

December 13, 2021

Mr. Jeffrey J. Turner
Deputy Director, Office of Regulations and Interpretations
Employee Benefits Security Administration
Department of Labor

VIA Electronic Submission through Regulations.gov

Re: RIN 1210-AC03, Prudence and Loyalty in Selecting Plan Investments and Exercising Shareholder Rights; Comments of the American Legislative Exchange Council (ALEC) in opposition to proposed regulation

Dear Mr. Turner,

The American Legislative Exchange Council (ALEC) submits these comments in opposition to regulations proposed under Title I of the Employee Retirement Income Security Act of 1974 (ERISA). The proposed regulation would allow fiduciaries to make investment decisions on nonpecuniary considerations, allowing fiduciaries to place their political agendas over the interest of plan beneficiaries. ALEC is in support of the previous regulation, RIN 1210-AB95, Fed. Reg. 2020-13705, because it clarifies that “investment behaviors, such as socially responsible investing, sustainable and responsible investing, environmental, social, and corporate governance (ESG) investing, and economically targeted investing”¹ fall outside of the pecuniary requirements mandated by ERISA.

ALEC opposes the proposed regulation and recommends that the Department of Labor, through the Employee Benefits Security Administration, reject it. This recommendation follows ALEC non-partisan research and analysis on public pension investments, which offer counterfactuals of what happens when divestments occur due to political reasons rather than financial concerns. Individual investors can assume higher financial risk by making investment decisions that reflect personal convictions. However, investment portfolio managers operating under ERISA should avoid these risky, politically driven investment choices because ESG investing in public sector pension plans has led to lower returns and higher volatility.

This comment will compare the available evidence of ESG investment returns compared to optimized risk investment portfolios (which have no ESG investing), specifically in terms of public pension investments, to help the Department’s analysis of the proposed regulation. Further, ALEC has published research regarding public pensions and non-pecuniary investing considerations that will help EBSA and the DOL’s economic analysis, such as *Unaccountable and Unaffordable*² and *Keeping the*

¹ See RIN 1210-AB95, Fed. Reg. 2020-13705

² Thomas Savidge, Jonathan Williams, and Skip Estes. *Unaccountable and Unaffordable*, 2020, American Legislative Exchange Council, 2019, attached as Appendix 1. Hereafter *Unaccountable and Unaffordable*.

*Promise: Getting Politics Out of Pensions.*³

ALEC is the nation’s largest nonpartisan, voluntary membership organization of state legislators.⁴ ALEC, and its legislative members, are dedicated to advancing the principles of limited government, free markets, and federalism.⁵

ALEC is “a forum for stakeholders to exchange ideas and develop real, state-based policy solutions to encourage growth, preserve economic security and protect hardworking taxpayers,”⁶ Because of ALEC’s focus on state policy ideas, ALEC has a wealth of experience analyzing state public pension programs, the policy implications of investment strategies related to the programs, and determining types of policies to ensure their solvency.

Keeping the Promise includes data and analysis of public pensions that have made investment decisions based on nonpecuniary, primarily political, bases. The data and conclusions in the publication should help this Department analyze the potential economic impact of plan fiduciaries making investment decisions on similar nonpecuniary factors.

Problems with pensions can appear to be invisible when certain conditions are present. If pension fund investments have an exceptionally good year or lawmakers make a larger than expected contribution, losses from ESG-type investments may not be noticeable. A pension fund, though, gets into trouble over a long period of time.⁷

ESG investing can reduce access to sources of capital by limiting what a plan can invest in and increase costs on pension plans.⁸ Evidence from unrestrained ESG investing show that divestments have little to no effect on changing how the firms that are targeted through divestment behave, while the costs of divestment are significant. SEC Commissioner Hester Peirce noted that ESG is inherently political, vague, and subjective, which can push policymakers to write rules “outside our area of authority.”⁹

ESG investing is nothing new and takes many forms. A recent popular form of ESG investing is fossil fuel divestment, with the California Public Employees Retirement System (CalPERS) and the California State Teachers Retirement System (CalSTRS) divesting from fossil fuels, specifically coal companies starting in 2015,¹⁰ for example. For both public pensions, as well as other private pensions similarly

³ Theodore Lafferty, Kati Siconolfi, Jonathan Williams, and Elliot Young. *Keeping the Promise: Getting Politics Out of Pensions*, American Legislative Exchange Council, 2016, attached as Appendix 2. Hereafter *Keeping the Promise*.

⁴ See “About ALEC,” About, American Legislative Exchange Council, accessed December 7, 2021, <https://www.alec.org/about/>.

⁵ Id.

⁶ Id.

⁷ See, *Keeping the Promise* note 3, above.

⁸ Id.

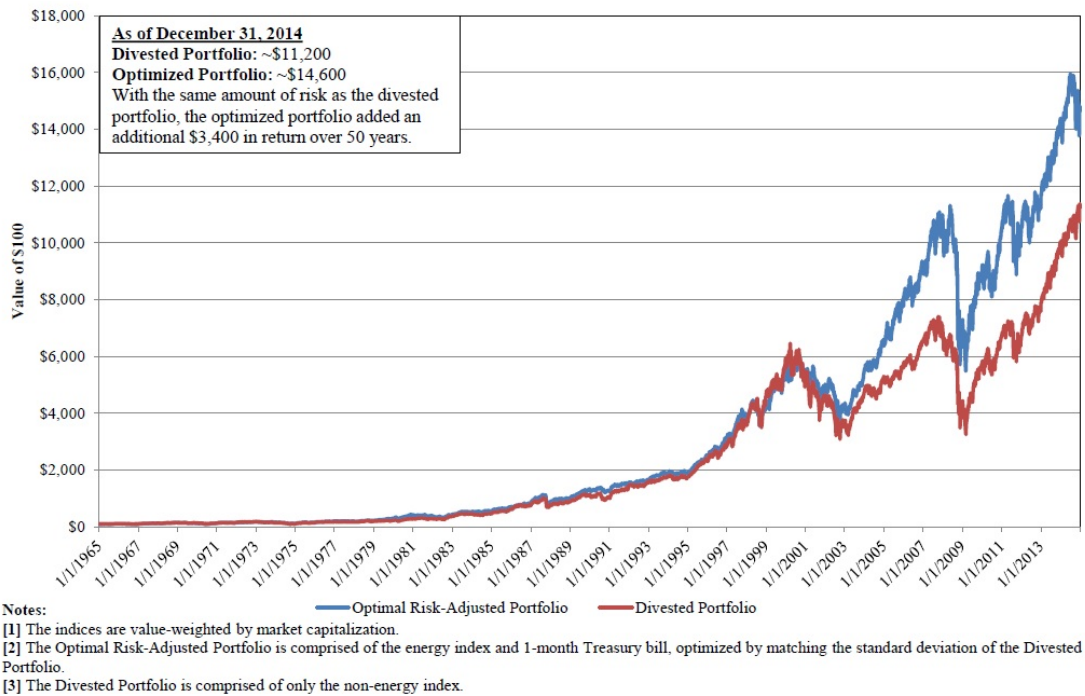
⁹ Hester Peirce, “Chocolate Covered Cicadas: Remarks before the Brookings Institution,” Brookings Institution (republished by U.S. Securities and Exchange Commission), July 20, 2021, accessed December 7, 2021, <https://www.sec.gov/news/speech/peirce-chocolate-covered-cicadas-072021>

¹⁰ See, *Keeping the Promise* note 3, above.

situated, financial losses from divestment are significant.

Research by the University of Chicago Law School Professor Daniel Fischel found that a hypothetical portfolio diversified across all industries outperformed a hypothetical portfolio divested from energy stocks over the past 50 years.¹¹ The divested portfolio produced returns 0.7 percentage points lower on average per year than the optimal risk-adjusted portfolio that did not divest from energy, representing a massive 23 percentage points decline in investment returns over five decades.¹² That chart is pictured below in Figure 1.

Figure 1: Optimal Risk-Adjusted Portfolio vs. Divested Portfolio, 1965-2014



Source: Fischel, Daniel, "Fossil Fuel Divestment: A Costly and Ineffective Investment Strategy," Center for Research in Security Prices; French, Kenneth.

In addition to Fischel’s research, we examine the actual investment returns of public pension plans that engage in ESG investing versus public pensions that have invested in a diversified portfolio. This comment highlights four public pension cases: California, New York, Tennessee, and Wisconsin. California and New York engage in some types of politically driven ESG investing, while Tennessee and Wisconsin invest using a diversified portfolio without politically driven investment or divestment.

The analysis will show that Tennessee and Wisconsin have been able to keep annual pension costs for the state and employees stable, predictable, and affordable by not engaging in ESG investing. A healthy

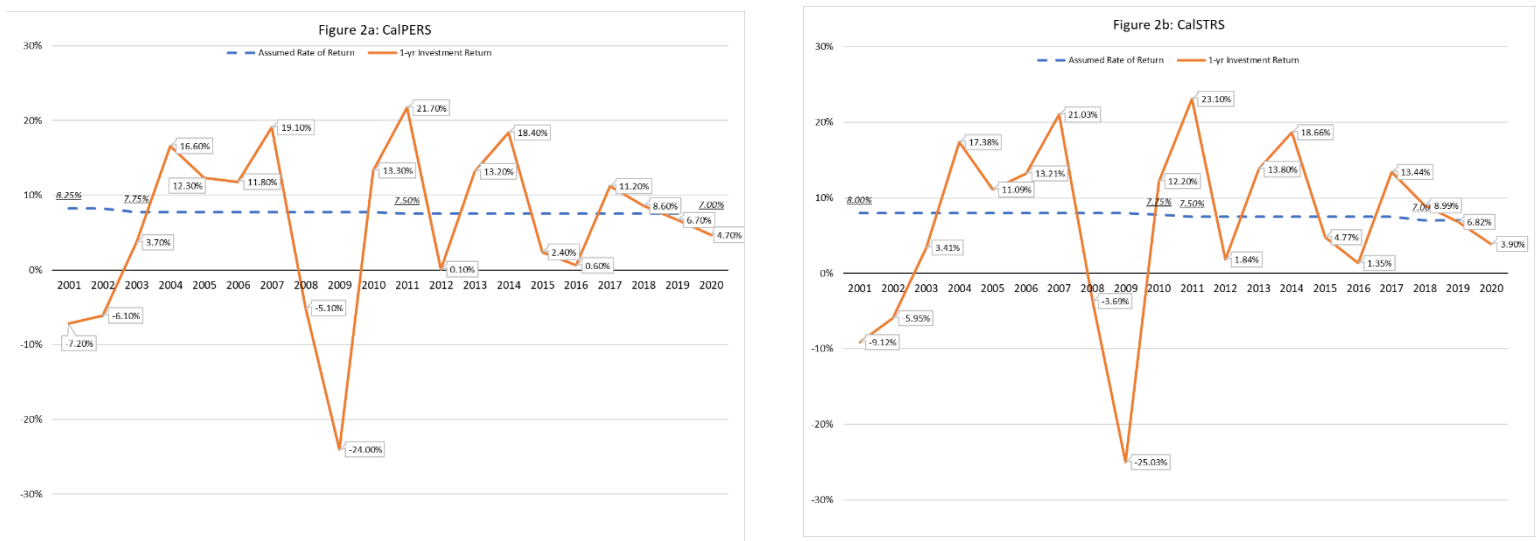
¹¹ David Fischel. "Fossil Fuel Divestment: A Costly and Ineffective Investment Strategy," *Compass-Lexecon*, 2015, attached as Appendix 3.

¹² *Id.*

pension system requires sound investing and funding practices.¹³

Examine the assumed and the actual one-year returns for both the CalPERS and CalSTRS retirement systems since 2001. While investment return assumptions have remained fairly constant (indicated by the blue line), actual one-year investment returns have been extremely volatile (indicated by the orange line). This investment return volatility has contributed to rising costs, as actuarially determined contributions (ADC) payments for the state of California has increased for both CalPERS¹⁴ and CalSTRS¹⁵ over the past decade. The ADC payment covers both normal costs for the year and an amortization payment of liabilities from previous years, both of which depend partially on investment returns, and, with California not making the full ADC payments every year, unfunded liabilities grew as well.¹⁶ Those charts are pictured in Figure 2.

Figure 2: California Public Employee Retirement System (2a) and California State Teachers Retirement System (2b) Assumed vs Actual Investment Returns, 2001-2020



Source: Public Plans Database; Center for Retirement Research at Boston College

For the CalPERS system, investment return assumptions were 8.25%, then lowered to 7.75% in 2003, and then lowered to 7.5% in 2010, and finally lowered to 7% in 2020. Meanwhile, investment returns

¹³ "ALEC Statement of Principles on Sound Pension Practices," American Legislative Exchange Council, 2016, accessed December 7, 2021, <https://www.alec.org/model-policy/alec-statement-of-principles-on-sound-pension-practices/>

¹⁴ "Comprehensive Annual Financial Report for 2018-19," California Public Employees' Retirement System (CalPERS), 30 June 2020, accessed July 30, 2020, <https://news.calpers.ca.gov/get-the-facts-in-our-annual-financial-report-2/>

¹⁵ "Comprehensive Annual Financial Report for 2018-19," California State Teachers' Retirement System (CalSTRS), 30 June 2020, accessed July 30, 2020, <https://www.calstrs.com/comprehensive-annual-financial-report>

¹⁶ To read more on public pension costs, see *Unaccountable and Unaffordable, 2020* in Appendix 1.

have either fallen far below assumed rate of return or far above, with an average rate of return of 5.52% since 2008, 21.09% below the current assumed rate of return on investments.¹⁷

The CalSTRS system had an assumed rate of return of 8% until it was lowered to 7.75% in 2010, then lowered to 7.5% from 2011 to 2017, and then lowered to the present assumed return at 7%. The actual investment rate of return for CalSTRS is like CalPERS, investment returns falling far below expectations or exceeding investment expectations. CalSTRS had an average rate of return of 6.17% since 2008, 11.92% below the current assumed rate of return on investments.¹⁸

It is also important to note that California currently has the largest total unfunded pension liabilities in the United States at over \$894 billion, or \$22,642 per capita.¹⁹ While poor investment decisions are not the sole cause of these massive unfunded liabilities, they are contributors to their growth. For instance, CalPERS and CalSTRS divested from companies tied to tobacco starting in 2001. From 2001-2018, CalPERS has lost \$3.6 billion in investment returns.²⁰

Politically driven ESG investing and divesting is currently a heated issue in the state of New York. The State Comptroller argues that the state is engaging in ESG practices, while some legislators argue that the state is not going far enough.

In December 2020, New York State Comptroller Thomas DiNapoli announced the New York State Common Retirement Fund, valued at \$226 billion, will divest from all fossil fuels by 2040.²¹ In addition, New York has integrated ESG investment principles into its corporate governance to include “sustainability, diversity, and accountability” since 2004 and investing in ESG funds since 2008.²² The Common Retirement Fund currently has \$20 billion invested in renewable energy sources. .²³ The New York State Common Retirement Fund annual investment returns is shown in Figure 3, with the latest detail showing returns just before fossil fuel divestment takes effect.

¹⁷ Public Plans Database, Center for Retirement Research at Boston College, MissionSquare Research Institute, National Association of State Retirement Administrators and the Government Finance Officers Association, 2001-2020, accessed December 1, 2021, <https://publicplansdata.org/public-plans-database/>.

¹⁸ Id.

¹⁹ *Unaccountable and Unaffordable*, above note 2.

