOTAL RETIREMENT COST	DISTRICT K–12 SPENDING	DISTRICT SPENDING MINUS DISTRICT RETIREMENT COST	TOTAL K–12 SPENDING	TOTAL K–12 SPENDING MINUS TOTAL RETIREMENT COST
2001	\$439	\$0	\$439	\$10,740	\$10,301	\$14,695	\$14,255
2002	\$361	\$0	\$361	\$11,187	\$10,827	\$15,501	\$15,140
2003	\$358	\$5	\$363	\$11,319	\$10,956	\$15,647	\$15,283
2004	\$360	\$7	\$367	\$11,816	\$11,450	\$16,258	\$15,891
2005	\$399	\$10	\$408	\$12,371	\$11,963	\$17,004	\$16,596
2006	\$369	\$13	\$382	\$13,042	\$12,660	\$17,719	\$17,337
2007	\$459	\$17	\$475	\$14,278	\$13,803	\$19,320	\$18,844
2008	\$465	\$20	\$485	\$14,385	\$13,900	\$19,496	\$19,011
2009	\$444	\$20	\$464	\$13,440	\$12,976	\$18,848	\$18,384
2010	\$435	\$21	\$456	\$12,515	\$12,060	\$18,066	\$17,610
2011	\$478	\$22	\$500	\$11,865	\$11,365	\$17,454	\$16,954
2012	\$178	\$21	\$199	\$10,880	\$10,681	\$16,452	\$16,254
2013	\$203	\$21	\$224	\$10,542	\$10,318	\$16,029	\$15,805
2014	\$310	\$21	\$331	\$10,659	\$10,328	\$15,849	\$15,517
2015	\$334	\$22	\$355	\$10,862	\$10,507	\$16,184	\$15,828
2016	\$331	\$22	\$353	\$10,950	\$10,597	\$16,608	\$16,256
2017	\$346	\$24	\$370	\$12,289	\$11,919	\$16,698	\$16,328
2018	\$372	\$34	\$406	\$12,284	\$11,878	\$16,970	\$16,564
2019	\$392	\$36	\$428	\$12,520	\$12,092	\$17,515	\$17,087
2020	\$423	\$41	\$464	\$13,330	\$12,866	\$18,721	\$18,257

Source: Total K–12 education spending data are drawn from U.S. Census Bureau, 2020 Annual Surveys of State and Local Government Finances. Unfunded liability data are drawn from public plan valuation reports and ACFRs. All spending figures are adjusted for inflation.



## 4. Who Will Pay Pension Cost Increases in the Future?

Recent efforts by FRS and the State Board of Administration (SBA) to improve actuarial assumptions have led to gradually increasing contribution rates for state pension benefits. And in 2022, the legislature approved a 3% of payroll increase in the employer contribution to individual retirement plan accounts (for those who have opted to enroll in defined contribution benefits). From the perspective of financing retirement benefits and ensuring adequate future retirement income, these are positive steps in the near term. But, they are unlikely to be sufficient if the FRS is to achieve financial sustainability in the long run.

Florida's rising teacher pension debt is driven primarily by two factors:

- poorly measured cost of benefits (actuarial assumptions consistently underestimated the timing of retirement by FRS members), and
- unrealistic investment assumptions, which have led to both underperforming investments and a need to recognize that previous actuarial valuations were not fully reflecting the long-term FRS funding shortfall.

Historically, there have been other contributors to FRS pension debt, including unpaid for benefit increases between 2001 and 2010. The legislature tried to offset the benefit increases by slashing cost-of-living adjustments in 2012, but this just papered over the larger accounting problems for FRS.

In a positive turn of events, strong investment performance in 2021 helped the Florida Retirement System's assets significantly. On a market value basis, and based on investment expectations at the time, it even looked like the huge returns would take care of most unfunded liabilities.

But 2022 caused sharp investment losses, with a -7.18% return (below the national average in losses for pension plans).<sup>12</sup> The volatility underscores the lack of resilience built into the status quo for FRS. And it exposes the need for more changes than simply hoping to invest the pension fund back to health.

The State Board of Administration's steps over the past few years to lower the assumed rate of return to 6.7% should be commended. However, the most popular survey of capital market forecasts estimates there is roughly a 40% chance that pension funds will earn a 7% investment return in the coming decade.<sup>13</sup>

Other large pension funds have taken note of these projections and adjusted their assumptions accordingly. The largest pension fund in the United States, California Public Employees' Retirement System (CalPERS) lowered their investment assumption to 6.8% in 2021, and their board investment advisors has suggested targeting 6% in the long-run.<sup>14</sup> The New York State Common Fund, one of the best managed pension funds in the country and third largest by assets under management, recently dropped their investment assumption to 5.9%.<sup>15</sup>

<sup>12</sup> Anthony Randazzo and Jonathan Moody, "State of Pensions 2022," Equable Institute.

<sup>13</sup> Anthony Randazzo and Jonathan Moody, "State of Pensions 2022," Equable Institute.

<sup>14</sup> Equable Institute, "CalPERS Strong Investment News Triggers Lower Assumed Rate of Return," August 13, 2021.

<sup>15</sup> Office of the New York State Comptroller, "DiNapoli Announces Reduction in Employer Contribution Rates for Retirement System," August 25, 2021.



## WHAT QUESTIONS SHOULD THE LEGISLATURE CONSIDER?

All of this leads us to the conclusion that Florida will again need to lower its assumed rate of return in the near term. And this, in turn, will mean larger contribution rate requirements. Moreover, retirees from FRS lack inflation adjustment of benefits given cuts made in 2012. In the broader inflationary environment stretching into 2023 there would be just cause to make an adjustment to benefit values to account for a lack of COLA. This would, though, also require an increase in contribution rates.

With these things in mind there are three critical questions that arise when considering the strategy that FRS, the State Board of Administration, and the state legislature should take when next increasing contribution rates:

- Will the State Board of Administration again decrease the assumed rate of return only marginally (e.g., 6.6% to 6.4%), or will they make the full adjustment necessary and drop it to between 5.75% and 6%? Making marginal adjustments prevents actuarially determined contribution rates from spiking on a short-term basis, but making a single large step toward a realistic investment assumption helps to make clear what long-term cost obligations will be for FRS benefits.
- How much will contribution rates need to increase based on the new assumed rate of return and how will the funded status of FRS change due to the performance of its investments since it has been lowering its rate gradually over the past few years?
- How will the state distribute those cost increases among the legislative budget, K-12 employers, and FRS members?

A related matter would be whether the state should finish steps toward providing benefits that offer retirement income security. Specifically, the legislature should consider changes to both the FIP and Pension Plan:

- The Investment Plan was recently improved with 3% of payroll increases from employers, but while a meaningful step forward this still leaves the total default contribution rate into individual retirement plans below levels recommended for a defined contribution plan to provide adequate lifetime income. Specifically, the Investment Plan's contribution rates should be increased again such that there are at least 10% of salary total contributions flowing into individual accounts — which would address concerns that the benefits provided by the FIP are inadequate. This could add between 1% and 3% of payroll contributions for employers and/or members depending on the legislature's policy preference.
  - FIP members only contribute 3% of their pay, which is relatively low compared to other member requirements nationally. However, any required member increase would effectively be a pay cut unless it was offset.
  - If employers were required to provide the increased amount it would not be a large dollar difference in the near-term since FIP members are a relatively small percentage of the plan today. But since the FIP is now the default plan then over time it is likely to accumulate a larger share of teachers relative to the Pension Plan, at which time such an increase could be a meaningful cost increase for school districts.
- The Pension Plan's benefits are among the lowest valued in the country, whether for teachers or any other members of the "Regular" plan. (See Appendices D and E for more details.) And there is a lack of inflation protection for members of the Pension Plan, and its underlying values are particularly poor relative to teachers nationwide.





## OUR POLICY VIEW

Despite recent reforms and investment performance, Florida faces considerable challenges in funding and improving FRS. The state will need to make important changes in the near future.

Based on the analysis in this paper, our policy view is the following:

- Investment assumptions for FRS should be reduced to create a better baseline for measuring the contribution rates necessary to get the pension funds back to full funding.
- Ideally, any future contribution rate increases for FRS will not cut into K–12 funding. While this may be challenging, at a minimum the legislature should increase transparency by officially showing the portion of state and local K–12 resources (excluding itemized federal dollars) that are spent on retirement and other benefit costs. In addition, the legislature could require additional reporting that shows what portion of any additional increases in K–12 funding are actually required to cover growing retirement costs. The legislature might also use general funds or one-time contributions that are designed to offset local school district contributions that are needed to cover unfunded liability amortization payments.
- At the same time, the state should review how requiring districts to pay the full value of the employer contribution, and how the reliance on local resources to pay FRS's debts exacerbates inequities. Florida should consider adopting an adjustment to the school funding formula that requires higher-income districts that pay larger salaries to contribute more to FRS.
- Finally, the benefits provided for teachers and staff through FRS also should be improved. Members of the Investment Plan should have at least 10% of salary in annual contributions (currently, the 3% member contribution rate and 6.3% employer contribution rate are insufficient when combined). Members the Pension Plan should at least have inflation protection of their benefits. (These elements are discussed at more length in Appendices D and E.)