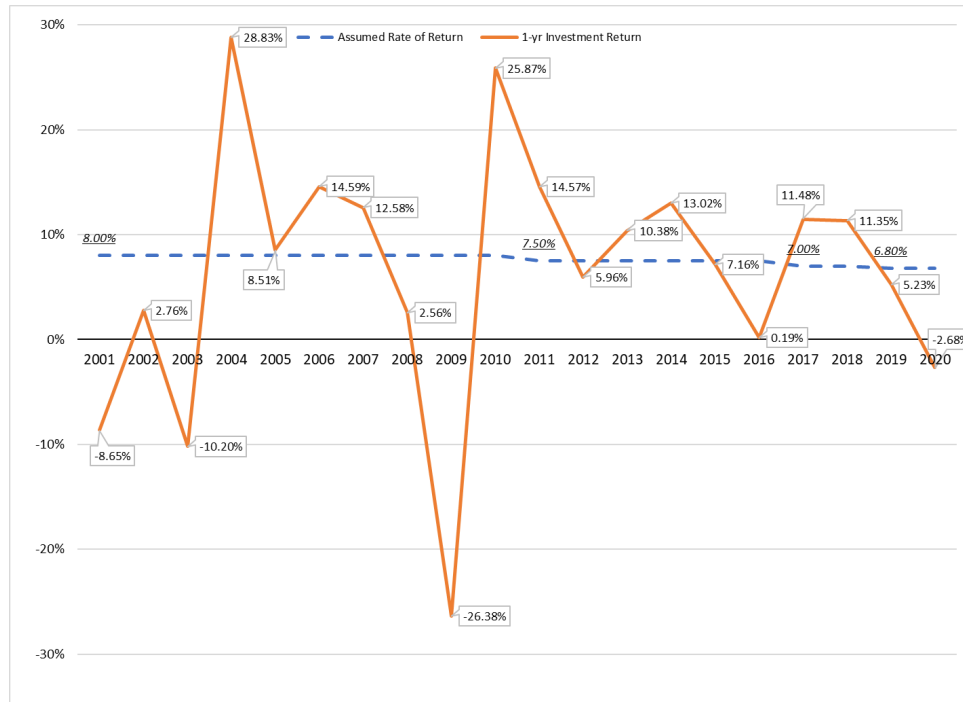
²⁰ Heather Gillers, “Calpers’ Dilemma: Save the World or Make Money?” The Wall Street Journal, June 19, 2019, accessed December 7, 2021, https://www.wsj.com/articles/calpers-dilemma-save-the-world-or-make-money-11560684601?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosporata&stream=top

²¹ “For Immediate Release: New York State Pension Fund Sets 2040 Net Zero Carbon Emissions Target,” Office of the New York State Comptroller, December 9, 2020, accessed December 7, 2021, <https://content.govdelivery.com/accounts/NYOSC/bulletins/2b0442d>

²² “New York State Common Retirement Fund Environmental, Social, and Governance Report,” Office of the New York State Comptroller, March 2017, accessed December 13, 2021, <https://www.osc.state.ny.us/files/reports/special-topics/pdf/esg-report-mar2017.pdf>

²³ “New York State Common Retirement Fund Comprehensive Annual Financial Report for the Fiscal Year ending March 31, 2021,” Office of the New York State Comptroller, March 31, 2021, accessed December 7, 2021, <https://www.osc.state.ny.us/files/retirement/resources/pdf/asset-listing-2021.pdf>

Figure 3: New York Common Retirement Fund Assumed vs Actual Investment Returns, 2001-2020



Source: Public Plans Database; Center for Retirement Research at Boston College

The fund maintained an 8% assumed rate of return until 2011 when it lowered to 7.5%, then to 7% in 2017 and finally 6.8% in 2019, where it currently remains. Since 2001, investment returns have been volatile, either exceeding or falling far short of assumed expectations. Since 2008, average investment performance was 6.05%, 10.96% below current assumed rate of return.²⁴ New York currently has over \$342 billion in unfunded pension liabilities (\$17,591 per capita), the 4th largest total unfunded pension liability burden in the nation.²⁵ These volatile investment returns have necessitated higher ADC payments to cover investment losses and have led unfunded liabilities to grow over time.

Public sector unions in New York have also strongly opposed politically motivated investing practices. The Civil Service Employees Association, which represents 300,000 public and private sector members, stated that politically motivated investments would, “jeopardize the financial security of over one million current and future retirees.”²⁶

As noted in *Unaccountable and Unaffordable*, states with the 10 highest public pension funding ratios²⁷

²⁴ Public Plans Database, above note 17.

²⁵ *Unaccountable and Unaffordable*, above note 2.

²⁶ Bernadette Hogan. “Unions oppose move to make state dump fossil fuel investments from pension fund,” *New York Post*, April 30, 2019, <https://nypost.com/2019/04/30/unions-oppose-move-to-make-state-dump-fossil-fuel-investments-from-pension-fund/>

²⁷ The funding ratio is the ratio of pension plan assets to pension plan liabilities. Large funding ratios are a key indicator of a well-funded defined benefit plan. To read more on funding ratios, see *Unaccountable and Unaffordable*, note 2, above.

are Wisconsin, South Dakota, New York, Idaho, Tennessee, Utah, Washington, Maine, and Nebraska.²⁸

Of those states, only New York's public pension system utilizes ESG investing.²⁹ New York is among the highest funded states because of reforms that create a tiered pension system, not ESG investing.³⁰ The latest reforms, Tier 6 (enacted in 2012), include a defined contribution option for state employees among other reforms that helped improve New York pension funding.³¹

Among the states without ESG investing, this comment will focus on Tennessee, the public pension system with the lowest unfunded liabilities per capita, and Wisconsin, the state with the highest funding ratio.

The Tennessee Retiree Group Trust (TGRT) is a group trust that pools funds from the various Tennessee public pension plans (not including political subdivisions), along with other assets in the custody of the State Treasurer, solely for investment purposes.

The stated primary investment objective is, "to establish a stable, diversified investment portfolio that, in the long term, will meet or exceed the assumed rate of return, as adopted by the Board, in order to provide sufficient liquidity to pay beneficiaries in a timely manner."³²

The TGRT assumed and actual investment returns are shown in Figure 4.

²⁸ Id.

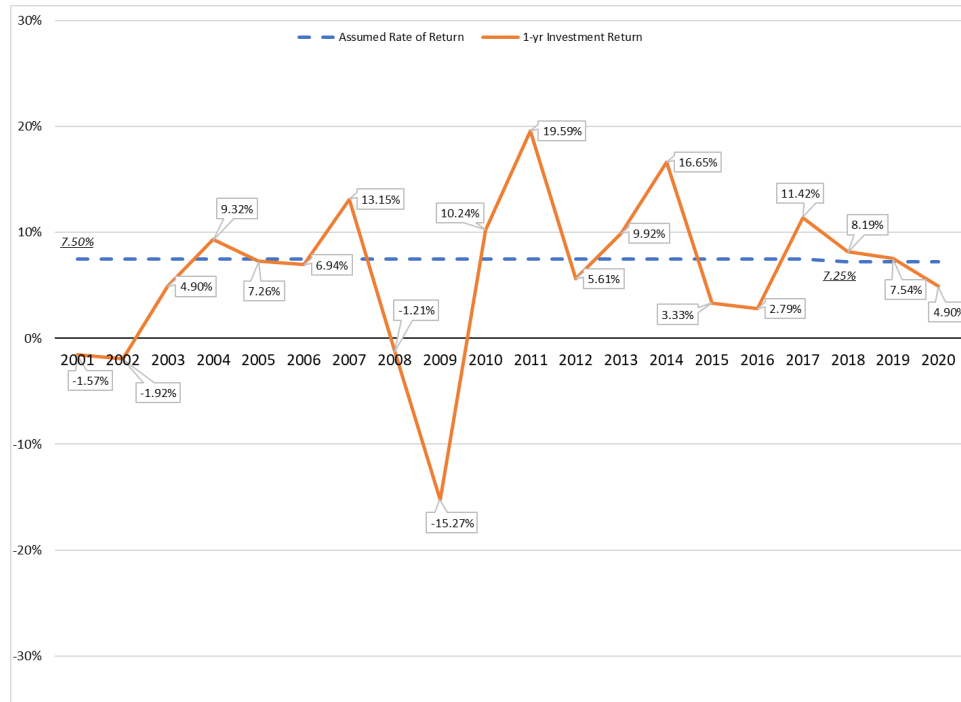
²⁹ "ESG-Environmental, Social, and Governance." *National Association of State Retirement Administrators (NASRA)*, Feb. 2019, <https://www.nasra.org/esg>

³⁰ E.J. McMahon. "Testimony: Tier 6 Pension" *Empire Center for Public Policy*, January 2012, accessed July 30, 2020, <https://www.empirecenter.org/publications/e-j-mcmahon-testimony-tier-6-pension/>

³¹ Id.

³² "Tennessee Consolidated Retirement System Comprehensive Annual Financial Report (CAFR) For the Fiscal Year Ended June 30, 2019." June 30, 2019, https://treasury.tn.gov/Portals/0/Documents/Retirement/CAFR%20Reports/2019/2019%20CAFR_Full%20Report.pdf

Figure 4: Tennessee Group Retiree Trust Assumed vs Actual Investment Returns, 2001-2020



Source: Public Plans Database; Center for Retirement Research at Boston College

The Trust’s assumed rate of return has been 7.5% until 2018 when it was lowered to 7.25%. The investment loss due to the financial crisis in 2008 (-15.27%) was not nearly as severe as the investment losses in California (-24% for CalPERS and -25.03% for CalSTRS) or New York (-26.38%).³³

In an analysis done by ALEC Research Manager Thomas Savidge, the TGRT was found to perform nearly on par with the average returns on public pension investments and the S&P 500.³⁴ By not engaging in politically driven ESG practices, the TGRT has strictly adhered to its fiduciary duties and reduced volatility in investment returns.

The state of Wisconsin, the best funded public pension system in the nation, has also avoided ESG investing. The State of Wisconsin Investment Board (SWIB) key investment philosophies include “Asset classes and sub-asset classes are broadly defined to gain exposure to the entire investable opportunity set and capture the greatest depth of available investment opportunities to the extent they offer a risk-return trade-off commensurate with SWIB’s return objectives and risk tolerance.”³⁵

³³ Public Plans Database, above note 17.

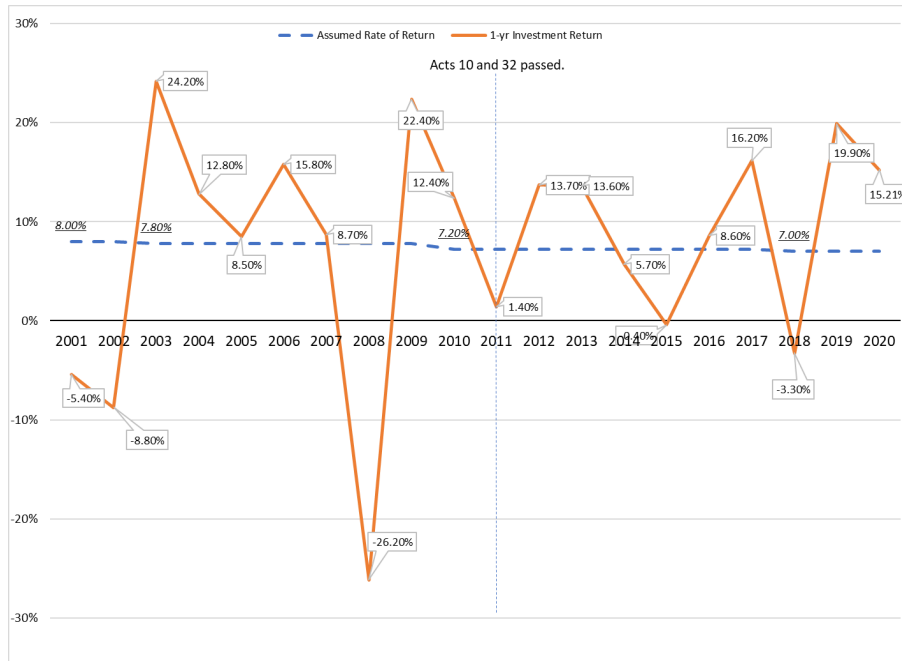
³⁴ Thomas Savidge “Tennessee Public Pensions: A Model for Pension Reform.” *Political Economy Research Institute at Middle Tennessee State University Policy Study*, Aug. 2020, attached as Appendix 4.

³⁵ “Board of Trustees Wisconsin Retirement System Investment Policy.” *State of Wisconsin Investment Board*, March 18,

The Wisconsin Employee Retirement System (WRS) assumed vs actual one-year investment returns are shown in Figure 5.

As noted in Figure 5, the Wisconsin Legislature and then-Gov. Scott Walker signed Acts 10 and 32 in 2011, which included public pension reforms.³⁶ These acts introduced several pension cost and risk-sharing measures, such as requiring all WRS participants (including public safety employees) to contribute half of all actuarially determined contributions (ADC) for pension plans.³⁷ By requiring participants and the state to split the ADC payment ever year, prudent investment practices are incentivized to minimize financial risks and annual costs.

Figure 5: Wisconsin Retirement System, Assumed vs Actual Investment Returns, 2001-2020



Source: Public Plans Database; Center for Retirement Research at Boston College

The WRS assumed rate of return was 8% for 2001 and 2002, lowered to 7.8% from 2003 through 2009, then lowered to 7.2% from 2010 until 2018 when it was lowered to 7% where it currently remains. Although losses sustained in 2008 were greater than in California or New York in percentage terms, the reforms in 2011 have improved investment performance dramatically. Since 2008, the average rate of

2020, https://7ffb9e60-f2dc-4359-b148-1db6b9d76c71.filesusr.com/ugd/69fc6d_1183ae90c6854453acfd9a296a915c03.pdf.

³⁶ Act 32 modifies the cost-sharing provisions of Act 10, covering municipal police and fire employers as well as state employers of troopers and vehicle inspectors.

³⁷ Kerri Seyfert. "The Wisconsin Retirement System Is Fully Funded and a Model for Other States." *Reason Foundation*, January 14, 2020, <https://reason.org/commentary/the-wisconsin-retirement-system-is-fully-funded-and-a-model-for-other-states/>.

return on investments was 7.63%, 9.02% higher than the current assumed rate of return.³⁸ Of these case studies, Wisconsin is the only state to beat its investment return target.

When managers of public pension plans put political considerations over plan beneficiaries, both public employees and taxpayers suffer higher costs and lower rates of return.³⁹ If the proposed regulation is adopted, fiduciaries will be able to put their political beliefs ahead of the needs of plan beneficiaries. Further, the evidence from public pensions is that politically driven ESG investing leads to foregone gains and long-run volatility, as well as creating conflict between stakeholders over the proper role of fiduciary duty. Because of the available data from public pensions as discussed in this comment and the attached appendices, the Department's proposed regulation regarding the "Investment Duties" regulation is not a necessary, and proper, interpretation of ERISA and ALEC recommends its rejection.

Sincerely,

Jonathon Paul Hauenschild, Esq.
Jonathan Williams
Executive Vice President of Policy and ALEC Chief Economist
Thomas Savidge
Research Manager, Center for State Fiscal Reform

³⁸ Public Plans Database, above note 17.

³⁹ ALEC members adopted a Statement of Principles on Sound Pension Practices. The first two principles outline that state governments should make investment decisions based on stability and predictability. These principles mean that government pensions should be secure and safe from high-risk assumptions and be predictable and structured to foster certainty for taxpayers and policy makers. "ALEC Statement of Principles on Sound Pension Practices," *American Legislative Exchange Council*, September 12, 2016, <https://www.alec.org/model-policy/alec-statement-of-principles-on-sound-pension-practices/>.

Appendix 1

Unaccountable and Unaffordable, 2020

UNACCOUNTABLE AND UNAFFORDABLE

UNFUNDED
PUBLIC
PENSION
LIABILITIES
EXCEED
\$5.8 TRILLION



UNACCOUNTABLE AND UNAFFORDABLE

Unaccountable and Unaffordable 2020

Unfunded Public Pension Liabilities Exceed \$5.8 Trillion

About the American Legislative Exchange Council

The *Unaccountable and Unaffordable 2020* report was published by the American Legislative Exchange Council (ALEC) as part of its mission to discuss, develop and disseminate model public policies that expand free markets, promote economic growth, limit the size of government and preserve individual liberty. ALEC is the nation's largest nonpartisan, voluntary membership organization of state legislators, with more than 2,000 members across the nation. ALEC is governed by a Board of Directors of state legislators. ALEC is classified by the Internal Revenue Service as a 501(c)(3) nonprofit, public policy and educational organization. Individuals, philanthropic foundations, businesses and associations are eligible to support the work of ALEC through tax-deductible gifts.

About the ALEC Center for State Fiscal Reform

The ALEC Center for State Fiscal Reform strives to educate policymakers and the general public on the principles of sound fiscal policy and the evidence that supports those principles. We also strive to educate policymakers by outlining the policies that provide the best results for the hardworking taxpayers of America. This is done by personalized research, policy briefings in the states and by releasing nonpartisan policy publications for distribution such as *Rich States, Poor States: ALEC-Laffer State Economic Competitiveness Index*.

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TABLE OF CONTENTS

| | |
|---|----|
| Introduction | 1 |
| Section 1: Key Findings | 2 |
| Section 2: Poor Assumptions Make Poor Pensions | 8 |
| Section 3: Reform Can Help States Trying to Tread Water | 12 |
| Appendix: Methodology | 14 |
| References | 16 |

INTRODUCTION

Unfunded state pension liabilities total \$5.82 trillion or \$17,748 for every man, woman and child in the United States. State governments are obligated, often by contract and state constitutional law, to make these pension payments regardless of economic conditions. As these pension payments continue to grow, revenue that would have gone to essential services like public safety and education, or tax relief, goes to paying off these liabilities instead.

Unfunded liabilities have increased by more than \$900 billion in this year's report due to several factors:

The 10 states with the largest unfunded liabilities, California, Illinois, Texas, Ohio, New York New Jersey, Pennsylvania, Florida, Georgia and Massachusetts have rapidly growing unfunded liabilities. They take up an increasing share of total unfunded liabilities in the country. These states make up 58% of all unfunded liabilities in the country, up from 57% last year. Pension investment returns have again fallen short of assumptions in this year's report, covering FY 2019, with an average of 6.5% return instead of the assumed 7.2%.

This study uses a risk-free discount rate, expressed as a percent, to determine the value of liabilities that pension plans must pay in the future. The "risk-free" aspect of our discount rate calculation follows the reality that states cannot default on their pension promises. This risk-free discount rate is based upon the yields of U.S. Treasury bonds, which means that the rate changes each year. This year, the risk-free discount rate lowered from 2.96% to 2.34%, increasing the present value of liabilities. We also measure liability values with a fixed discount rate of 4.5% to account for these changes in the risk-free discount rate.

Most state pension plans are structured as defined-benefit plans. Under a defined-benefit plan, an employee receives a fixed payout at retirement based on the employee's final average salary, the number of years worked and a benefit

multiplier. Pension plans pay these benefits to millions of public workers across the country. These plans accrue assets through employee contributions, tax revenue and, in the worst case, by taking on debt to pay pension promises today. Paying pension obligations by issuing bonds only kicks the can down the road to future taxpayers, as they will ultimately be responsible for solving the pension funding crisis.

States are obligated, in some cases constitutionally, to pay pension obligations. There are important reforms, however, that can prevent unfunded liabilities from growing in the future. By offering newly elected employees sustainable plans, such as hybrid and defined-contribution plans, similar to how 401(k) plans work for workers in the private sector, states can prevent the rapid growth of unfunded liabilities and give public workers greater flexibility with their retirement contributions, plus the ability to take their retirement savings with them to new positions or new careers.



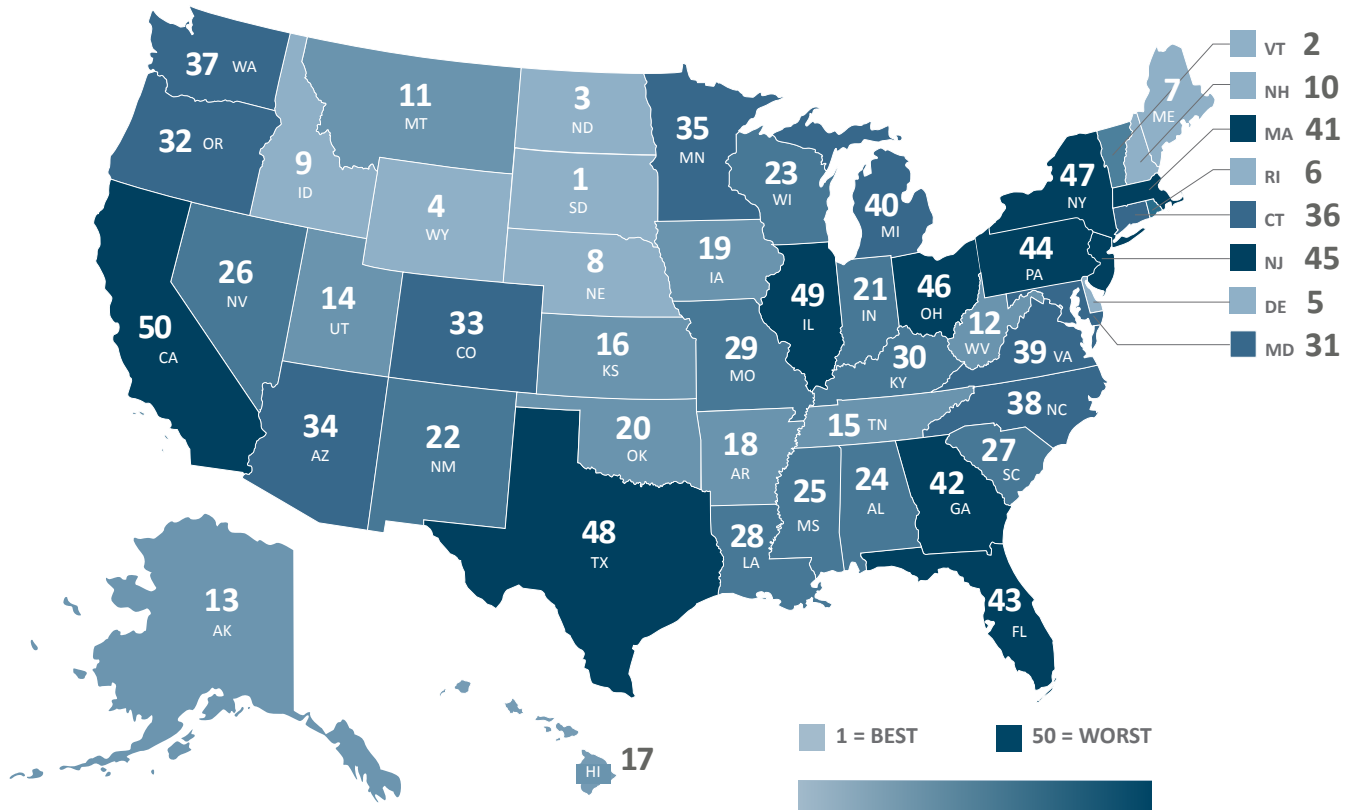
Because of the significant impact unfunded pension liabilities have on state budgets and individual taxpayers, the American Legislative Exchange Council (ALEC) produces publications to educate policymakers and the public about the danger unfunded pension liabilities pose to core government services and the economy. This report surveys more than 290 state-administered public pension plans, detailing assets and liabilities from FY 2011-2019. The unfunded liabilities are reported using three different calculations:

- Estimates from each respective state
- Estimates using a risk-free discount rate, which reflects constitutional and other legal protections extended to state pension benefits
- Estimates using a fixed rate of 4.5%, which compares funding ratios and controls for changes in discount rate assumptions over time

SECTION 1: KEY FINDINGS

Figure 1, Table 1

Total Unfunded Pension Liabilities, 2020



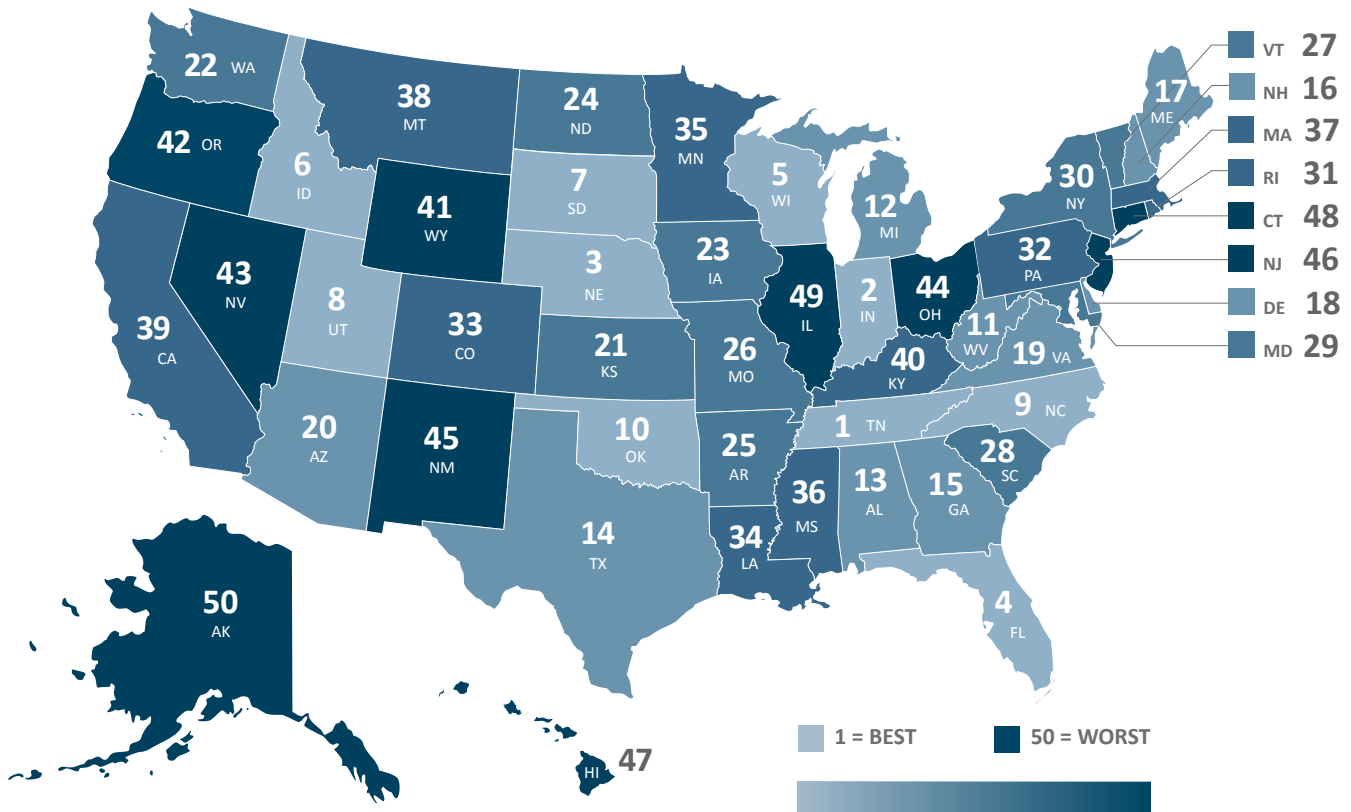
| RANK | STATE | RISK-FREE UNFUNDED LIABILITIES |
|------|---------------|--------------------------------|
| 1 | South Dakota | \$10,196,806,271 |
| 2 | Vermont | \$10,209,419,265 |
| 3 | North Dakota | \$11,997,434,609 |
| 4 | Wyoming | \$13,591,478,905 |
| 5 | Delaware | \$14,102,006,237 |
| 6 | Rhode Island | \$18,963,459,987 |
| 7 | Maine | \$19,082,764,864 |
| 8 | Nebraska | \$19,099,526,006 |
| 9 | Idaho | \$19,106,306,953 |
| 10 | New Hampshire | \$19,198,501,296 |
| 11 | Montana | \$23,149,588,259 |
| 12 | West Virginia | \$24,360,561,619 |
| 13 | Alaska | \$31,323,107,715 |
| 14 | Utah | \$37,007,562,251 |
| 15 | Tennessee | \$43,336,342,256 |
| 16 | Kansas | \$43,342,547,992 |
| 17 | Hawaii | \$44,001,806,975 |
| 18 | Arkansas | \$47,715,577,572 |
| 19 | Iowa | \$48,976,700,267 |
| 20 | Oklahoma | \$52,065,124,476 |
| 21 | Indiana | \$52,911,200,935 |
| 22 | New Mexico | \$59,016,137,483 |
| 23 | Wisconsin | \$59,208,864,425 |
| 24 | Alabama | \$66,948,949,617 |
| 25 | Mississippi | \$72,943,383,394 |

| RANK | STATE | RISK-FREE UNFUNDED LIABILITIES |
|------|----------------|--------------------------------|
| 26 | Nevada | \$77,022,271,739 |
| 27 | South Carolina | \$85,441,291,234 |
| 28 | Louisiana | \$89,951,703,249 |
| 29 | Missouri | \$99,631,050,908 |
| 30 | Kentucky | \$102,373,103,261 |
| 31 | Maryland | \$102,753,627,887 |
| 32 | Oregon | \$105,287,199,428 |
| 33 | Colorado | \$106,868,209,172 |
| 34 | Arizona | \$107,942,152,600 |
| 35 | Minnesota | \$109,775,895,459 |
| 36 | Connecticut | \$111,208,604,422 |
| 37 | Washington | \$115,162,015,369 |
| 38 | North Carolina | \$122,151,299,950 |
| 39 | Virginia | \$126,298,279,304 |
| 40 | Michigan | \$136,126,914,592 |
| 41 | Massachusetts | \$146,216,045,340 |
| 42 | Georgia | \$149,825,036,645 |
| 43 | Florida | \$217,208,467,450 |
| 44 | Pennsylvania | \$230,931,024,569 |
| 45 | New Jersey | \$254,408,156,375 |
| 46 | Ohio | \$323,656,378,765 |
| 47 | New York | \$342,215,439,115 |
| 48 | Texas | \$401,505,067,782 |
| 49 | Illinois | \$405,246,695,783 |
| 50 | California | \$894,649,357,458 |

Source: Data are based on ALEC Center for State Fiscal Reform calculations. To read the full report and methodology, see [ALEC.org/PensionDebt2020](https://www.alec.org/PensionDebt2020)

Figure 2, Table 2

Total Unfunded Pension Liabilities Per Capita, 2020



| RANK | STATE | UNFUNDED LIABILITIES PER CAPITA |
|------|----------------|---------------------------------|
| 1 | Tennessee | \$6,345.77 |
| 2 | Indiana | \$7,859.40 |
| 3 | Nebraska | \$9,873.58 |
| 4 | Florida | \$10,113.19 |
| 5 | Wisconsin | \$10,169.09 |
| 6 | Idaho | \$10,691.44 |
| 7 | South Dakota | \$11,526.26 |
| 8 | Utah | \$11,543.37 |
| 9 | North Carolina | \$11,646.67 |
| 10 | Oklahoma | \$13,157.82 |
| 11 | West Virginia | \$13,592.95 |
| 12 | Michigan | \$13,630.61 |
| 13 | Alabama | \$13,654.18 |
| 14 | Texas | \$13,846.97 |
| 15 | Georgia | \$14,111.24 |
| 16 | New Hampshire | \$14,119.55 |
| 17 | Maine | \$14,196.25 |
| 18 | Delaware | \$14,481.95 |
| 19 | Virginia | \$14,796.79 |
| 20 | Arizona | \$14,829.83 |
| 21 | Kansas | \$14,877.40 |
| 22 | Washington | \$15,123.26 |
| 23 | Iowa | \$15,523.17 |
| 24 | North Dakota | \$15,743.38 |
| 25 | Arkansas | \$15,811.44 |