Addressing these kinds of issues and, in particular, better integrating teacher pension costs with school finance will involve a number of policy choices and trade-offs. However, ignoring these issues simply means that students and educators lose.

For students: The status quo is eroding dollars for the classroom in all districts, and is particularly regressive for lower wealth school districts. Further, equally distributing costs across all districts favors wealthier districts that pay teachers more and retain them longer and this has a negative fiscal effect on low-income communities.

For educators: The status quo puts all of the cost of paying down unfunded pension liabilities on school districts, which in turns restricts their resources that would be available to improve salaries. Moreover, the costs of unfunded pension liabilities have created a political context that favors lower benefit values and larger contribution requirements from teachers themselves — the longer that the pension funding problem persists the harder it will be to honor the service of educators with better quality benefits.

Together, these elements mean the Florida's teacher retirement benefits as currently structured are a kind of subsidy to wealthy communities. Something must be done to implement equitable policy in Florida and lessen the financial burden on low-wealth districts that already struggle to generate sufficient revenue to support their students and educators.



## GLOSSARY OF TERMS

Pension plans are designed to collect contributions every year and then invest those funds. The combined assets and investment returns are used to pay promised benefits.

**Total Pension Liability (TPL) or Actuarial Accrued Liability (AAL)** — The value of those promised benefits measured in today's dollars.

**Fiduciary Net Position (FNP) or Actuarial Value of Assets (AVA)** — The value of assets on hand being invested to generate returns.

**Net Pension Liability (NPL) or Unfunded Actuarial Accrued Liability (UAAL)** — When the value of promised benefits (in today's dollars) is greater than the value of assets on hand to be invested, then a pension fund is said to have an "Unfunded Actuarial Liability." Under Government Accounting Standards Board (GASB) methodology, this is defined as the "Net Pension Liability," but colloquially it can be thought of as a "funding shortfall" or as "pension debt" owed by the government that created the pension fund.

**Funded Ratio** — The percentage of assets on hand compared to promised benefits. Pension funds should target 100% funded ratio, which means that all future pension checks measured in today's dollars are equal to the assets on hand generating investment returns.

Contributions into a pension plan come from three sources: "members," "participating employers," and "non-participating employers."

**Member Contributions** — Automatically deducted on a pre-tax basis from the paychecks of active employees who work for a public school employer. Some states allow employers to pay this contribution on the members' behalf instead, and usually this "pick up" of member contributions results in lower negotiated salaries than would otherwise be demanded.

### Employer Contributions:

**Participating** — Dollars that flow from a school district, independent school, or public school agency with members enrolled in a retirement system. Generally, we refer to these as "district" contributions to distinguish from money paid in by the state, though some state agencies that serve K-12 public schools are also considered "employers."

**Non-Participating** — Dollars that flow from the state legislature's budget directly into a retirement system, paid on behalf of participating employers. Generally, this is when the state makes a lump sum payment instead of distributing money out to districts and then having them pay the amount back.

Retirement systems are intended to provide income to their members after retiring from public service. Whether those benefits are sufficient to retire comfortably is typically defined via measures of "benefit adequacy."

**Pension Plan Benefit Adequacy** — Typically measured by looking at "replacement rates" provided by a pension plan (e.g., the percentage of income earned during a teacher's working years that get paid to a pension plan member during their retirement). Adequate replacement rate targets range from 60% to 80% depending on who you ask.

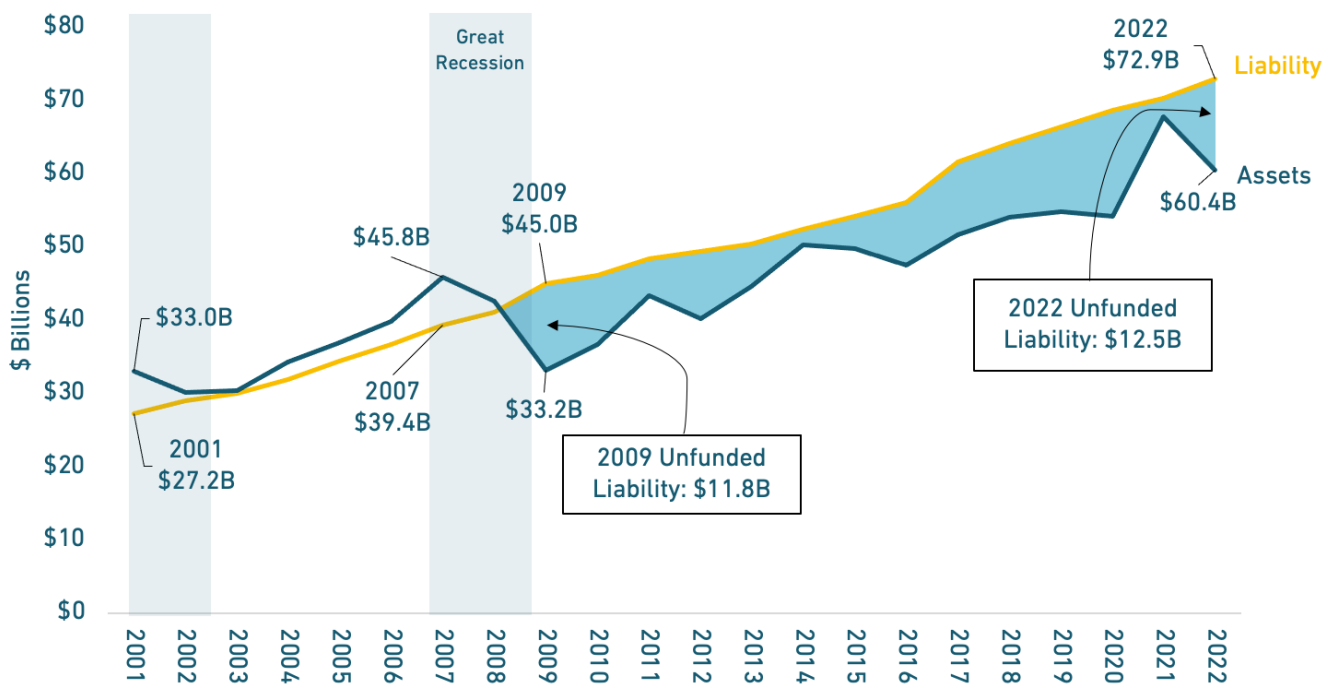
**Defined Contribution Plan Benefit Adequacy** — Typically measured based on the value of contribution rates flowing into the plan. Adequate rates typically are 10% to 15% for those also enrolled in Social Security, and 15% to 20% for those without Social Security access.



# Appendices

## Appendix A: What Has Caused Pension Debt Costs to Increase? Growing Unfunded Liabilities.

FIGURE A1: THE TEACHER SHARE OF FRS'S UNFUNDED LIABILITY REACHED \$12.5 BILLION IN 2022  
*Estimated Public School Employer Share of FRS Market Valued Assets and Actuarially Accrued Liability, 2001–2022*



Source: Equable Institute analysis of public plan valuation reports and ACFRs.

The funding shortfall for FRS did not emerge until the financial crisis and it has grown between 2009 and 2022. Even during the bull market after the financial crisis, unfunded liabilities continued to accumulate — partially because the legislature didn't always properly fund the Pension Plan and partially because the FRS board overestimated what returns they could actually earn.

Figure A1 shows that FRS ran a surplus from 2001 to 2008, as the system held more in assets than accrued benefit liabilities to members. That changed dramatically during the Great Recession. From 2007 to 2009, FRS went from a \$19.2 billion surplus to a \$35.2 billion deficit — \$11.8 billion of which was specific to teachers and public school employees (shown in the figure). Yet, despite increasing its assets by 63% from 2009 to 2020, FRS's unfunded liability has only continued to grow. In 2020, before the full effects of the pandemic set in, the public school employer share of FRS unfunded liabilities had nearly grown to \$14.5 billion.

While the once-in-a-generation investment returns of 2021 reduced the plan's pension debt significantly, investment losses in 2022 reversed a large portion of those gains. As of June 2022, FRS reports \$37.2 billion in unfunded liabilities, of which around \$12.5 billion is for teachers and public school employers.

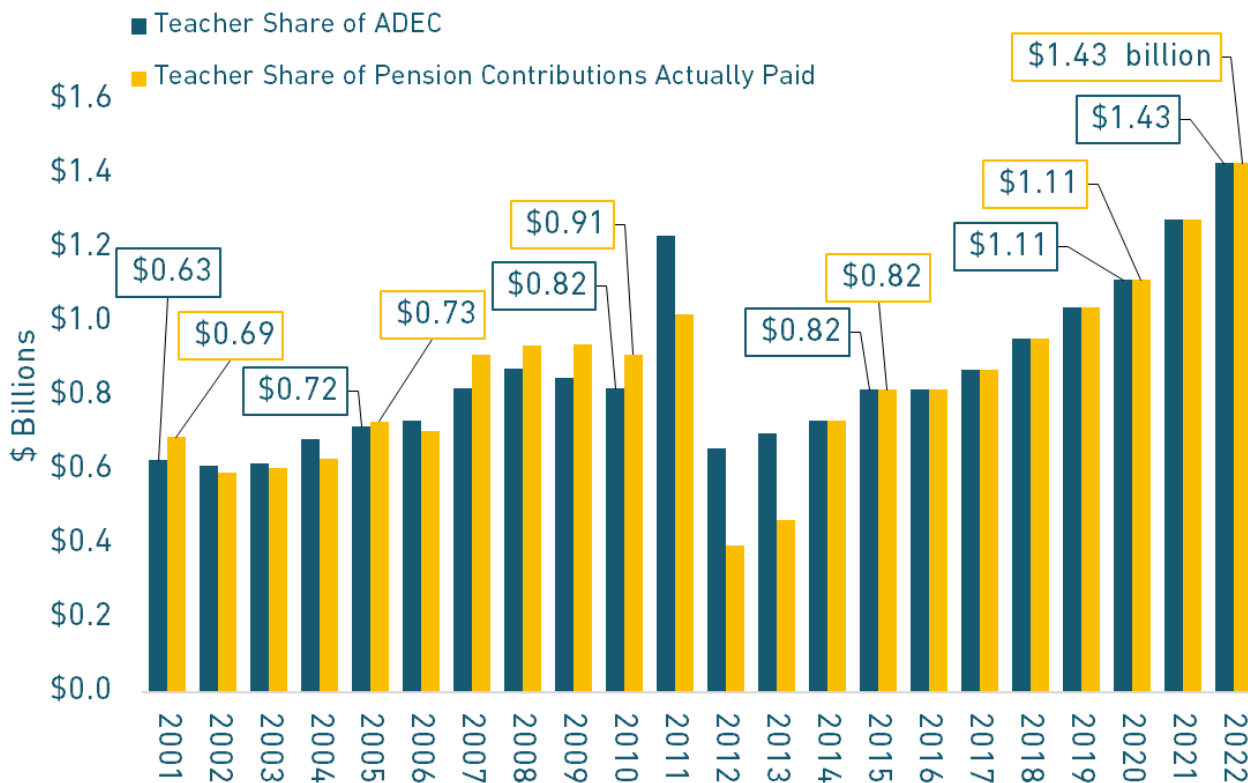


Unfortunately, the situation is likely to get worse, as the current reported level of unfunded liabilities is based on the assumption of earning 6.7% investment returns in the coming years — the prospect of which is at best 50/50 and probably much lower probability than that, depending on your outlook on future financial markets.<sup>16</sup> FRS’s own “sensitivity” analysis shows that if they used a more realistic 5.7% assumed rate of return, the current total \$37.2 billion reported level of unfunded liabilities is actually closer to \$65 billion.

There is good news about FRS funding policy though.

Prior to 2014, the state would frequently underpay and overpay the full actuarially determined employer contribution (ADEC). As shown in Figure A2, since 2014 Florida paid the full required contributions to FRS each year. In total, the state underpaid their required contributions since 2001 by \$410.1 million.

FIGURE A2: FLORIDA HAS CONSISTENTLY PAID THE FULL REQUIRED CONTRIBUTION TO FRS SINCE 2014  
*Required (ADEC) and Actual Contributions Paid to FRS, 2001–2022, Public School Employers Only*

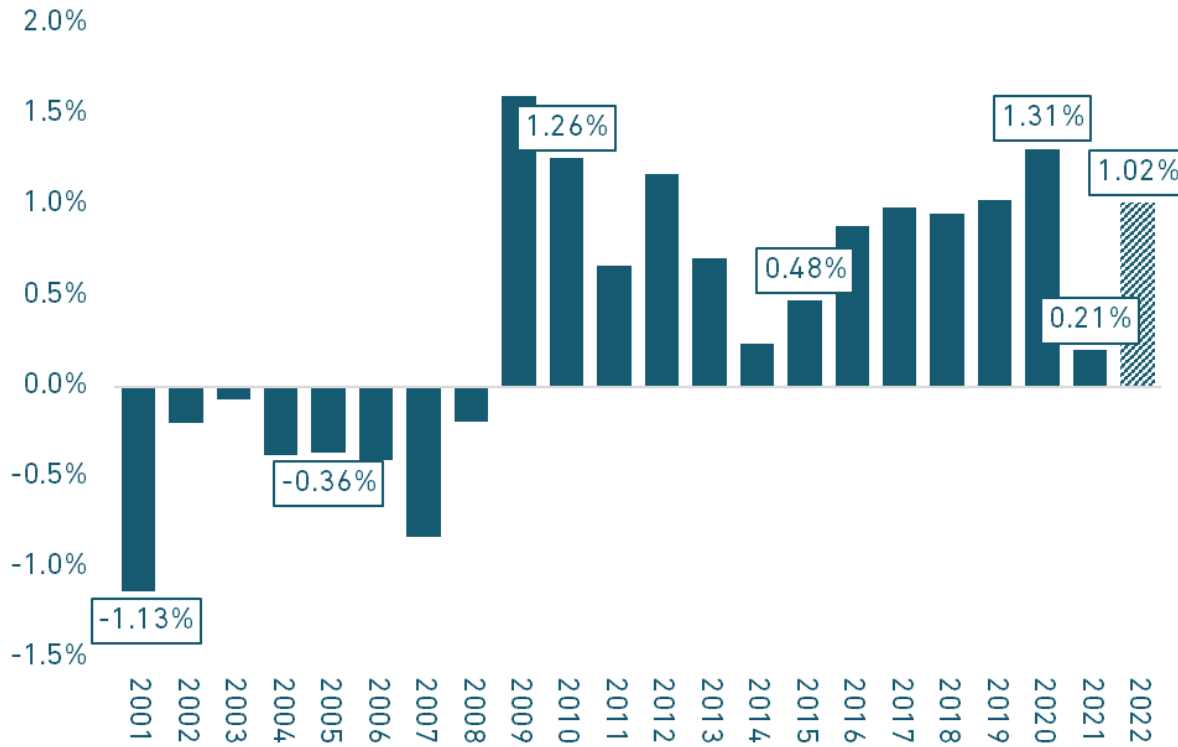


Source: Equable Institute analysis of public plan valuation reports and ACFRs.

<sup>16</sup> Investment analysts for Florida’s State Board of Administration said in October 2022 there was a 50/50 chance of 6.57% return over the forthcoming decade and a similar chance of 7% returns over the next 20-years, but that a more realistic outlook might be closer to 6.1% investment returns, which would also be more consistent with the assumption changes of peer retirement systems. See “[2022 FRS Actuarial Assumption Estimating Conference](#),” Milliman, October 20, 2022.



FIGURE A3: TEACHER SHARE OF FRS FUNDING SHORTFALL AMOUNTS TO NEARLY 1% OF FLORIDA'S GDP  
*Market Valued FRS Unfunded Liability as a Share of Florida's GDP, 2001-2022*



Source: Equable Institute analysis of public plan valuation reports and ACFRs. U.S. Bureau of Economic Analysis, "GDP by State."

The transition from FRS's teacher-based \$5.8 billion surplus in 2001 to a \$12.5 billion shortfall in 2020 is significant. But, while the \$18.3 billion increase in debt appears shocking, considering the sheet size of the state's budget, this number is much less threatening. However, comparing unfunded liabilities with the economic activity in the state gives some helpful perspective. Figure A3 above shows the reported unfunded liabilities each year from 2001 to 2021 as a share of Florida's GDP.<sup>17</sup>

In 2020, the unfunded teacher pension liability reported by FRS (based on a market value of assets) was \$14.5 billion, and that was 1.31% of the state's economic output. The state reported a lower shortfall in 2021 due to high investment returns, dropping to only 0.21% of the state's GDP. However, the actual shortfall will still be considerably higher using a more realistic investment assumption to measure the value of liabilities. While GDP data for 2022 are not yet available, it is likely that a realistic measure of FRS unfunded liabilities in 2022 will look similar to the reported value of liabilities in 2021 and will still be around 1% of Florida's output (assuming that economic activity in 2022 was similar or better than 2021).<sup>18</sup>

Fortunately, this percentage of GDP is a manageable figure – which means the unfunded liability should also be considered a manageable dollar number. The functional roadblock for fixing Florida's funding is largely a political issue – does the state want to spend the money necessary to fix the funding shortfall or let costs continue to accumulate and get passed down to school districts? And to the degree that state leaders want to solve this problem, can they do so in such a way that holds schools and students harmless?