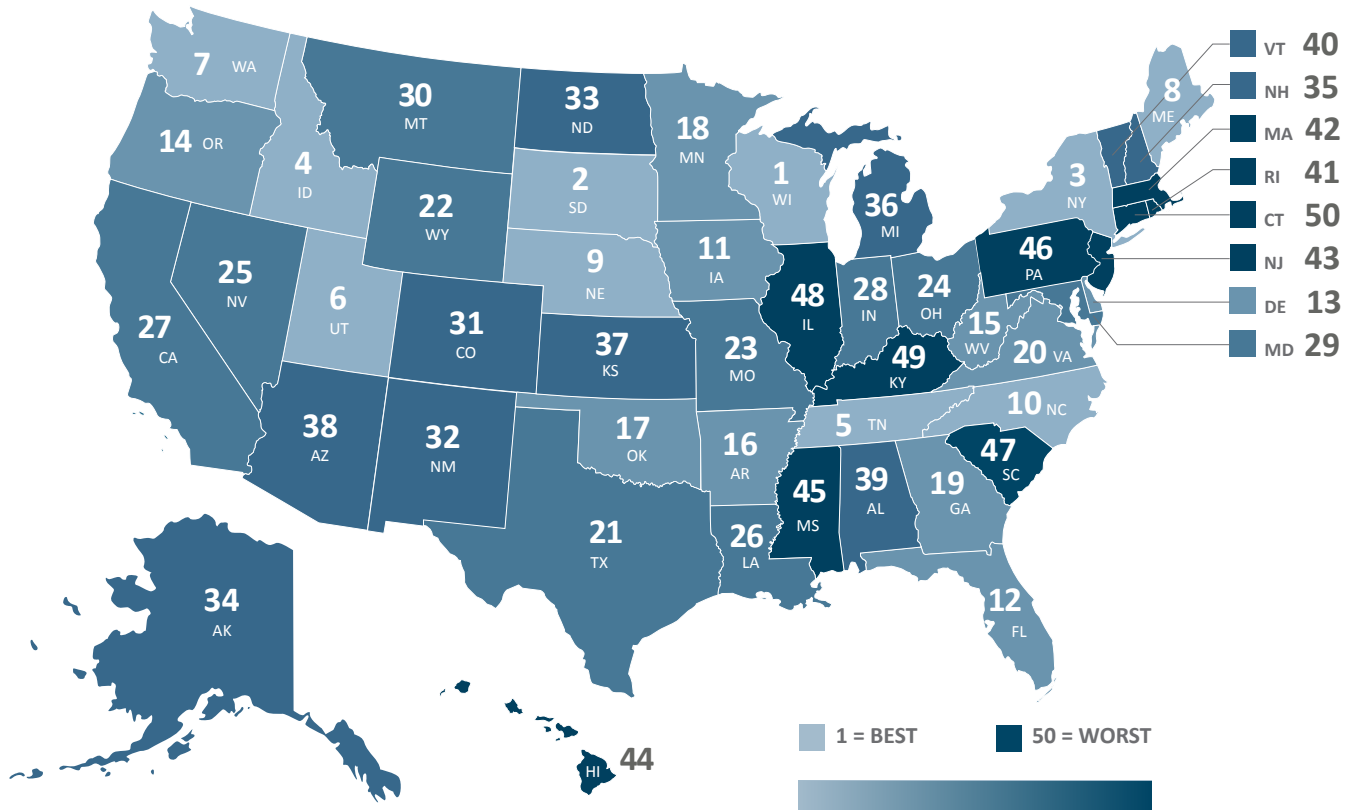
| RANK | STATE | UNFUNDED LIABILITIES PER CAPITA |
|------|----------------|---------------------------------|
| 26 | Missouri | \$16,233.36 |
| 27 | Vermont | \$16,361.54 |
| 28 | South Carolina | \$16,594.69 |
| 29 | Maryland | \$16,996.21 |
| 30 | New York | \$17,591.40 |
| 31 | Rhode Island | \$17,900.85 |
| 32 | Pennsylvania | \$18,038.68 |
| 33 | Colorado | \$18,557.58 |
| 34 | Louisiana | \$19,349.47 |
| 35 | Minnesota | \$19,465.08 |
| 36 | Mississippi | \$20,602.96 |
| 37 | Massachusetts | \$21,213.78 |
| 38 | Montana | \$21,659.87 |
| 39 | California | \$22,642.34 |
| 40 | Kentucky | \$22,914.19 |
| 41 | Wyoming | \$23,483.83 |
| 42 | Oregon | \$24,962.96 |
| 43 | Nevada | \$25,005.96 |
| 44 | Ohio | \$27,688.73 |
| 45 | New Mexico | \$28,145.42 |
| 46 | New Jersey | \$28,642.50 |
| 47 | Hawaii | \$31,077.53 |
| 48 | Connecticut | \$31,192.05 |
| 49 | Illinois | \$31,980.15 |
| 50 | Alaska | \$42,817.75 |

Source: Data are based on ALEC Center for State Fiscal Reform calculations. To read the full report and methodology, see [ALEC.org/PensionDebt2020](https://www.alec.org/PensionDebt2020)

SECTION 1: KEY FINDINGS

Figure 3, Table 3

Funding Ratios



FUNDING RATIOS

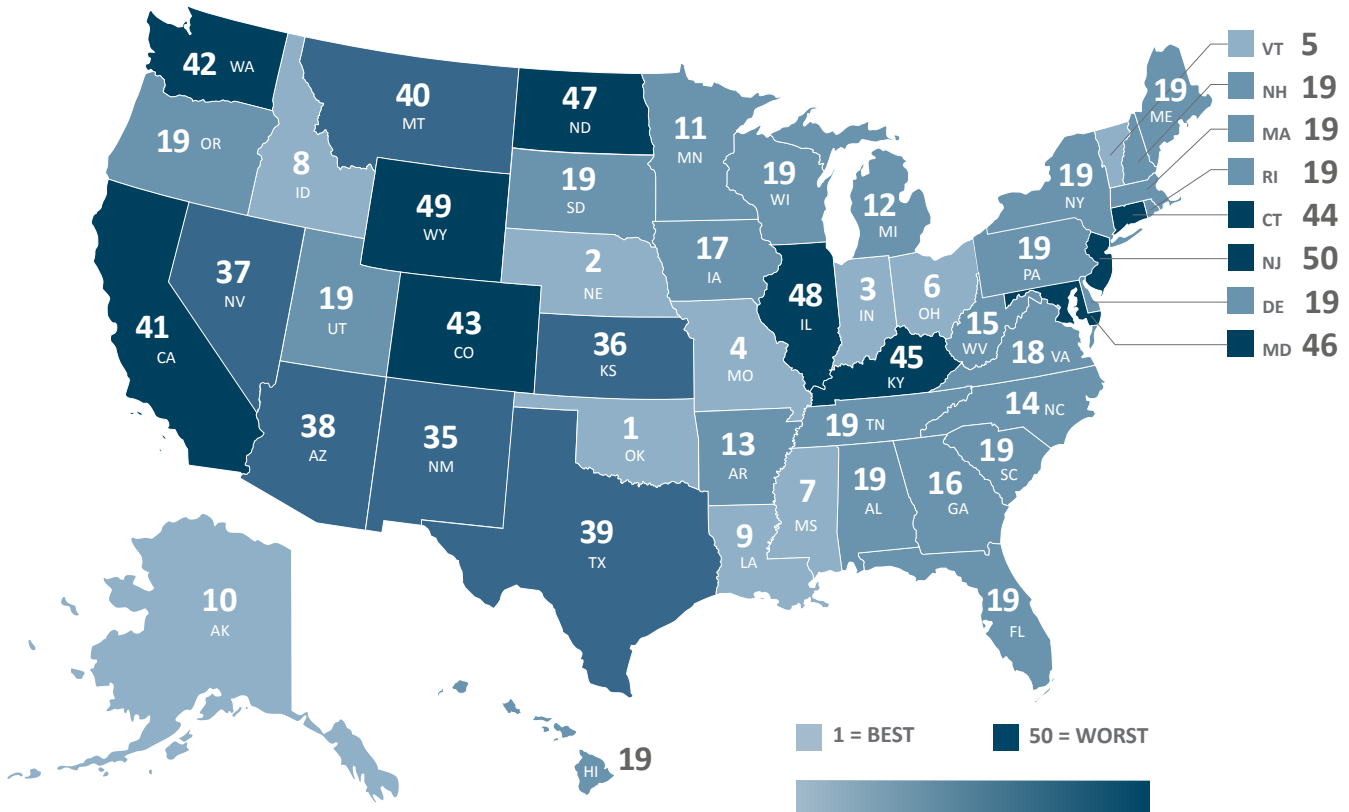
The funding ratio is one measurement of the health of a pension plan. It is the ratio of plan assets to plan liabilities, expressed as a percent. Each state pension plan should strive for a 100% funding ratio. The measurements here use the asset values reported by states and compares them to the liability values this report calculates by using a risk-free discount rate. The important distinction between a plan’s measured liabilities and the risk-free liabilities are explained in Section 2.

| RANK | STATE | FUNDING RATIO | RANK | STATE | FUNDING RATIO |
|------|----------------|---------------|------|----------------|---------------|
| 1 | Wisconsin | 64.27% | 26 | Louisiana | 36.52% |
| 2 | South Dakota | 55.13% | 27 | California | 36.42% |
| 3 | New York | 49.32% | 28 | Indiana | 36.41% |
| 4 | Idaho | 48.16% | 29 | Maryland | 35.14% |
| 5 | Tennessee | 47.86% | 30 | Montana | 33.96% |
| 6 | Utah | 47.24% | 31 | Colorado | 33.95% |
| 7 | Washington | 46.71% | 32 | New Mexico | 33.05% |
| 8 | Maine | 44.14% | 33 | North Dakota | 32.95% |
| 9 | Nebraska | 43.82% | 34 | Alaska | 32.71% |
| 10 | North Carolina | 43.32% | 35 | New Hampshire | 32.46% |
| 11 | Iowa | 43.28% | 36 | Michigan | 32.34% |
| 12 | Florida | 42.96% | 37 | Kansas | 32.27% |
| 13 | Delaware | 40.91% | 38 | Arizona | 32.09% |
| 14 | Oregon | 40.00% | 39 | Alabama | 31.72% |
| 15 | West Virginia | 39.99% | 40 | Vermont | 30.51% |
| 16 | Arkansas | 39.27% | 41 | Rhode Island | 30.41% |
| 17 | Oklahoma | 39.24% | 42 | Massachusetts | 28.96% |
| 18 | Minnesota | 39.11% | 43 | New Jersey | 28.63% |
| 19 | Georgia | 39.04% | 44 | Hawaii | 28.14% |
| 20 | Virginia | 38.72% | 45 | Mississippi | 28.13% |
| 21 | Texas | 38.66% | 46 | Pennsylvania | 27.78% |
| 22 | Wyoming | 38.42% | 47 | South Carolina | 27.42% |
| 23 | Missouri | 38.05% | 48 | Illinois | 25.05% |
| 24 | Ohio | 38.02% | 49 | Kentucky | 24.69% |
| 25 | Nevada | 36.57% | 50 | Connecticut | 23.87% |

Source: Data are based on ALEC Center for State Fiscal Reform calculations. To read the full report and methodology, see ALEC.org/PensionDebt2020

SECTION 1: KEY FINDINGS

Figure 5, Table 5 **Percent Actuarially Determined Contribution (ADC) Paid**



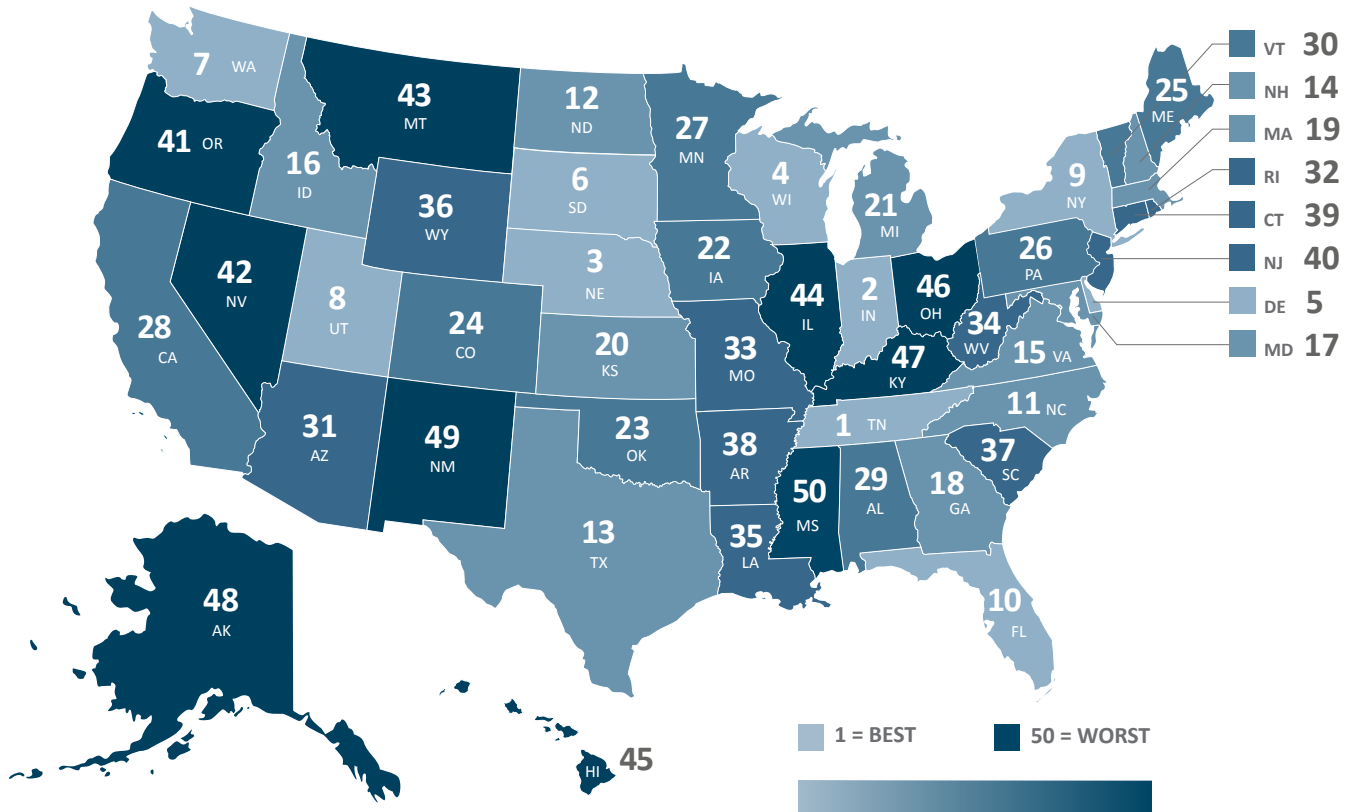
| RANK | STATE | PERCENT ADC PAID |
|------|----------------|------------------|
| 1 | Oklahoma | 121.18% |
| 2 | Nebraska | 116.91% |
| 3 | Indiana | 116.64% |
| 4 | Missouri | 116.10% |
| 5 | Vermont | 110.28% |
| 6 | Ohio | 109.54% |
| 7 | Mississippi | 105.34% |
| 8 | Idaho | 104.42% |
| 9 | Louisiana | 103.86% |
| 10 | Alaska | 102.42% |
| 11 | Minnesota | 102.39% |
| 12 | Michigan | 101.37% |
| 13 | Arkansas | 101.30% |
| 14 | North Carolina | 101.10% |
| 15 | West Virginia | 100.67% |
| 16 | Georgia | 100.35% |
| 17 | Iowa | 100.28% |
| 18 | Virginia | 100.10% |
| 19 | Alabama | 100.00% |
| 19 | Delaware | 100.00% |
| 19 | Florida | 100.00% |
| 19 | Hawaii | 100.00% |
| 19 | Maine | 100.00% |
| 19 | New Hampshire | 100.00% |
| 19 | New York | 100.00% |

| RANK | STATE | PERCENT ADC PAID |
|------|----------------|------------------|
| 19 | Oregon | 100.00% |
| 19 | Pennsylvania | 100.00% |
| 19 | Rhode Island | 100.00% |
| 19 | South Dakota | 100.00% |
| 19 | Tennessee | 100.00% |
| 19 | Utah | 100.00% |
| 19 | Wisconsin | 100.00% |
| 19 | South Carolina | 100.00% |
| 19 | Massachusetts | 100.00% |
| 35 | New Mexico | 99.57% |
| 36 | Kansas | 98.68% |
| 37 | Nevada | 98.31% |
| 38 | Arizona | 97.32% |
| 39 | Texas | 97.32% |
| 40 | Montana | 96.67% |
| 41 | California | 95.83% |
| 42 | Washington | 95.49% |
| 43 | Colorado | 94.01% |
| 44 | Connecticut | 92.41% |
| 45 | Kentucky | 90.13% |
| 46 | Maryland | 89.25% |
| 47 | North Dakota | 78.32% |
| 48 | Illinois | 74.00% |
| 49 | Wyoming | 71.95% |
| 50 | New Jersey | 71.40% |