<sup>17</sup> Economic data for 2022 aren't available yet, but data from 2021 are helpful as a benchmark.

<sup>18</sup> The estimated 2022 total uses the reported unfunded liabilities from the FRS ACFR and assesses them as a percentage of the FY21 GDP to provide a point of reference.



## Appendix B: What Has Caused Unfunded Liabilities to Increase? Inaccurate Assumptions about Investments and Demographics.

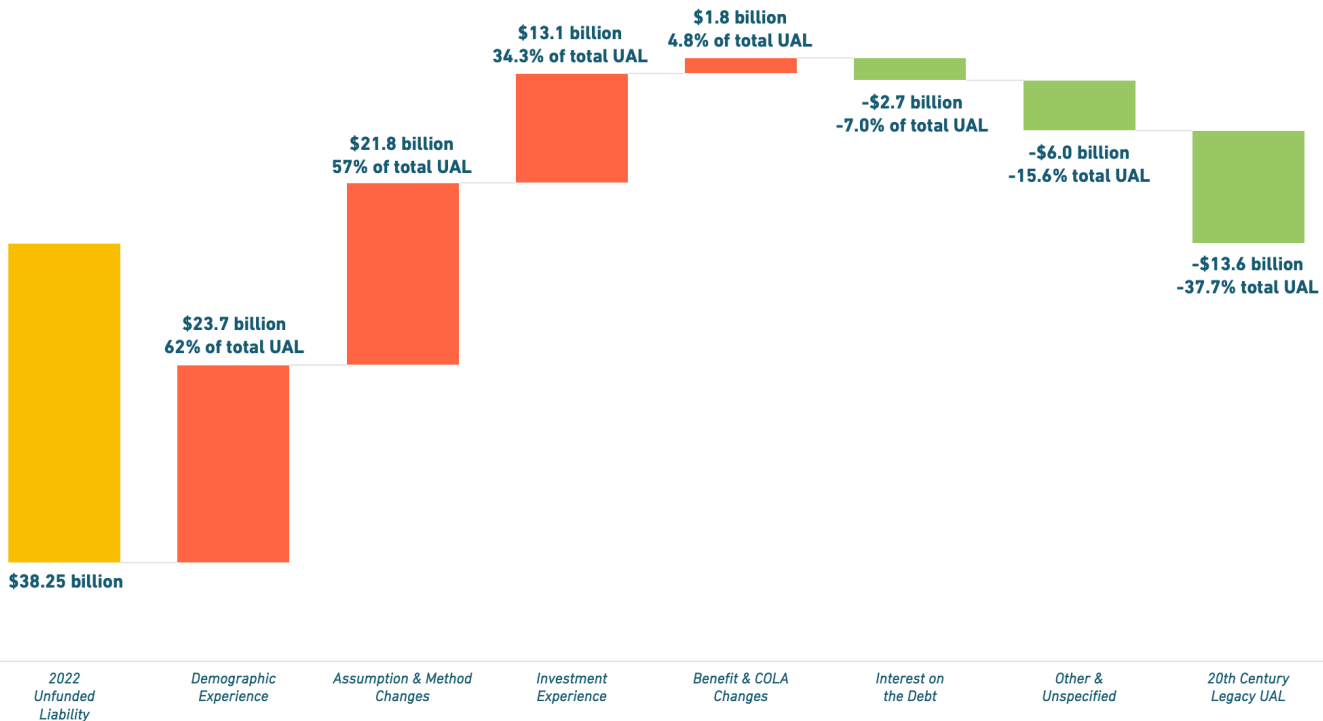
The two largest contributors to FRS’s unfunded liability have been poor assumptions about retirement patterns and investment returns. This is not to say Florida has experienced large investment losses or even that FRS has made bad investments. Rather, what happened was that the actual rates of retirement and turnover of staff were different than assumed. And the actual investment returns earned were less than assumed.

Put another way, while investments may have met various benchmarks and performed well, the average FRS investment return wasn’t sufficient to meet the plan’s assumed rate of return. The underperforming years outweighed the overperforming years.

Performance relative to actuarial assumptions was not the whole story for FRS unfunded liability though. Figure B1 breaks out the main factors that contributed to the emergence of unfunded liabilities, as well as the elements that reduced the overall funding shortfall. For 2020, the unfunded actuarial accrued liability was reported at \$38.25 billion, and this chart shows the various factors that have been identified as contributing to that measurement of the FRS’s funding shortfall.<sup>19</sup>

FIGURE B1: UNDERPERFORMING INVESTMENTS AND RETIREMENT RATES ACCOUNT FOR THE MAJORITY OF FRS’S UNFUNDED LIABILITY GROWTH

*FRS’s Gains and Losses by Source, 2001–2022*



Source: Equable Institute analysis of public plan valuation reports and ACFRs.

<sup>19</sup> These data include the entire FRS system and not strictly the portion attributable to teacher pensions. There is no reason the teacher portion of FRS would be operated in a manner that would result in a different distribution of actuarial gains and losses other than certain actuarial gains or losses related to benefit changes that may be only attributable to special categories of FRS workers.





Figure B1 shows the sources attributed to FRS's unfunded liabilities, reflected in the far left yellow column. The elements that have built up to that figure are shown from left to right:

1. **Demographic Experience:** Actual demographic factor experience was so different from the actuarial assumptions that they added \$23.7 billion to the unfunded liability over the past two decades. The primary factor was FRS members, including teachers, retiring later than expected. By contrast, payroll for FRS members did not grow as fast as expected (meaning benefit pensions earned haven't been as large as anticipated) and people have lived shorter lives than estimated by the FRS actuarial assumptions. But the off-target retirement pattern assumptions added so much to the unfunded liability that it outweighed actuarial "gains" related to those other demographic factors.
2. **Assumption Changes:** Over time, the state administrative board that sets investment assumptions for FRS has gradually made changes, particularly to the assumed rate of return. FRS inappropriately assumed a 7.75% or higher investment return until 2013 when they finally began to make slow changes. The assumed return rate was nudged down 5 to 20 basis points a year, reaching 6.7% in 2022. These and other changes to actuarial assumptions to adapt to a changing world and improve accuracy, like improving mortality tables, have meant recognizing an additional \$21.8 billion in unfunded liabilities. That said, it needs to be lowered further given market expectations over the next decade.<sup>20</sup>
3. **Investment Experience:** Between 2001 and 2022, there were good years and bad years of investment returns, but all added together there was enough underperformance to add \$13.1 billion to the FRS unfunded liabilities. The majority of these actuarial losses were accumulated during the years of the financial crisis. But actual performance during the decade-long bull market that followed the Great Recession was not sufficient to meaningfully reduce this share of the unfunded liability growth. Because FRS uses a five year period to phase in gains and losses, this number includes 40% of the 2021 investment gains and 20% of the 2022 investment losses.
4. **Benefit & COLA Changes:** Benefit increases and decreases also influenced funding levels. In the first few years of the 21st century, benefit levels were increased for some active FRS members, which added to unfunded liability levels because they were unpaid for. And between 2005 and 2010, there were more than \$3 billion in COLAs distributed that hadn't been previously funded. The legislature moved to eliminate COLAs as of 2012, which reduced future expected benefit values and also reduced unfunded liabilities. The combined effect of all of this benefit experience was a \$1.8 billion increase in unfunded liabilities.
5. **Interest on the Debt:** FRS has followed a funding policy that aimed to ensure interest did not accumulate on unfunded liabilities. Overtime this helped to reduce the pension plan's funding shortfall, including offsetting \$1.77 billion that would have been added to the unfunded liability in years that the actuarially required contribution was not paid. The net effect of contribution experience and avoiding interest on the pension debt was to reduce overall unfunded liabilities by \$2.7 billion.
6. **Other:** Reporting by FRS on actuarial gains and losses is relatively detailed compared to other states, but there are large dollar amounts each year that are simplify classified in reporting as "other" or "undeclared." Over the last 20 years these unspecified categories add up to a \$6 billion reduction in unfunded liabilities. This is a meaningful portion of the overall total to not be articulated, but at this time it is unresolved. Fortunately, it is not so meaningful as to render the other observations about changes in the unfunded liability invalid.
7. **21<sup>st</sup> Century Legacy:** Technically, between 2001 and 2022 there was a more than \$50 billion growth in unfunded liabilities within FRS. However, the state retirement system was starting that time period with a \$13.6 billion surplus, meaning the total unfunded liability as of 2022 was only \$38.25 billion.

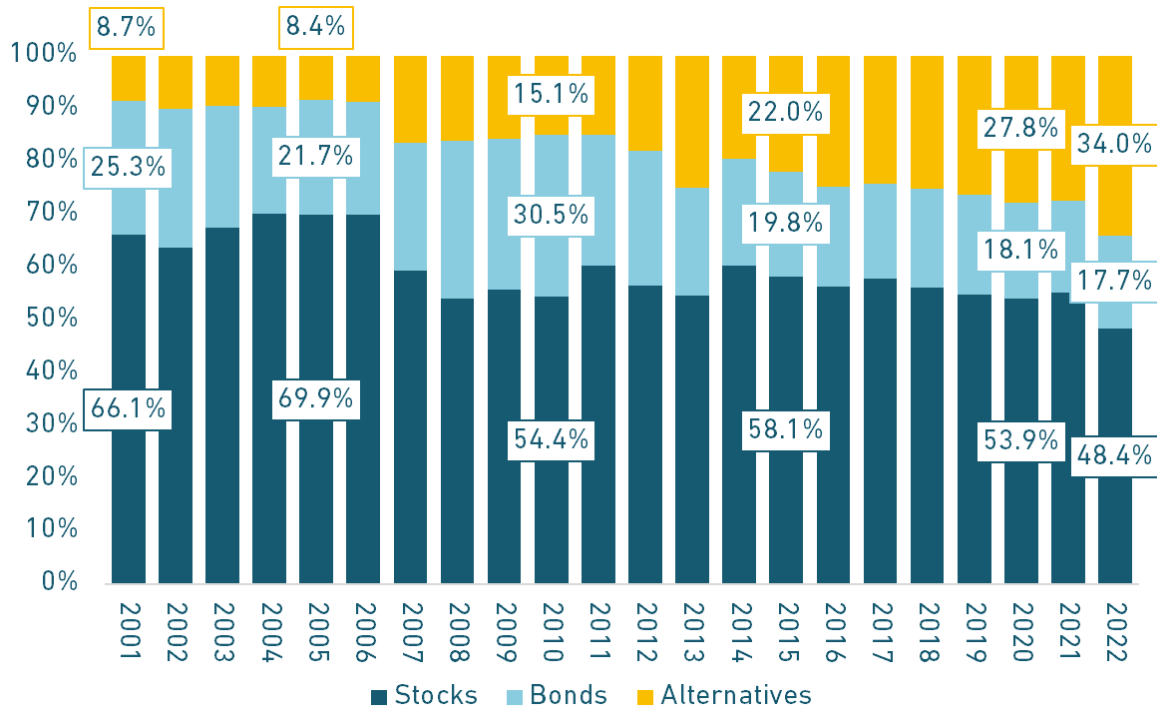
<sup>20</sup> Anthony Randazzo and Jonathan Moody, "State of Pensions 2021," Equable Institute, 2021.



In an effort to achieve their assumed investment returns, FRS shifted its investing strategy into riskier asset classes. Figure B2 below shows that since the early-to-mid 2000s, when FRS was in surplus, the share of the plan's assets allocated to alternatives has increased steadily from 8.7% to 34.0%. Alternative assets include investments in real estate, private equity, and hedge funds, among other asset classes. These investments are high risk, high reward, but they also come with higher volatility from year to year.

FIGURE B2: HIGH RISK, NONTRANSPARENT ASSETS COMPRISE AN INCREASING SHARE OF FRS'S INVESTMENTS

*Florida FRS's Asset Allocation, 2001–22*



Source: Equable Institute analysis of public plan valuation reports and ACFRs.

The failure of the state legislature to directly invest in FRS and pay down the debt directly is pushing Florida's teacher pension system into making these riskier investments, making FRS increasingly susceptible to market volatility. Using riskier investments increases the likelihood of another down year, as alternative investments can have higher returns, but can also lead to larger losses. But without a substantial change in FRS's assumptions and funding policy, this pattern will likely continue, digging FRS more deeply into debt.



## Appendix C: Florida's Hidden Education Funding Cuts, A Detailed State & Local Breakdown

In Florida, teacher retirement costs have been increasing steadily over the past two decades, cutting into the funds available for other education spending priorities.

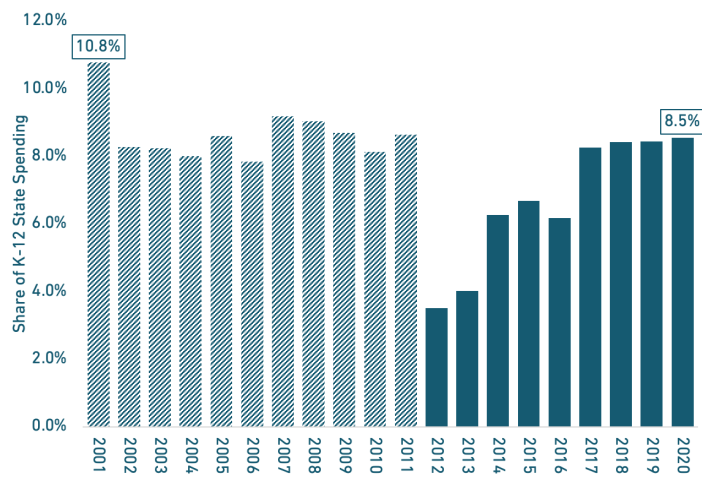
Figure C1 shows that in 2001, after adjusting for inflation, teacher retirement spending consumed 2.9% of total state and local K–12 spending. And for several years the share of education funding going to retirement declined. By 2006, it was down to 2.1%. It rose briefly through 2011, but then in 2012 there was a significant drop as FRS implemented required member contributions and reduced benefits. However, beginning in 2012, the share of total K–12 spending going to retirement began steadily increasing as a result of the introduction and growth of unfunded liabilities. By 2020, 2.5% of all K–12 expenditures went to FRS. That amounts to a 15.0% decrease from 2001 to 2020, but a 107.1% increase from 2012 to 2020.

As a raw percentage, Florida's 2.5% investment of its total K–12 expenditures on teacher retirement may seem rather trivial. But that amounts to nearly than \$1.3 billion. Had Florida been better able to constrain rising retirement costs since 2012 – principally due to growing debt – and maintained teacher retirement spending at 1.2% of its K–12 education budget, Florida's schools would have had an additional \$659.5 million in available funding in 2020.

Since local funds finance teacher retirement under FRS, the effect of rising retirement costs has a more profound effect on local K–12 education budgets. Figure C2 shows that in 2001, 4.0% of local school budgets was spent on pensions. That amount slowly decreased to 2.8% in 2006. It increased to a peak of 3.7% in 2011, but then dropped to 1.8% in 2012 with the changes to the plan benefits. Since 2012 it has increased to 3.5% in 2020. That corresponds with a 12.7% decrease over the past two decades, but more pressingly, a 92.3% increase since 2012.

FIGURE C1: RETIREMENT COSTS 2X AS A SHARE OF STATE EDUCATION SPENDING SINCE 2012

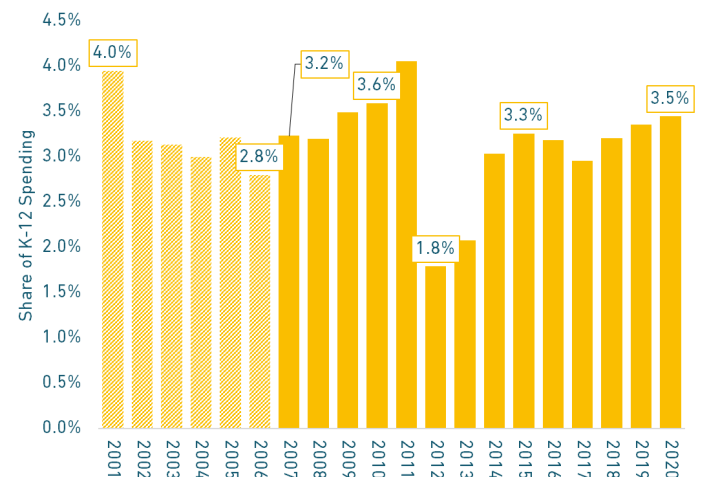
*Actual Employer Contributions to FRS as a Share of State K–12 Spending 2001–2020*



Source: Equable Institute analysis of public plan valuation reports and ACFRs. These figures are based on expenditure data adjusted for inflation.