Source: Data are based on ALEC Center for State Fiscal Reform calculations. To read the full report and methodology, see ALEC.org/PensionDebt2020

Figure 6, Table 6

Unfunded Liabilities as a Percentage of Gross State Product (GSP)



| RANK | STATE | PERCENT CHANGE |
|------|----------------|----------------|
| 1 | Tennessee | 11.40% |
| 2 | Indiana | 14.03% |
| 3 | Nebraska | 15.03% |
| 4 | Wisconsin | 17.05% |
| 5 | Delaware | 18.70% |
| 6 | South Dakota | 19.13% |
| 7 | Washington | 19.21% |
| 8 | Utah | 19.63% |
| 9 | New York | 19.76% |
| 10 | Florida | 19.87% |
| 11 | North Carolina | 20.78% |
| 12 | North Dakota | 21.03% |
| 13 | Texas | 21.28% |
| 14 | New Hampshire | 21.67% |
| 15 | Virginia | 22.79% |
| 16 | Idaho | 23.61% |
| 17 | Maryland | 23.99% |
| 18 | Georgia | 24.31% |
| 19 | Massachusetts | 24.55% |
| 20 | Kansas | 25.03% |
| 21 | Michigan | 25.14% |
| 22 | Iowa | 25.14% |
| 23 | Oklahoma | 25.27% |
| 24 | Colorado | 27.38% |
| 25 | Maine | 28.26% |

| RANK | STATE | PERCENT CHANGE |
|------|----------------|----------------|
| 26 | Pennsylvania | 28.39% |
| 27 | Minnesota | 28.82% |
| 28 | California | 28.92% |
| 29 | Alabama | 28.99% |
| 30 | Vermont | 29.35% |
| 31 | Arizona | 29.48% |
| 32 | Rhode Island | 29.84% |
| 33 | Missouri | 30.00% |
| 34 | West Virginia | 31.16% |
| 35 | Louisiana | 34.09% |
| 36 | Wyoming | 34.28% |
| 37 | South Carolina | 34.69% |
| 38 | Arkansas | 35.83% |
| 39 | Connecticut | 38.93% |
| 40 | New Jersey | 39.45% |
| 41 | Oregon | 41.85% |
| 42 | Nevada | 43.36% |
| 43 | Montana | 44.37% |
| 44 | Illinois | 45.17% |
| 45 | Hawaii | 45.23% |
| 46 | Ohio | 46.34% |
| 47 | Kentucky | 47.69% |
| 48 | Alaska | 56.53% |
| 49 | New Mexico | 56.75% |
| 50 | Mississippi | 61.41% |

Source: Data are based on ALEC Center for State Fiscal Reform calculations. To read the full report and methodology, see ALEC.org/PensionDebt2020

SECTION 2: POOR ASSUMPTIONS MAKE POOR PENSIONS

SECTION 2: POOR ASSUMPTIONS MAKE POOR PENSIONS

State government balance sheets are experiencing increased pressure from growing pension liabilities. This pressure is becoming more apparent with improved financial reporting. The Governmental Accounting Standards Board (GASB) statements 67 and 68 went into effect in FY 2014 and 2015, respectively. These changes were discussed extensively in *Unaccountable and Unaffordable, 2019*.¹

Most pension plans use historical trends to estimate future conditions of assets and liabilities.² Past returns, however, are no guarantee of future performance. As state pension plans invest their funds in increasingly risky assets, the gap between expected rates of return and actual rates of return widens, with results falling far short of expectations. When investment returns come up short of expected returns, taxpayers and plan members must make up the difference through increased contributions or employees request the legislature to provide additional appropriations.

To reflect terminology used in the majority of pension plans, this report will now refer to the actuarial value of assets as the fiduciary net position – FNP – and the actuarial accrued liability will be referred to as the total pension liability – TPL – to reflect the terminology used by most plans.

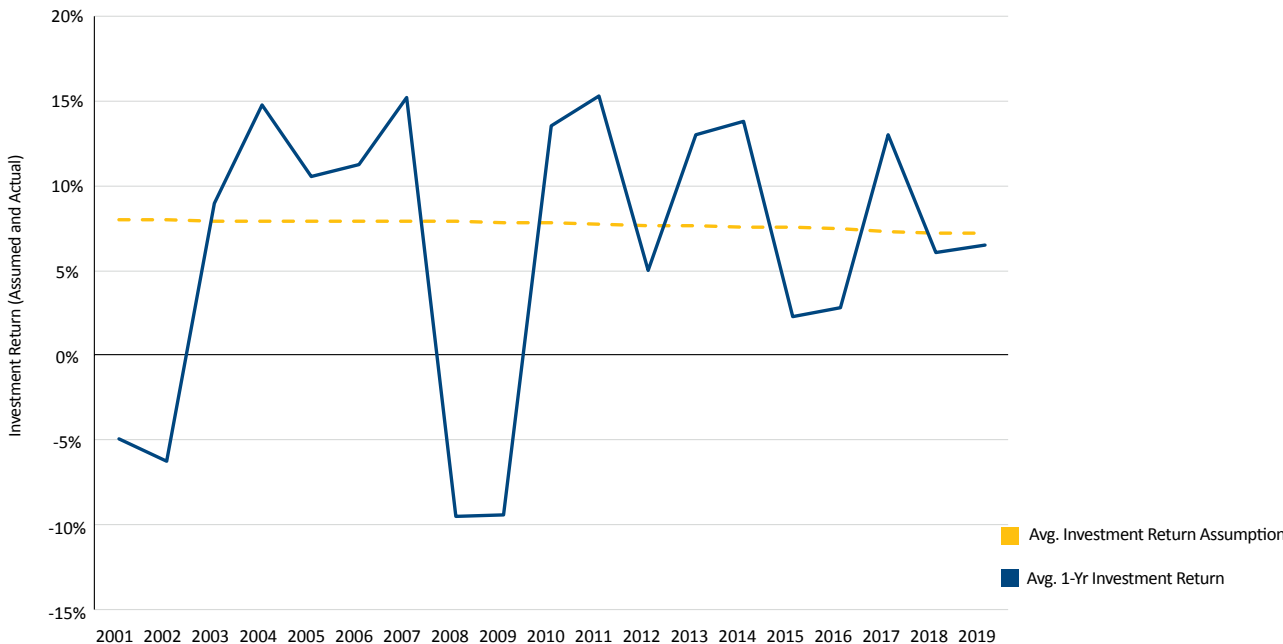
It is also important to note that the data reflect FY 2019, one year before the economic impact of COVID-19. While FY 2020 financial reports have not been published, initial reports indicate that FY 2020 data will show unfunded liabilities increase and investment returns fall short of expectations.³

INVESTMENT RATE OF RETURN

A plan’s assumed investment rate of return is based on a pension plan’s portfolio of investment assets and their earnings. How much these investments will earn is subject to interest rates and risks associated with the assets. The assumed rate of return is thus a reflection of the risk of the plan’s investment assets. The

Table 7, Figure 7 Average Annual Investment Returns Relative to 1-Year Investment Return for All States, 2001-2019

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Avg. 1-Yr Investment Return | -4.91% | -6.22% | 8.95% | 14.76% | 10.55% | 11.29% | 15.25% | -9.49% | -9.42% | 13.54% |
| Avg. Investment Return Assumption | 7.99% | 7.98% | 7.95% | 7.92% | 7.92% | 7.91% | 7.90% | 7.88% | 7.85% | 7.80% |
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Avg. |
| Avg. 1-Yr Investment Return | 15.31% | 4.99% | 13.05% | 13.82% | 2.32% | 2.77% | 13.06% | 6.05% | 6.54% | 6.43% |
| Avg. Investment Return Assumption | 7.74% | 7.67% | 7.63% | 7.60% | 7.54% | 7.45% | 7.33% | 7.22% | 7.20% | 7.71% |



Source: Public Plans Database, Boston College Center for Retirement Research

discount rate is the rate used to determine the value today of the amount a pension plan must pay retirees in the future. To make matters more confusing, investment rate of return and discount rate are often used interchangeably in state financial documents.

In the case of public pensions, however, investment rate of return and discount rate are not interchangeable, because there are different risk levels associated with pension assets and pension liabilities.⁴ Over the past four decades, pension asset funds have changed from low-risk, fixed income investments, such as U.S. Treasury bonds, to an increasingly volatile portfolio of stocks, bonds, and alternative investments.⁵ This is the result of lower bond yields over the past 30 years, the desire to chase higher returns, and the desire from some politicians and plan managers to use pension funds to advance their own economic development or political agendas — a perfect storm of bad incentives.

The figure below shows the disparity between assumed rates of return, noted by the dotted line, and the actual annual rates of return, noted by the solid line. Over the past 20 years, the average assumed rate of return was 7.71% while the actual 1-year investment return was 6.43%, more than a full percentage point lower. The result is actual 1-year investment returns over the past 20 years resemble a roller coaster. This roller coaster makes annual costs more difficult to predict, and, in years of downturn, states must increase future contributions to maintain current funding levels.

One aspect that has increased the volatility of investment returns is politically based investing practices. For instance, environmental, social, and governance (ESG) principles broadly advocate investing or divesting pension investments based on variety of causes.⁶ Examples include divestments from fossil fuels, tobacco and firearms.⁷ However, by allowing political causes or social issues to drive investment strategies, pension plans could miss out on millions of dollars in foregone investment returns. Missing out on those investment returns means plan managers and workers will need to increase their contributions to keep their pension plans solvent.

While data on pension investment returns for 2020 are slowly being published, at the time of this report not enough plans have published their data to provide an accurate average of assumed and actual investment returns for the year. As will be discussed in Section 3, many pension plans have struggled to meet target investments even with market recoveries in Q3 and Q4 of 2020.

Research by the University of Chicago Law School Professor Daniel Fischel found a hypothetical portfolio divested from fossil fuels produced returns 0.7 percentage points lower on average per year than the optimal risk-adjusted portfolio that did not divest from fossil fuels over a 50-year period from 1965-2014.⁸ This represents a massive 23 percentage point decline in investment returns over five decades.

California currently has the largest unfunded pension liabilities in the United States at over \$894 billion, or \$22,642 per capita. While poor investment decisions are not the sole cause of these massive unfunded liabilities, they are a contributor. For instance, the California Public Employee Retirement System and the California State Teachers Retirement System — CalPERS and CalSTRS respectively — divested from companies tied to tobacco starting in 2001.⁹ From 2001-2018, CalPERS lost \$3.6 billion in investment returns from tobacco divestment alone.¹⁰ California also divested from firearms manufacturers who manufacture guns that are illegal for sale in the state of California, which cost CalPERS \$11 million in investment returns from 2013-2018.¹¹

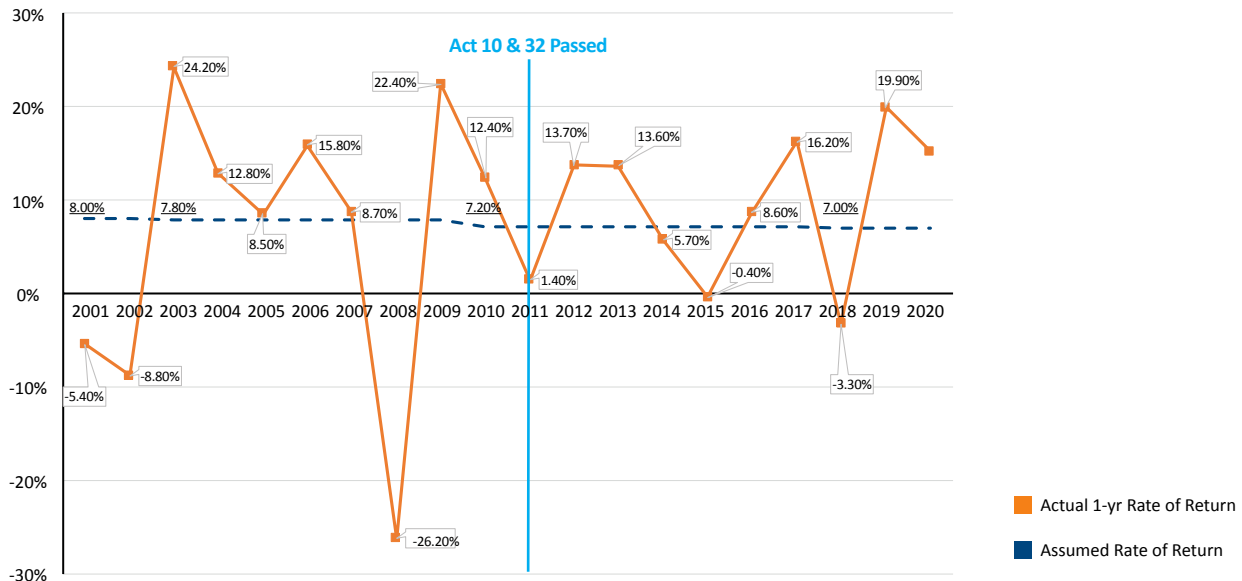
Contrast California with Wisconsin. Wisconsin does not incorporate ESG divesting into its investment strategy. The Board of Trustees of the Wisconsin Retirement System clearly states, “Asset classes and sub-asset classes are broadly defined to gain exposure to the entire investable opportunity set and capture the greatest depth of available investment opportunities to the extent they offer a risk-return trade-off commensurate with SWIB’s return objectives and risk tolerance.”¹²

Reforms passed by the Wisconsin Legislature and Governor Scott Walker in 2011, Acts 10 and 32 incorporated several cost and risk-sharing measures into the Wisconsin Retirement System (WRS), such as requiring all WRS participants to contribute half of all annual contribution payments for pension plans.¹³ By requiring participants and the state to split the annual contribution payment every year, Wisconsin’s pension reforms incentivize prudent investment practices to minimize financial risks and annual costs.¹⁴ As shown in Figure 8 below, Wisconsin exceed their assumed rate of return by 8.21 basis points in 2020 when many pension plans struggled to meet their target investment. These reforms have helped the Wisconsin Retirement System maintain its status as one of the best funded pension systems in the country for all years measured in this report. These reforms helped safeguard the retirement savings of thousands of public employees in Wisconsin while keeping costs relatively low for both the state and public employees.

SECTION 2: POOR ASSUMPTIONS MAKE POOR PENSIONS

Figure 8

Wisconsin Employee Retirement System Assumed VS. Actual Investment Returns, 2001-2020



Source: Public Plans Database, Center for Retirement Research

DISCOUNT RATE: ASSUMED VS RISK-FREE

Discount rates are used to measure the level of risk for pension liabilities and help determine the present value of the amount of pension liabilities owed to public employees in the future.¹⁵ The Appendix discusses extensively how the present value of pension liabilities are calculated.