FIGURE C2: RETIREMENT COSTS 2X AS A SHARE OF LOCAL EDUCATION SPENDING SINCE 2012

*Actual Employer Contributions to FRS as a Share of Local K–12 Spending 2001–2020*



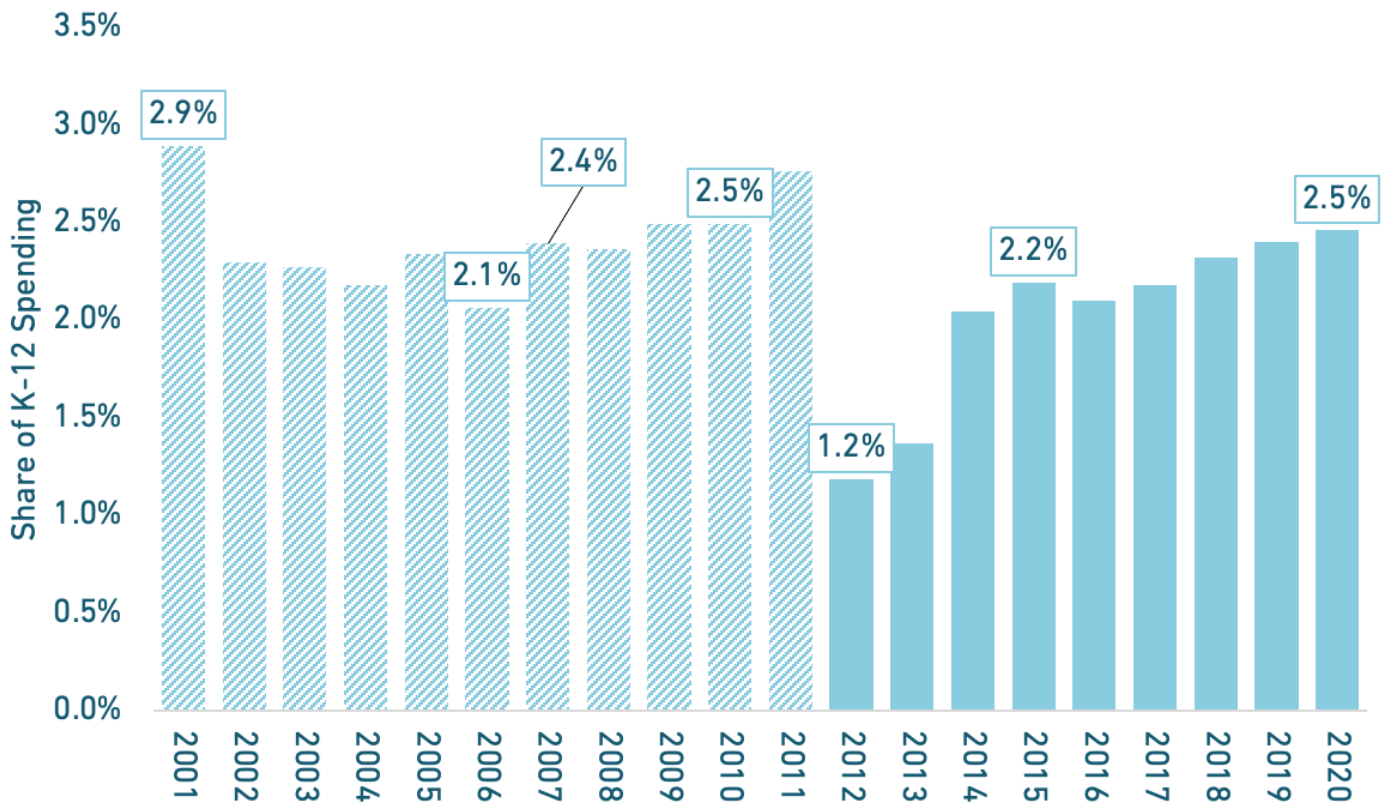
Source: Equable Institute analysis of public plan valuation reports and ACFRs. These figures are based on expenditure data adjusted for inflation.



All of this builds up to Figure C3, which shows how much these retirement benefit costs have consumed from Florida's education spending. Notably, the share of employer contributions in 2001 was higher than it was today. But there has since been multiple paradigm shifts with respect to education spending in Florida, and how FRS is measuring its liabilities (and thus determining costs). This is reflected in data for 2012, when retirement costs were 1.2% of total education spending. Since then education spending has grown, but retirement spending has grown faster — such that in 2020 Pension and FIP costs were consuming 2.5% of education dollars. That is a hidden education funding cut.

FIGURE C3: FLORIDA PUBLIC SCHOOL RETIREMENT COSTS ARE CONSUMING A SMALLER SHARE OF K-12 EDUCATION SPENDING COMPARED TO 2001, BUT THE SHARE HAS MORE THAN DOUBLED SINCE 2012

*Actual State + Employer FRS Contributions as a Share of Total K-12 Spending, 2001-2020*



Source: Equable Institute analysis of public plan valuation reports and ACFRs. These figures are based on expenditures data adjusted for inflation. Note: Employer contributions includes both state and employer spending.



## Appendix D: Teacher Pension Benefit Structure in Florida

It is important to note that the high costs of teacher retirement benefits in Florida are not due to lavish benefit levels. As previously shown in the appendices for this paper, the driving factor for costs are unfunded liability payments. And unfunded liabilities have been primarily caused by underperforming investments.

In fact, the benefits for teachers in Florida are not universally putting educators on a path to retirement income security. Those who work their full career teaching in Florida are likely to end up with a good benefit, but that is not the case for most teachers. Less than 4 in 10 (32.2%) new educators is expected to vest in retirement benefits, and just 6.4% are expected to make it all the way to FRS normal retirement age.

In effect, there are two classes of public school employees in Florida — those for whom retirement benefits are working and those for whom they are not. The current system benefits long-term workers, administrators who earn large salaries, and wealth school districts that pay teachers above average salaries. Those who are losing out in the status quo include new teachers (who are enrolled in less valuable benefits and have a lower probability of working a full career than those hired in the 20<sup>th</sup> century), teachers who will spend less than 20 years teaching in Florida, and teachers who do not vest in FRS. The availability of a choice of retirement benefits helps to mitigate some of these challenges, but neither the Pension Plan or Investment Plan are particularly strong retirement benefit plans.

The following pages break down how FRS Investment Plan and FRS Pension Plan benefits are structured. And the following Appendix E provides an evaluation of the quality of benefits relative to a retirement income adequacy benchmark.

Moreover, none of the analysis thus far even accounts for how higher pension costs will have put pressure on some districts to reduce their ability to give teachers raises. Which in turn will mean lower valued retirement benefits earned. Higher pension contribution rates have eaten away at wage growth for teachers—and that's before considering the effects of other rising costs, like health care and special education. The erosion of teacher salaries by rising pension spending is likely felt unevenly across the state. For instance, lower wealth districts may not have been able to raise teacher salaries as much as the average district in Florida. Yet teachers in those districts still must pay the higher teacher pension contribution rates.

### PLAN STRUCTURE, INVESTMENT PLAN

As its default retirement plan for all members, including teachers, Florida FRS offers a Defined Contribution plan called the Investment Plan (FIP). The FIP was first offered in 2003 as an optional primary retirement benefit, and it became the default plan for new hires in 2018.<sup>21</sup> Participants contribute 3.3% of their salary to their Defined Contribution accounts, and employers contribute 6%. Members are automatically vested in their contributions and become eligible to take employer contributions with them if they leave for another job after one year of service.

### PLAN STRUCTURE, PENSION PLAN

Newly hired teachers may choose to opt out of the FIP program and instead enroll in FRS's salary-based Defined Benefit retirement plan, which FRS calls the "Pension Plan." As with many states, Florida's teacher pension system has different tiers based on a teacher's hire date.<sup>22</sup> The current tier of FRS applies to those educators hired on or after July 1, 2011.<sup>23</sup> All new hires join this version of the plan.

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<sup>21</sup> Florida Retirement System, "Enrollment (1st Election)," accessed February 2022.

<sup>22</sup> Florida Department of Management Services Retirement, "FRS Today: Florida Retirement System, Pension Plan Member Handbook," 2021 Edition.