As stated previously, states are contractually obligated to pay pension liabilities. As pension asset investment volatility increases, there has been a major divergence between the risk premiums of pension assets and liabilities. As the Society of Actuaries' Blue-Ribbon Panel on Public Pension Plan funding recommends, "the rate of return assumption should be based primarily on the current risk-free rate plus explicit risk premium or on other similar forward-looking techniques."¹⁶

Because U.S. Treasury bonds are insured with the full faith and credit of the United States government, the rate of return for these bonds is the best proxy for a risk-free discount rate. A valuation of liabilities based on a risk-free rate contrasts sharply with the overly optimistic assumptions used by nearly every public sector pension plan. As economist and pension scholar Joshua Rauh notes:

"The logic of financial economics is very clear that measuring the value of a pension promise requires using the yields on bonds that match the risk and duration of that promise. Therefore, to reflect the present value cost of actually delivering on a benefit promise requires the use of a default-free yield curve, such as the Treasury yield curve. Financial economists have spoken in near unison on this point. The fact that the stock market, whose performance drives that of most pension plan investments, has earned high historical returns does not justify the use of these historical returns as a discount rate for measuring pension liabilities."¹⁷

This report uses a more prudent discount rate calculated by averaging 10-year and 20-year U.S. Treasury bond yields to create a hypothetical 15-year bond yield to match the 15-year midpoint of the amortization schedule of pension liabilities. The discount rate calculated from these bond yields is the best proxy for a risk-free rate. The 15-year midpoint comes from GASB noting "the maximum acceptable amortization period [the length of time to pay liabilities] is 30 years," and our assumption that pension plans will take the full 30 years to pay off liabilities.¹⁸ Research has also shown that the midpoint of the stream of future benefits for a public pension plan is approximately 15 years in the future.¹⁹ Thus the midpoint of the

amortization period is used because a lump-sum payment in 15 years can be treated as an approximation of the annual benefit liability owed by the plan.²⁰

Since the risk-free discount rate depends upon the average yield of the U.S. Treasury bonds, there have been changes to the discount rate each year of this report. This year, the risk-free discount rate was 2.34%, a decrease from last year's 2.96%.

In addition, the risk-free discount rate creates a standard for measuring the present value of pension liabilities for plans throughout the 50 states. Discount rates can vary depending on the plan, even for different plans in the same state. Using a uniform risk-free rate allows for an accurate comparison of the value of liabilities across pension plans. The risk-free discount rate used in this year's report also sharply contrasts with the overly optimistic assumptions used in state financial documents, providing a more prudent estimate of the value of liabilities across pension plans.

ACTUARIALLY DETERMINED CONTRIBUTION

The actuarially determined contribution (ADC) refers to a collection of terminology used by state plans in the comprehensive annual financial reports (CAFRs) valuations and GASB notes and statements. Other terms include "actuarially recommended contribution" and "annual required contribution," used in previous editions of this report, but they all refer to the same definition. This report now uses the term, "actuarially determined contribution" instead of "annual required contribution" (ARC) to reflect the language currently used by most public pension plans.

An ADC is the amount of money state and local governments must annually contribute to pension plans to meet obligations to current and future retirees. The ADC is calculated based on certain parameters, including normal costs for the year and a component for amortization of the total unfunded actuarial accrued liabilities for a period no longer than 30 years. Each ADC is calculated a little differently, here is an example of the Colorado Public Employee Retirement Association (PERA) actuarially determined contribution:

(1) ADC = ADC Contribution Rate × Covered Payroll + Annual Increase Reserve Contribution

The actuarially determined contribution rate is the portion (expressed as a percent) that the state must pay that is equal to the payroll of public employees eligible for a pension. For example, the PERA contribution rate for Fiscal Year (FY) 2019 was 23.28% of a payroll of just under \$3 billion – so that portion of the contribution was just under \$700 million.²¹ That amount is then added to the annual increase reserve contribution, the dollar amount the state needs to contribute to increase the plan's total assets. In FY 2019, that amount was just over \$17.5 million.²² Thus, the total ADC for the PERA plan in 2019 was roughly \$87 million.

If a plan is consistently making ADC payments, it is better able to adjust to fluctuating variables (i.e., cost of living adjustments and life expectancy) and pay off its liabilities within 30 years.

SECTION 3: REFORM CAN HELP STATES TRYING TO TREAD WATER

SECTION 3: REFORM CAN HELP STATES TRYING TO TREAD WATER

Unfunded pension liabilities have been a major focus of ALEC research for many years. The market downturn in March of 2020 significantly harmed retirement plans, and public pensions were no exception. Moody's Investors Service noted that state governments and public employees would have to dramatically increase their annual contributions to keep liabilities from growing, let alone fulfilling previously unfunded liabilities.²³ In March, Moody's anticipated liabilities would rise nearly 60% in FY 2021.²⁴ While the economy has begun to recover, most pension investments did not meet their assumed rates of return for 2020. Growing unfunded liabilities, even during the relatively prosperous FY 2019, July 2018-June 2019 for most states, show that states cannot simply invest their way out of pension funding problems.²⁵

MAKING THE SWITCH TO DEFINED-CONTRIBUTION

One of the best ways to solve the pension crisis is to change the way pension plans are structured. Changing from the current defined-benefit system to a well-run defined-contribution system will improve the health of state pension plans and give employees more control over their own retirement savings. The defined-contribution options allow employees to contribute to a 401(k) or similar retirement plan with employers matching a contribution. The key benefit of defined-contribution is its flexibility. Employees do not have to wait to become vested to access this account and, if they choose to leave the public sector, that 401(k) account will follow them. Defined-contribution is a retirement system that helps workers adapt to the job market of the future. In May 2020, the Bureau of Labor Statistics found that Americans born 1980-1984 held an average of 8 jobs from

ages 18 through 32, with over half of these jobs held from ages 18 to 22.²⁶ With younger workers frequently changing jobs, they need a plan that allows their retirement savings to move with them. A recent study by Andrew Biggs found that from 1989-2016 household retirement savings increased for every age, income, race, and educational group, thanks in part to defined contribution plans being introduced in the private sector.²⁷

One state that has implemented a hybrid system with elements of both defined-benefit and defined-contribution for all new public employee hires was Tennessee. An analysis of the Tennessee public pension systems found that switching to a hybrid system for all new hires in July 2014 and implementing prudent investment practices helped improve pension plan solvency and helped make Tennessee the state with the lowest unfunded liabilities per capita every year from 2016 to this current report.²⁸ Tennessee could greatly improve its pension funds by transitioning all new hires to a fully defined contribution system.

USING A RISK-FREE DISCOUNT RATE

One reform most pension plans can immediately adopt is lowering their discount rates to the private sector average of 4.5%, or for a more accurate measurement, to a risk-free rate to reflect the risk-free nature of state pension promises.²⁹ The risk-free rate used in ALEC pension reports varies from year to year based upon the average of 10-year and 20-year U.S. Treasury bond yields. The table below shows the risk-free discount rate by fiscal year:

As described in Section 2, the risk-free rate provides the most accurate depiction of pension promises because it reflects a state's inability to default on pension promises.

Table 8

Risk-Free Rate by Year of Fiscal Year

| 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3.69% | 3.63% | 3.20% | 2.17% | 2.74% | 2.81% | 2.35% | 2.03% | 2.49% | 2.96% | 2.34% |

Source: Federal Reserve Bank of St. Louis FRED Database and Authors' Calculations

IMPLEMENTING COST SHARING

While states should consider the defined-contribution option, policymakers should also look to Wisconsin for necessary reforms to traditional pensions. Thanks to reforms passed by the Wisconsin Legislature and then-Governor Scott Walker in 2011, the Wisconsin Retirement System (WRS) incorporated several cost and risk-sharing measures.³⁰ These reforms included requiring all WRS participants, including public safety employees, to contribute half of all ADC payments for pension plans. By requiring participants and the state to split the ARC payment every year, it incentivizes prudent investment practices to minimize financial risks and annual costs.³¹ These reforms show, as Wisconsin has been the best funded pension system in the country from FY 2012-2018.³²

AVOIDING ESG INVESTMENTS

In a comment submitted to the Department of Labor Employee Benefits Security Administration, ALEC supported a rule clarifying the role of ESG investing and fiduciary management.³³ This rule states that ESG investing falls outside of current regulations requirement that pension plan managers select investments solely on financial considerations.

While the rule applied to private pension funds, the ALEC comment aimed to educate policymakers on what occurs to pension investments when such a rule does not exist.³⁴ Public pensions offered a clear counterexample. As mentioned in Section 2, California public pension systems have experienced increased volatility, higher costs, and billions lost in foregone investment returns.

Allowing more prudent investment strategies such as in Tennessee and Wisconsin help keep investment returns relatively stable, costs predictable and pension funds solvent. States can use this regulation as a model for their own public pension investments.

CONCLUSION

The strategies explained above illustrate ways states may limit the risks associated with pension mismanagement, but states can shed these risks entirely by reforming their pension systems. With sound pension reform, states can keep the promises they made to public employees to keep pensions funded. In addition, these reforms keep promises made to taxpayers to prevent unfunded liabilities from causing tax increases and crowding out essential government services. For public employees, implementing a defined-contribution system for new hires means all costs are realized in the present, taking away the possibility of employers underfunding employee benefits altogether. The employee can control where he invests his retirement savings as he sees fit.

APPENDIX: METHODOLOGY

This report features a complete dataset from FY 2012 and 2019. This report uses each plan's actuarial value of assets (FNP) and actuarial accrued liability (TPL) to calculate unfunded liabilities. This report, however, makes several assumptions regarding the structure and actuarial assumptions in state liabilities to present a more reasonable estimate of each state's liabilities than is commonly found in the state financial reports.

In addition, many plans use the phrase "rate of return" and "discount rate" interchangeably. Section 2 explains the differences between an investment rate of return and a discount rate. As discussed in Section 2, there is also a major difference between the assumed return on investments and actual return on investments.

Another important factor in understanding state pensions is how the discount rate affects the value of liabilities. Generally, the higher the discount rate, the lower the liability (and vice versa). Also mentioned in Section 2, assuming higher rates of return and discount rates creates perverse incentives for policymakers to overvalue the returns on investment and undervalue liabilities.

For this report, a 15-year midpoint, using a hypothetical 15-year U.S. Treasury Bond yield, is used to derive an estimated risk-free discount rate of 2.34%. This is calculated as the average of the 10-year and 20-year bond yields.

As stated in Section 2, the 15-year midpoint comes from the GASB recommendation that a pension plan take no longer than 30 years to pay off its pension liabilities. While state financial documents are not required to report their liabilities projected over a time series (i.e., reporting total liability due per year for the next 75 years), this report must assume the midpoint of state liabilities in order to recalculate state liabilities under different discount rates.

Applying the risk-free rate to pension liabilities allows for more accurate cross-state comparisons than simply comparing liability values as stated in state financial documents.

The valuations in this report are calculated based on the present value of those liabilities. While it is difficult to estimate how much future liabilities will cost (because of changes in variables like inflation and mortality rates) we can estimate the value of those future liabilities today by calculating their present value. Present value is the value today of an amount of money in the future.

The discount rate is the rate used to determine the present value of benefits a pension plan must pay retirees in the future.³⁵ A general rule is the higher the discount rate, the lower the present value of future pension liabilities and vice versa. This study uses a discount rate that is lower than the discount rate in many state financial documents. This is, in part, to show a more conservative valuation of those liabilities (compared to many state financial documents) and allow more accurate liability comparisons to be made between states.

Pension plan discount rates can vary even among plans within a state. The use of a risk-free discount rate normalizes discount rates across pension plans, providing the means to assess present value of liabilities across plans. This provides a basis of comparison for liabilities and funding ratios across the 50 states. Other variables provided by state financial documents such as mortality rates, demographics and health care costs were assumed to be correct and not normalized across plans.

A risk-free discount rate is a more prudent discount rate than many plans offer. The formula for calculating a risk-free present value for a liability requires first finding the future value of the liability. That formula, in which "i" represents a plan's assumed discount rate, is described in equation 1 below:

$$(1) \text{ Future Value} = \text{Total Pension Liability} \times (1 + i)^{15}$$

The second step is to discount the future value to arrive at the present value of the more reasonably valued liability. That formula in which "i" represents the risk-free discount rate or 4.5% fixed discount rate is described in equation 2 below:

$$(2) \text{ Present Value} = \frac{\text{Future Value}}{(1 + i)^{15}}$$

This methodology was developed by Bob Williams and Andrew Biggs when this report was created by State Budget Solutions, now a project of the ALEC Center State Fiscal Reform. It normalizes liability values across plans and presents a more prudent valuation of liabilities than many state benefits plans. The inclusion of the fixed discount rate of 4.5%, was added by the authors of *Unaccountable and Unaffordable, 2018*.³⁶ This discount rate controls for changes in the risk-free rate, year-over-year, and is similar to private sector pension discount rates that are mandated to use by federal law.

Furthermore, smaller plans that did report their investment rates of return tended to deviate from the national average more than larger plans, likely due to their smaller and less diversified funds. In some cases, smaller plans pool their assets with the state employee, teacher or police funds to reduce management costs. This created a comparison problem between states in terms of their investment rates of return. States with smaller plans tended to report a larger variance in their investment returns than states with consolidated funds as well as, problematically, states with smaller plans that did not report investment rates of return. For this reason, this report excludes smaller plans and uses the Boston College Center for Retirement Research Public Plans Database Investment rates of return to analyze larger state plan investment returns.

Membership figures are collected from CAFRs, valuations and GASB notes, and are divided into active employees and beneficiaries (i.e., current retirees, inactive employees entitled to benefits who have not yet retired and survivors entitled to benefits). Some state plans used the term “inactive” to refer to different aggregations of inactive employees, such as retirees, inactive employees entitled to a future benefit and inactive employees not entitled to a benefit. Supporting documents were used to parse the two groups. For example, the Connecticut Municipal Employee Retirement System, CMERS, uses the term “inactive members” in their GASB 68 report ambiguously but clarifies the figure in their GASB 67 report by parsing the total into retirees currently receiving benefits and inactive members entitled to a benefit.

Actuarially determined contributions (ADCs) and the percentage of actuarially determined contributions made were collected primarily from pension CAFRs, usually from tables titled “Schedule of Employer Contributions.” Actuarially determined contributions, actuarially recommended contributions, actuarially determined contributions net of taxes and fees are reported as ADC in our study.

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Appendix 2

Keeping the Promise: Getting Politics Out of Pensions



KEEPING THE PROMISE:
GETTING POLITICS OUT OF PENSIONS



A

Center for
State Fiscal
Reform

About the American Legislative Exchange Council

Keeping the Promise: Getting Politics Out of Pensions was published by the American Legislative Exchange Council (ALEC) as part of its mission to discuss, develop and disseminate model public policies that expand free markets, promote economic growth, limit the size of government and preserve individual liberty. ALEC is the nation's largest nonpartisan, voluntary membership organization of state legislators, with more than 2,000 members across the country. ALEC is governed by a Board of Directors comprised of state legislators. Additionally, ALEC is classified by the Internal Revenue Service as a 501(c)(3) nonprofit, public policy and educational organization. Individuals, philanthropic foundations, businesses and associations are eligible to support the work of ALEC through tax-deductible gifts.

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The Center for State Fiscal Reform strives to educate policymakers, the media and the general public on the principles of sound fiscal policy and the evidence that supports those principles. This is done by personalized research, policy briefings in the states and by releasing nonpartisan policy publications for distribution, such as *Rich States, Poor States: ALEC-Laffer State Economic Competitiveness Index*.

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Table of Contents

| | |
|--|----|
| Executive Summary | v |
| Chapter 1: Background on Public Pension Systems | 1 |
| Public Pension Plans in the United States | 1 |
| Public Pensions Significantly Underfunded | 2 |
| The Defined-Contribution Alternative | 4 |
| The Importance of Proper Plan Management | 5 |
| Weak Fiduciary Standards Enable Pension Fund Cronyism | 5 |
| Chapter 2: Economically Targeted Investments | 7 |
| ETIs Lead to Significant Lost Returns | 7 |
| Alabama Bets Big on ETIs | 8 |
| Overview of Alabama’s ETIs | 8 |
| Poor Performance of ETIs in Alabama | 9 |
| ETIs Weigh Down RSA Investment Returns | 9 |
| RSA’s Real Estate Investments: A Key Contributor to Poor Performance | 9 |
| RSA’s Other ETIs Lead to Significant Losses | 11 |
| Alabama’s Weak Fiduciary Standards Enable ETIs | 11 |
| Opaque Pension Reporting Conceals Performance of RSA’s ETIs | 13 |
| Alabama’s Poor Pension Board Composition and Governance Enables ETIs | 13 |
| The Results of Alabama’s Pension Investment Model | 15 |
| ETIs Put Workers and Taxpayers at Risk | 15 |
| Solutions for Fighting ETI Cronyism | 16 |
| Chapter 3: Political Kickbacks | 17 |
| Political Bias in Public Pension Funds | 17 |
| CalPERS Kickbacks | 19 |
| Political Kickbacks Cost Pension Funds | 19 |
| Solutions for Fighting Political Kickback Cronyism | 20 |
| Chapter 4: Political Crusades | 21 |
| The Pension Divestment Movement Harms State Pension Funds | 21 |
| Fossil Fuel Divestment | 21 |
| Fossil Fuel Divestment Fails to Achieve Its Goals | 23 |
| California | 23 |
| New York | 24 |
| Vermont | 25 |
| Pension Divestment at the Municipal Level | 25 |
| Fossil Fuel Divestment Threatens Pensioners’ Retirement | 26 |
| Divestment from Individuals Based on Personal Beliefs | 26 |
| Rhode Island Trades Investment Returns for Politics | 27 |
| Shareholder Activism in Pension Fund Management | 29 |
| Public Pension Funds Advance Political Shareholder Resolutions | 29 |
| Shareholder Activism to Silence Free Speech | 30 |
| Shareholder Activism and Executive Compensation | 30 |
| Political Crusades Put Pensioners at Risk | 30 |
| Solutions for Fighting Political Crusade Cronyism | 31 |
| Conclusion | 32 |
| Appendix A: Solutions for Prudent Pension Investment and Governance | 33 |
| Appendix B: ALEC Model Policies | 35 |
| Endnotes | 40 |

Executive Summary

Pensions are a valuable non-wage benefit that a large majority of state and local governments offer their employees as part of their compensation packages. With approximately \$3.8 trillion in total assets, millions of workers rely on the promises made by governments to provide a secure retirement through a lifelong pension. In order to keep these promises, pension funds should be managed for the exclusive purpose of providing retirement benefits to workers, with pension trustees doing their best to achieve the greatest possible return on investments.

Unfortunately, many lawmakers and pension plan officials have other priorities besides doing what is best for workers. They see the billions of pension fund dollars they manage as an opportunity to advance their own agendas. Rather than investing to earn the best return for workers, they use pension funds in a misguided attempt to boost their local economies, provide kickbacks to their political supporters, reward industries they like, punish those they don't and bully corporations into silence and behaving as they see fit.

As lawmakers and trustees knowingly make inferior investment decisions, sacrificing better returns in order to advance political agendas, pension funding declines, jeopardizing workers' retirement benefits and leaving taxpayers to pick up the tab. This reckless decision to place political agendas ahead of what's best for workers is known as pension fund cronyism, and it is happening every year in pension funds across the country. This report exposes these dishonest practices and shows state and local policymakers what they can do to get politics out of their pensions and focus on keeping the promise to workers and retirees alike.

Chapter 1

Background on Public Pension Systems

Before addressing the many forms of pension fund cronyism in detail, some background on the mechanics and current underfunded status of public pensions is necessary. While pension fund cronyism is always detrimental, the alarming and deteriorating state of public pension funds underscores the critical need to get politics out of pensions.

There are three main reasons why most public pension plans are in such trouble. The first relates to the actual funding of the plans. This includes both how the funding required from state and local governments is calculated each year and their commitment to making those payments. The second is related to the structure of the plans themselves, which permits state and local governments to get away with underfunding pension plans for political convenience. The third relates to weak fiduciary standards that enable pension board members and fund managers to use public pension funds to advance political agendas at the expense of securing the best returns on pension investments. An examination of these causes is crucial to understanding the depth and breadth of the problem, and the steps policymakers need to take in order to comprehensively fix public pensions going forward.

Public Pension Plans in the United States

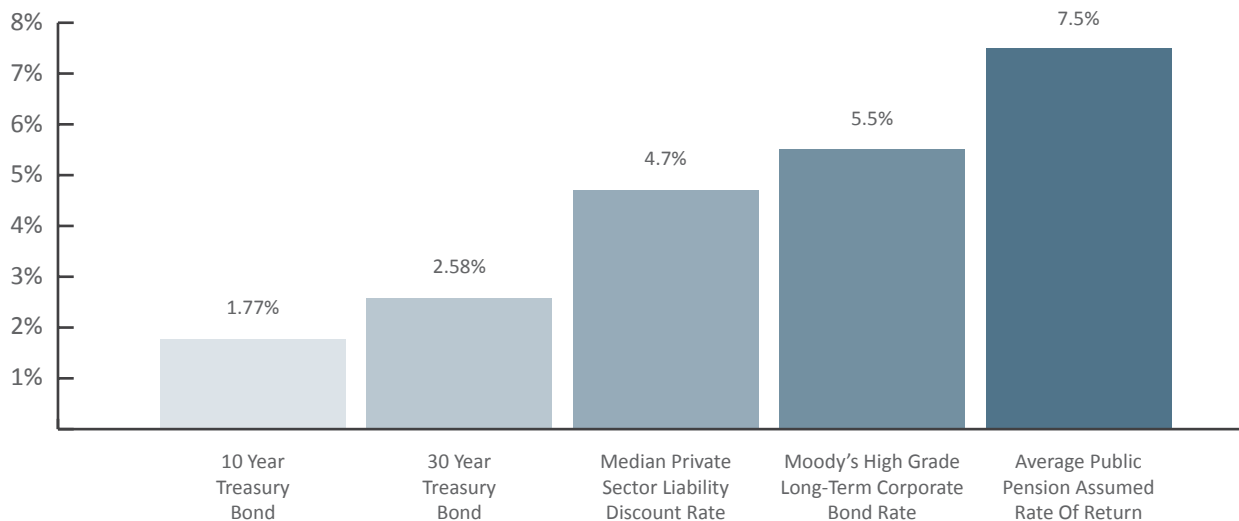
Nearly all state public pension plans operate on what is called a defined-benefit model. In defined-benefit plans, pension systems collect fund contributions from employees, their government employers (such as school districts) and the state or local government itself. The money is then invested on behalf of those participating in the pension system. That fund is then used to pay obligations to retirees. A defined-benefit pension plan guarantees, upon retirement, an employee will receive a specific benefit each period, regardless of market performance or contributions into the system.

While the amount that employees are required to contribute to a defined-benefit pension system is typically set through collective bargaining or other contractual negotiations, and the contribution from government employers is often derived from these negotiations or state law, the amount the state or local government directly contributes is calculated differently. Actuaries calculate the amount the government must contribute to the pension system every year, known as the “annual required contribution” (ARC), based on the number of people in the system, their expected work years, retirement duration and the expected rate of return on the fund’s investments. This last variable, the “discount rate,” has a significant effect on how large a government’s ARC payment will be. As states and cities increase the discount rate, their ARC payments decrease. This is because the higher the investment returns assumed by the plan, the less money the state or local government must contribute through the ARC payment to keep the plan well-funded.

Unfortunately, the vast majority of public pension plans rely on unrealistically high assumptions, often expecting a whopping seven percent or more return — in each and *every year*.¹ This is problematic because most financial experts believe assuming regular returns at these rates is unrealistic. Simply put, the expected return on investment state and local governments use to calculate ARC payments is far too high.

Lowering the expected rate of return on pension investments to a more reasonable level would serve to mitigate financial risks and help improve long-term plan solvency. In fact, these unrealistic assumptions led *The Economist* to declare in 2013 that “States need to wake up. The priority is to make taxpayers aware of the scale of the problem by accounting for it properly, rather than pretending the stock market fairy will magic it away.”²

FIGURE 1: COMPARISON OF POPULAR RATES OF RETURN



Source: Bloomberg, The Economist and California Policy Center³

What happens when a pension fund fails to achieve its expected rate of return? If market returns on a pension's investments fall below expectations, the state or local government is responsible for making up the difference with additional funding beyond the ARC payment. This usually means the state or municipality must raise taxes, cut the budget or borrow money to cover the pension fund's underperformance. Alternatively, some state and local governments simply decline to make this additional payment, or supply only part of the necessary funds. They opt to "kick the can down the road," leaving the pension system underfunded and with fewer assets to invest, setting the state or local government up to have to make even larger payments to fund pension liabilities in the future.

The failure of state and local governments to make these additional payments, or in many cases, even their baseline ARC payments, is one of the major reasons why public pensions' funded ratios have declined precipitously in the last several years. The assumed investment returns have not materialized and many state and local governments have failed to contribute what is required to maintain funding levels.

Part of the reason investment returns have fallen short is because state and local governments have failed to adequately police their pensions' trustees, both pension board members and pension fund managers. They have not reined in trustees who play politics when it

comes to pension investment decisions. By directing pension funds to inferior investments for their alleged local economic benefit, to reward their supporters or to attack various industries, many trustees have cost their pension systems billions of dollars in foregone returns and have left state and local governments, pensioners and ultimately the taxpayer with the bill.

Public Pensions Significantly Underfunded

Although rarely in the spotlight, unfunded liabilities in state and municipal public pension systems are among the most significant financial challenges for lawmakers, government workers and taxpayers across the United States. Unlike one-time budget problems that result from natural disasters or a cycle of weak revenue collections, nearly all public pension systems carry long-term financial liabilities that are perpetually increasing as policymakers fail to take action.

The high-profile bankruptcies of Stockton and San Bernardino, California, followed by Detroit, Michigan, have increased public awareness around the issue of unfunded public pension liabilities and helped affirm that these problems will not simply disappear. These examples, along with many others, have highlighted the severe financial risk unfunded public pension liabilities present.

The scale of the unfunded liabilities public pensions now face is shocking. While estimates vary, largely depending on the investment rate of return one assumes, it is generally agreed many public pension funds are heading down the road to major financial problems, and eventually, insolvency. According to the ALEC Center for State Fiscal Reform report, *Unaccountable and Unaffordable 2016*, when a risk-free rate of return is used, the national funded ratio for state pension plans

is a meager 35.1 percent, with almost \$5.6 trillion in unfunded liabilities.⁴ That staggering figure is more than 30 percent of the gross domestic product (GDP) of the United States.⁵ The Society of Actuaries, in their *Report of the Blue Ribbon Panel on Public Pension Plan Funding*, recommends pension plans utilize a “risk-free” rate of return, like the ALEC report does, since benefits must be paid to retirees regardless of market returns.⁶

TABLE 1: 2016 STATE PENSION UNFUNDED LIABILITIES

| STATE | FUNDED RATIO | UNFUNDED LIABILITIES | UNFUNDED LIABILITIES PER CAPITA |
|----------------|--------------|----------------------------|---------------------------------|
| Alabama | 30.3% | \$74,957,966,779 | \$15,427 |
| Alaska | 31.4% | \$31,715,653,280 | \$42,950 |
| Arizona | 31.2% | \$90,710,340,087 | \$13,285 |
| Arkansas | 36.4% | \$43,976,220,971 | \$14,766 |
| California | 35.6% | \$956,081,787,553 | \$24,424 |
| Colorado | 30.3% | \$106,382,900,927 | \$19,496 |
| Connecticut | 22.8% | \$99,299,024,840 | \$27,653 |
| Delaware | 44.7% | \$11,262,866,330 | \$11,907 |
| Florida | 40.5% | \$210,153,896,482 | \$10,367 |
| Georgia | 38.8% | \$122,645,214,077 | \$12,007 |
| Hawaii | 29.2% | \$35,136,593,006 | \$24,544 |
| Idaho | 46.5% | \$16,572,789,476 | \$10,014 |
| Illinois | 23.8% | \$362,646,966,724 | \$28,200 |
| Indiana | 34.8% | \$56,748,217,042 | \$8,573 |
| Iowa | 39.8% | \$46,424,775,242 | \$14,861 |
| Kansas | 29.9% | \$40,737,986,356 | \$13,991 |
| Kentucky | 23.4% | \$95,946,947,928 | \$21,682 |
| Louisiana | 31.3% | \$94,320,807,435 | \$20,194 |
| Maine | 42.1% | \$17,676,038,583 | \$13,297 |
| Maryland | 33.1% | \$93,343,409,896 | \$15,541 |
| Massachusetts | 27.7% | \$126,677,266,263 | \$18,644 |
| Michigan | 27.5% | \$156,941,092,013 | \$15,817 |
| Minnesota | 34.5% | \$110,474,025,601 | \$20,124 |
| Mississippi | 27.9% | \$64,300,123,348 | \$21,488 |
| Missouri | 36.9% | \$99,369,429,995 | \$16,334 |
| Montana | 33.6% | \$19,496,700,717 | \$18,875 |
| Nebraska | 40.3% | \$17,367,830,965 | \$9,159 |
| Nevada | 32.7% | \$69,697,815,811 | \$24,110 |
| New Hampshire | 28.0% | \$17,320,649,176 | \$13,017 |
| New Jersey | 26.9% | \$235,489,469,324 | \$26,288 |
| New Mexico | 32.1% | \$54,455,339,568 | \$26,116 |
| New York | 44.9% | \$347,542,971,698 | \$17,556 |
| North Carolina | 47.9% | \$96,402,637,555 | \$9,599 |
| North Dakota | 28.9% | \$10,213,597,800 | \$13,494 |
| Ohio | 34.3% | \$331,420,701,160 | \$28,538 |
| Oklahoma | 34.9% | \$51,903,613,095 | \$13,270 |
| Oregon | 36.3% | \$97,781,712,858 | \$24,270 |
| Pennsylvania | 28.9% | \$211,586,194,586 | \$16,527 |
| Rhode Island | 29.6% | \$18,636,960,291 | \$17,644 |
| South Carolina | 30.1% | \$74,095,092,870 | \$15,133 |
| South Dakota | 47.8% | \$11,286,522,172 | \$13,147 |
| Tennessee | 47.3% | \$47,826,122,962 | \$7,246 |
| Texas | 36.9% | \$360,396,676,526 | \$13,120 |
| Utah | 41.7% | \$37,987,328,775 | \$12,680 |
| Vermont | 30.4% | \$8,707,979,583 | \$13,910 |
| Virginia | 37.4% | \$107,648,590,922 | \$12,841 |
| Washington | 39.9% | \$107,740,838,715 | \$15,026 |
| West Virginia | 35.5% | \$23,640,020,456 | \$12,819 |
| Wisconsin | 63.4% | \$52,842,437,646 | \$9,156 |
| Wyoming | 36.6% | \$13,642,969,825 | \$23,277 |
| TOTAL | 35.1% | \$5,589,633,115,291 | \$17,427 |

Source: Center for State Fiscal Reform, American Legislative Exchange Council

The magnitude of unfunded liabilities has been increasing for years. In order to turn things around for failing defined-benefit pension systems – that is if policymakers wish to continue with a defined-benefit model – lawmakers must begin setting more reasonable assumed rates of return and commit to making the larger ARC payments this would require. They must also commit to doing everything they can to meet their assumed rates of return. This means eliminating pension fund cronyism by insisting trustees invest solely in the interest of securing the best long-term, risk-adjusted returns and not allowing them to sacrifice portfolio performance in the pursuit of political agendas.