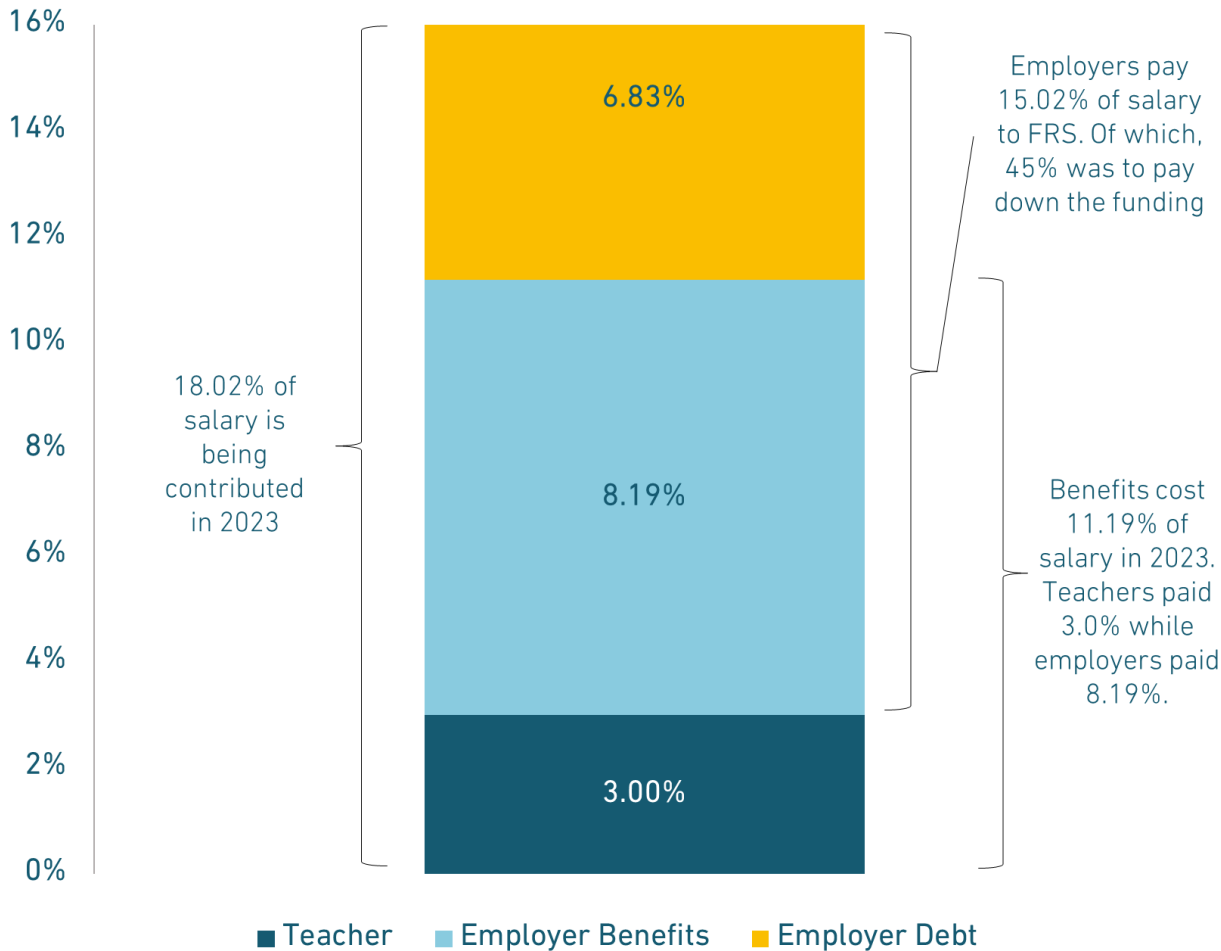
<sup>23</sup> Florida Retirement System, "About the Pension Plan," accessed February 2022.



In 2023, teachers will contribute 3% of their salary to the pension fund. The employer — the teacher’s school district — will contribute another 15.02% of payroll. In total, 18.02% of teacher payroll will be contributed to FRS in 2023. This full breakout is shown in Figure D1.

FIGURE D1: 45% OF EMPLOYER PENSION CONTRIBUTIONS PAY DEBTS

*Member and Employer Contribution Rates, 2023*



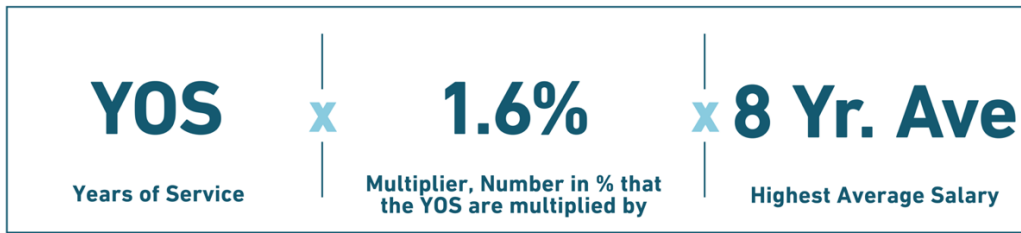
Source: Florida Retirement System [Actuarial Valuation Report](#) as of July 1, 2021.

A key feature of salary-based defined benefit pension is that the retirement income guaranteed to members is based on a formula that considers years of service and average salary. This is unlike many other retirement plan designs where retirement income is related to contributions and investments. While contributions are necessary to provide money to pay out promised benefits, what teachers put in does not directly relate with what they will get out of the system. The formula used to calculate benefits is shown in Figure D2 (next page).

If teachers vest in their benefits (see section on vesting below), their years of service are modified by the “multiplier,” depending on their years of service. The highest multiplier a teacher qualifies for is used in the formula. This number is used to measure the percentage of highest average salary (the average of the three highest consecutive years of salary).



FIGURE D2: FRS BENEFIT FORMULA (FOR THOSE WITH 33 YEARS OF SERVICE OR LESS)



Note: For those who work more than 25 years of service, there are slightly higher multipliers that are used in the above formula, as shown here:

- 1.60% — up to 33 years of service, or age 65 with 8 years of service
- 1.63% — 34 years of service, or age 66 with 8 years of service
- 1.65% — 35 years of service, or age 67 with 8 years of service
- 1.68% — 36 years of service or more, or age 68 with 8 years of service

## VESTING

Not every teacher in Florida qualifies for a pension. Educators must serve at least eight years before they “vest” in the system and are eligible for a pension. Unfortunately, only 32.24% of new teachers are expected to reach that mark according to FRS’s own actuarial assumptions.<sup>24</sup> In addition to failing to qualify for a pension, educators who either leave the profession or the state before eight years of service are eligible only for their own contributions with no interest. That is a poor return on their investment. It is far less than even conservative estimates of what a teacher could yield investing in the market. In fact, not offering any interest on employee contributions means that member contributions are expected to depreciate at FRS’s assumed annual inflation rate of 2.4%.<sup>25</sup>

## NORMAL RETIREMENT

In Florida, a teacher may retire with full benefits at age 65 with at least 8 years of service. A teacher who worked 25 years and retired with a final average salary of \$90,000 would qualify for the 1.6% multiplier and a pension worth \$36,000 per year, or 40% of her salary. Although not every state participates in Social Security of teachers, educators in Florida participate in the program and are eligible for benefits in retirement. According to FRS’s own assumptions, only 6.39% of educators will reach normal retirement age.

On its own, this replacement rate would be considered inadequate retirement income by almost any financial expert. As a general rule, financial experts recommend final salary replacement rates of 70% or higher.<sup>26</sup> For most people, this replacement rate target includes Social Security income. Additionally, personal savings beyond an employer-sponsored retirement plan can build toward that replacement rate target. In Florida, a new teacher who works 25 years would, with Social Security, meet that minimum threshold for a sufficient retirement.

## COST-OF-LIVING ADJUSTMENTS

Florida FRS does not provide a cost-of-living adjustment (COLA).

## SOCIAL SECURITY

Social Security replaces approximately 40% of a teacher’s salary in retirement, depending on how much they earned during their career and outside of public service. Florida teachers participate in Social Security.

<sup>24</sup> Florida Retirement System Actuarial Valuation Report as of July 1, 2020.

<sup>25</sup> Ibid.

<sup>26</sup> Jonathan Moody and Anthony Randazzo, “Retirement Security Report,” Equable Institute, 2021.





## Appendix E: Retirement Security Report, Florida FRS Analyses

In Equable Institute's "Retirement Security Report," the benefits provided through FRS are scored across a wide range of variables to determine the quality of the benefit provided through Florida's teacher retirement system.<sup>27</sup> Given that the quality of a retirement benefit varies by employee tenure, we assessed how well FRS works for members at three stages in their career: Short-Term Worker (10 years or less), Medium-Term Worker (10 to 20 years), Full-Career Worker (retires at normal retirement age). We evaluated both the default Defined Contribution plan (known as the Florida Investment Plan) and Defined Benefit Pension Plan.

Figure E1 below details our overall evaluation of the quality of benefits provided by the FRS Investment Plan, as well as the caliber of benefits provided to workers based on tenure. Figure E2 details our similar evaluation of the FRS Pension Plan.

Figures E3 to E6 show a forecast of benefit values at different career stages compared to an adequacy threshold target of 70% replacement rate. The graphs model the salary replacement rate of the benefits provided by FRS compared with a minimum standard of 70%. Since the age a teacher enters the system matters for the quality of their benefit, we modeled the replacement rates for a 25-year-old entrant and a 40-year-old entrant.

A complete discussion of how variables are scored is available in the "Retirement Security Report."<sup>28</sup>

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<sup>27</sup> Jonathan Moody and Anthony Randazzo, "[Retirement Security Report](#)," Equable Institute, 2021.

<sup>28</sup> Ibid.



FIGURE E1: DISTRIBUTION OF RETIREMENT SECURITY REPORT SCORES, INVESTMENT PLAN

	AVERAGE FOR ALL WORKERS	SHORT TERM WORKER >10 YEARS OF SERVICE	MEDIUM TERM 10-20 YEARS OF SERVICE	FULL CAREER <20 YEARS OF SERVICE
TOTAL SCORE	58.4%	57.1%	50.2%	68.0%
WHO IS SERVED	Serves all members moderately well	Serves all members moderately well	Serves all members moderately well	Serves all members moderately well

	SHORT TERM WORKER >10 YEARS OF SERVICE	MEDIUM TERM 10-20 YEARS OF SERVICE	FULL CAREER <20 YEARS OF SERVICE
Eligibility: Vesting	5 out of 5 points	Not Applicable	Not Applicable
Income Adequacy: Benefit Value – 25 Y/O Entrant	5 out of 15 points	6 out of 15 points	19 out of 25 points
Income Adequacy: Benefit Value – 40 Y/O Entrant	6 out of 15 points	6 out of 15 points	17 out of 25 points
Income Adequacy: COLA Policy	Not Applicable	Not Applicable	Not Applicable
COLA Policy Terms	Not Applicable	Not Applicable	Not Applicable
Flexibility & Mobility: Refunding Policy	4 out of 5 points	4 out of 5 points	Not Applicable
Policy Terms	Employer contributions are not immediately available, but are in one year or less	Employer contributions are not immediately available, but are in one year or less	Not Applicable
Flexibility & Mobility: Interest Rate Credited When Leaving Early	2 out of 5 points	2 out of 5 points	Not Applicable
Crediting Rate	Not Applicable	Not Applicable	Not Applicable

For more details see FRS complete Retirement Security Score for each type of worker available for download at: <https://retirementsecurity.report/>.



FIGURE E2: DISTRIBUTION OF RETIREMENT SECURITY REPORT SCORES, PENSION PLAN

	AVERAGE FOR ALL WORKERS	SHORT TERM WORKER >10 YEARS OF SERVICE	MEDIUM TERM 10-20 YEARS OF SERVICE	FULL CAREER <20 YEARS OF SERVICE
TOTAL SCORE	35.6%	9.2%	14.3%	83.3%
WHO IS SERVED	Does not serve all members well	Does not serve all members well	Does not serve all members well	Serves members moderately well

	SHORT TERM WORKER >10 YEARS OF SERVICE	MEDIUM TERM 10-20 YEARS OF SERVICE	FULL CAREER <20 YEARS OF SERVICE
Eligibility: Vesting	1 out of 5 points	Not Applicable	Not Applicable

Income Adequacy: Benefit Value – 25 Y/O Entrant	1 out of 15 points	2 out of 15 points	25 out of 25 points
Income Adequacy: Benefit Value – 40 Y/O Entrant	2 out of 15 points	7 out of 15 points	25 out of 25 points
Income Adequacy: COLA Policy	Not Applicable	0 out of 5 points	0 out of 5 points
COLA Policy Terms	No COLA	No COLA	No COLA

Flexibility & Mobility: Refunding Policy	0 out of 5 points	0 out of 5 points	Not Applicable
Policy Terms	All member contributions refunded without interest	All member contributions refunded without interest	Not Applicable

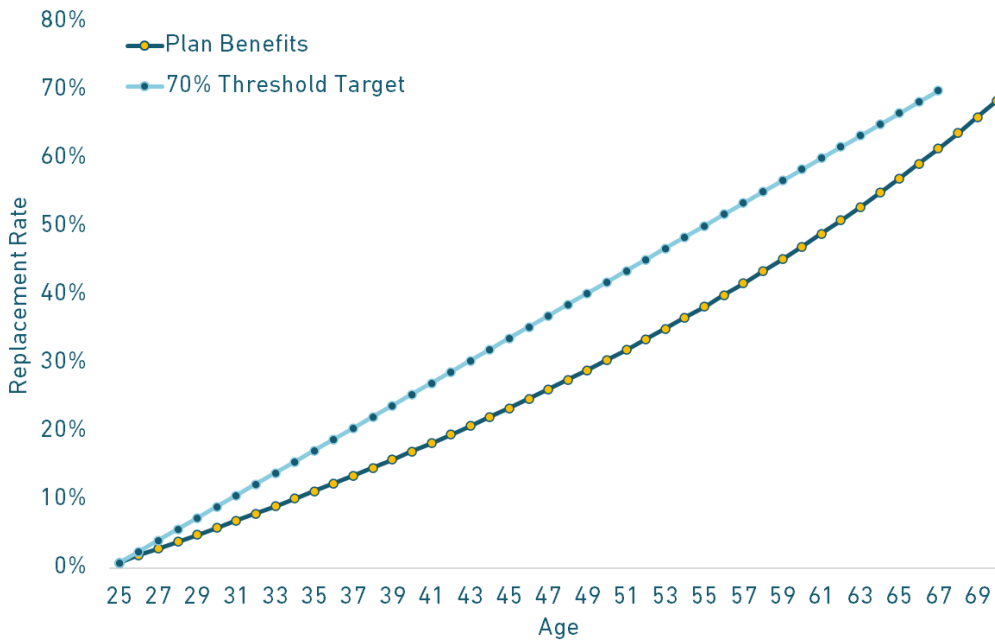
Flexibility & Mobility: Interest Rate Credited When Leaving Early	0 out of 5 points	0 out of 5 points	Not Applicable
Crediting Rate	0%	0%	Not Applicable

For more details see FRS complete Retirement Security Score for each type of worker available for download at: <http://retirementsecurity.report/>.



FIGURE E3: FIP BENEFITS FALL SHORT OF REACHING A 70% REPLACEMENT RATE TARGET FOR ADEQUATE RETIREMENT INCOME AT ALL STAGES OF A MEMBER'S CAREER

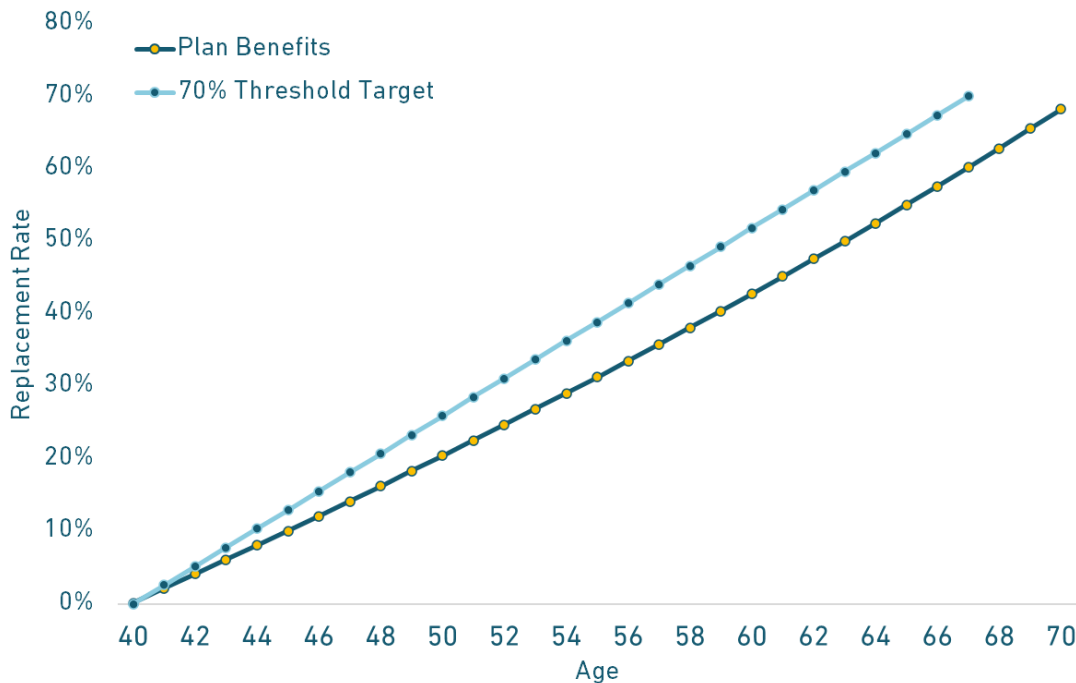
*Adequacy of FIP Benefits for a 25-Year-Old Entrant*



Source: Jonathan Moody and Anthony Randazzo, "[Retirement Security Report](#)," Equable Institute, 2021.

FIGURE E4: FIP BENEFITS ARE SLIGHTLY BETTER FOR MID-CAREER ENTRANTS, BUT STILL FALL SHORT OF A 70% REPLACEMENT RATE TARGET AT ALL STAGES OF A MEMBER'S CAREER

*Adequacy of FIP Benefits for a 40-Year-Old Entrant*



Source: Jonathan Moody and Anthony Randazzo, "[Retirement Security Report](#)," Equable Institute, 2021.



FIGURE E5: FRS BENEFITS FALL SHORT OF REACHING A 70% REPLACEMENT RATE TARGET FOR ADEQUATE RETIREMENT INCOME UNTIL 42 YEARS OF SERVICE

*Adequacy of FRS Benefits for a 25-Year-Old Entrant*