The Defined-Contribution Alternative

It is worth noting that some states and municipalities have escaped the perils of defined-benefit plans by creating new defined-contribution plans for government workers. A defined-contribution plan sets up a personal account that is owned by the employee and is entirely theirs upon full retirement. The typical defined-contribution plan is very similar to the 401(k) retirement savings accounts that most private sector employees utilize. While defined-contribution plans usually include payments from both the employee and the employer into their account, the employer (state or local government) makes no guarantee on what the eventual payout will be. Most private sector companies have realized the unsustainability of the defined-benefit model and switched to the 401(k) defined-contribution model years ago.

One of the key benefits of public defined-contribution plans is stability for state and local finances. Governments can budget knowing, within a certain predictable range, what contributions they will need to make to employees' retirement accounts. The variation is a result of factors such as provisions to match employee contributions and changes in the number of government workers. These variables are far more predictable than the ups and downs of global markets that determine defined-benefit plans' investment returns, and consequently, the contributions required by state and local governments to keep their pension plans well-funded.

Defined-contribution plans also provide improved accountability for state and local governments. With defined-contribution plans, employees have a legal cause of action if the government fails to make its required

contribution. In addition, they provide greater transparency through personal account statements, where in an employee may see the value of their pension and whether or not the government is making their proper payments. This stands in stark contrast to defined-benefit plans, where employees, and the taxpayers who are ultimately liable, can only hope state and local governments will faithfully make their "required" contributions to the pension fund.

This cause of action, combined with transparency, serves as an enforcement mechanism that ensures defined-contribution plans will be run as pay-as-you-go systems. So long as state and local governments make their reasonably predictable payments to pensioners' accounts, no unfunded liabilities accrue at all. Defined-contribution plans avoid the risk endemic to defined-benefit plans, where fiscally irresponsible lawmakers can make politically-beneficial promises today, but pass down a mountain of unfunded liabilities to future generations – and future lawmakers.

Finally, defined-contribution plans also have the benefit of essentially eliminating pension fund cronyism. Since employees in defined-contribution plans own their personal retirement accounts, they decide how their money is invested, often by choosing from a set of mutual funds managed by large, professional investment firms. The investment policies of these funds are clearly described in their prospectus and most are solely focused on achieving the greatest return within certain parameters of risk. If an employee chooses to invest in a socially-driven fund, they may do so without risking any other employee's investment returns or exposing the government, and taxpayers, to any additional liability.

While few states have adopted defined-contribution plans, one area of the public sector where defined-contribution systems have taken root is academia. Many higher education faculty and administrative employees currently utilize defined-contribution plans, such as those offered by the financial services company, TIAA. These plans have proven highly successful. In Illinois, a state that is on the verge of having its bond rating reduced to junk level, the TIAA defined-contribution plans have recently enjoyed the highest possible credit rating from all four credit rating agencies.⁷

Keeping promises to current retirees and workers is of paramount concern, but this can best be accomplished by changing public pension plans for future employees. Moving away from a defined-benefit pension system

caps new liabilities that a state or local government is accruing. Once these pension liabilities are capped, the state or city can then begin the process of paying down debts while still providing sustainable retirement assistance to government workers.

The Importance of Proper Plan Management

Even if reforms are made and public pension systems are put on the path toward long-term financial solvency, there remains the crucial task of ensuring pension systems are managed properly. This means getting politics out of pension policymaking. Switching from a defined-benefit model to a defined-contribution model is one of the most effective ways state and local governments can safeguard pension plans from political manipulation. For those that stop short of a full transition to defined-contribution plans, state and local governments must carefully police state pension systems to protect against cronyism.

This publication explains the many forms of pension fund cronyism and provides academic research and case studies that demonstrate the magnitude of the resulting financial losses. It then discusses several reforms states and cities can make to get politics out of pensions. These reforms include stronger fiduciary standards, increased financial transparency and reforms to pension board composition and governance.

No state is unaffected by the public pension crisis. Unfunded liabilities are mounting and the problems are becoming more difficult to ignore. This is no time for pension trustees to be sacrificing investment returns for politics. State and local officials must examine the

management of their pension funds for cronyism and enact the reforms necessary to stop it. By putting an end to pension fund cronyism, policymakers can help their public pensions begin the process of financial recovery.

Weak Fiduciary Standards Enable Pension Fund Cronyism

Trustees of both public and private pension funds must adhere to fiduciary standards that require prudent management of pension funds. In the private sector, pension plans must conform to the strict fiduciary responsibilities outlined in the Employee Retirement Income Security Act of 1974, better known as ERISA. However, public plans are not subject to ERISA. Instead, public pension trustees derive their fiduciary responsibilities from multiple sources, including state constitutions, statutes, judicial opinions and pension board by-laws. These fiduciary responsibilities vary considerably from state to state and tend to be far less rigorous than what ERISA requires of private-sector trustees.⁸ It is these weak fiduciary standards governing public pension trustees that have enabled pension fund cronyism to become widespread in America today.

Perhaps the most important fiduciary provision governing public pension trustees is the prudence standard, the level of care a fiduciary must demonstrate as they manage the pension fund. Most states have adopted a “prudent person” standard, while others have adopted a “prudent investor” standard.⁹ The specific language adopted by states varies, but generally the former requires the prudence exercised by an ordinary citizen investing in his own account, while the



For additional information regarding the many benefits of adopting a defined-contribution pension model, the authors recommend the ALEC publication, *Keeping the Promise: State Solutions for Government Pension Reform*. In the study, former Utah Senator Dan Liljenquist lays out many possible solutions for the structural problems facing state pension systems. At its core, however, any solution must honor the promises that have already been made to current retirees and employees; changes should only apply to future employees, with an option for current employees to enter the new system voluntarily.

Download your free copy at <https://www.alec.org/publication/keeping-the-promise-state-solutions-for-government-pension-reform/>

TABLE 2: STATE OVERVIEW OF SELECT FIDUCIARY PROVISIONS

| FIDUCIARY ELEMENT | STATES ADOPTING |
|--|-----------------|
| Prudence requirement | 50 |
| Exclusive purpose of providing benefits | 27 |
| Solely in the interest of participants | 26 |
| Reasonable administrative expenses | 22 |
| Diversification of investments | 27 |
| Economically targeted investments, first prudent | 8 |

Source: The Pew Charitable Trusts

latter requires the prudence exercised by an investment professional.¹⁰ The prudent investor standard is tougher and expects a greater level of prudence from the fiduciary when making plan investment and management decisions. Considering the number of workers relying on their investment decisions and the interest of all taxpayers in seeing their money wisely managed, states should adopt the prudent investor standard for public pension trustees to offer workers, retirees and taxpayers the most protection.

Fiduciaries are also subject to other provisions. Examples include the duty to act in the sole interest of plan participants, diversify the investment portfolio and incur only reasonable administrative expenses. States should enact these additional requirements as each of these provisions strengthens a state's fiduciary standards. When adopted, each should be written in a way that leaves no doubt about what is expected of a trustee as they invest and manage the fund.

The Pew Charitable Trusts recently surveyed states' fiduciary provisions, comparing them to the Uniform Law Commission's Uniform Management of Public Employee Retirement Systems Act (UMPERSA). UMPERSA is a model law that seeks to modernize, clarify and make uniform the rules governing the investment and management of public retirement systems' assets. It contains several model fiduciary provisions that may improve a state's existing fiduciary provisions for pension trustees.

Pew's research included six of the most important fiduciary provisions for pension trustees. The table shows how many states have statutorily-codified fiduciary provisions for pension trustees that meet UMPERSA's standards.¹¹

Strong fiduciary standards are important because when fiduciary standards are weak, trustees have latitude to engage in pension fund cronyism. In effect, they are put on a "long leash," permitted to invest in local pet projects, reward supporters with pension fund investments and pursue political agendas by investing in industries they like and divesting from those they don't, regardless of losses to fund performance. On the other hand, when fiduciary standards are strong, trustees have clear and specific directions to control them. They are put on a "short leash," required to invest in a manner that secures the best returns for plan participants. Similar to the Uniform Law Commission's UMPERSA, The ALEC Task Force on Tax and Fiscal Policy has developed its own recommendations to strengthen states' fiduciary provisions for public pension funds in its Retirement System Board of Trustees and Employees Prudent Investor Act.¹² More information on this key model policy can be found in Appendix B.

Finally, accountability mechanisms should be established by states to ensure compliance with fiduciary responsibilities. First, states should require transparency in financial reporting for public pension plans that allows lawmakers, pensions boards and average citizens to see all plan investments and evaluate their performance. In addition, states should reform pension boards to serve as better watchdogs of pension funds. Research suggests certain types of pension board members are more likely to overweight local investment and provide political kickbacks.¹³ Therefore, states should consider reforming the composition of pension boards and adopt board procedures to eliminate opportunities for cronyism. These transparency and pension board reforms will help to hold board members accountable.

Chapter 2

Economically Targeted Investments

Economically targeted investments (ETIs) are local investments “that have been selected for their economic or social benefits in addition to the investment return to the employee benefit plan.”¹⁴ ETIs are a type of cronyism because they favor local investments over broad-based investing, even if it produces inferior returns. They seek to serve government-defined economic and social goals at the expense of pension fund performance. ETIs may be pursued by individual fund managers or pension boards who support them, acting under weak fiduciary standards that permit them to do so, or endorsed by state and local governments as official policy for pension investments. It is worth noting that some of the states that permit ETIs have specific limits on the percentage of the total portfolio that can be invested in ETIs, indicating recognition of the harm they do to pension performance.¹⁵

To be clear, not all local investments are ETIs. If a public pension fund, looking at the entire universe of investment options determines a given investment offers the best risk-adjusted return ratio, and that investment happens to be local, this is not an ETI, and is an appropriate investment. However, given the relatively small percentage of global investment opportunities that exist within any particular state or municipality, local investments should make up a very small percentage of a pension fund’s total portfolio if a fund manager is acting solely in the interest of securing the best possible long-term, risk-adjusted returns. Unfortunately, when fund managers, pension boards and governments consistently favor local investments, pension returns suffer, and taxpayers must pay the bill.

ETIs Lead to Significant Lost Returns

The theory behind ETIs is that pension funds should favor local investments, even at the cost of investment returns, because doing so will allegedly help the local

economy thrive or provide some social benefit. Governments and local initiatives that subscribe to this theory often pressure pension funds to try to stimulate local economic development or pursue social goals by financing major projects with pension fund investments – projects they may not wish to fund with taxpayer dollars. Since trustees have little to lose if the fiduciary standards governing them permit or encourage ETIs, most of the risk is squarely upon pensioners, whose retirement benefits are put at risk, and taxpayers, who may have to ultimately make up the loss of returns caused by inferior investments.

While some may believe this is an acceptable trade-off, the loss of investment returns can be dramatic. Research indicates that ETIs consistently underperform broad-based investments. Regression analysis of the effects of various types of investments on pension fund performance has found underperformance is especially significant among two common forms of ETIs, local real estate and venture capital investments. Local real estate investments are predicted to deliver returns 7.90 percentage points lower compared to real estate investments generally. Local investments in venture capital are predicted to deliver returns 3.55 percentage points lower relative to venture capital investments generally.¹⁶ These are significant losses for any pension fund to sustain and are only compounded over time as any foregone returns in the present could be reinvested to gain further returns down the road.

Another study utilizing regression analysis to evaluate the performance of ETIs was conducted by Yale Professor Roberta Romano. She found, “Even when such investments have not been a total loss, they have often significantly underperformed alternative projects with far less risk. Accordingly, such investments do not meet prudential fiduciary standards.”¹⁷ The study cites some specific examples which highlight the failure of these investments. One such instance was the loss of more than \$100 million after Kansas’ pension fund invested

heavily in local businesses, including a steel mill that shut down and a savings and loan corporation that failed. Another example cited in the study was a GAO evaluation of five local housing investments undertaken by public pension funds that found each of those projects' returns were "either lower than comparable benchmarks, or the GAO could not determine the project's risk level."¹⁸

This significant underperformance in ETIs means the more pension funds invest in ETIs, the lower their returns are likely to be, making it less likely these funds will meet their assumed rate of return. State and local governments put their pensioners and taxpayers at risk by trying to spur the local economy or pursue social goals at the expense of pension investment returns.

Alabama Bets Big on ETIs

To further examine the effects ETIs can have on public pension funds, the case study of Alabama is instructive, since the state may have the highest allocation of ETIs in the nation.¹⁹ The Retirement Systems of Alabama (RSA) manages a variety of local and state funds, including three statewide government defined-benefit pension plans: The Teachers' Retirement System (TRS),

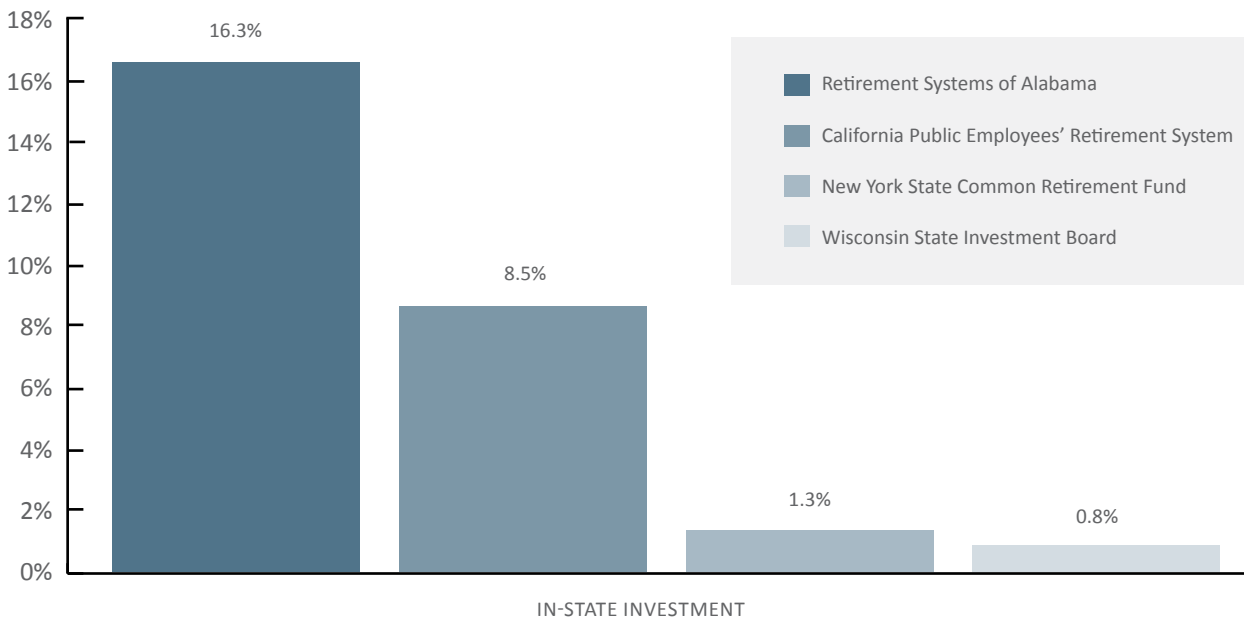
the Employees' Retirement System (ERS) and the Judicial Retirement Fund (JRF).²⁰

All of these plans face fiscal challenges. This appears to be due in part to the RSA's policy of allocating a significant share of its portfolio to ETIs and the dramatically inferior returns these investments tend to generate compared to other investments. This investment practice has continued for many years, in part, due to Alabama's weak fiduciary standards for public pension trustees, combined with RSA's lack of financial transparency and poor oversight from RSA's pension boards.²¹

Overview of Alabama's ETIs

According to The Pew Charitable Trusts, Alabama has "arguably the largest ETI allocation in the country."²² At the end of fiscal year 2014, an estimated 11.5 percent of the RSA portfolio was invested in private equity or private placement investments with Alabama headquartered businesses, while 4.8 percent of RSA's portfolio was invested in Alabama real estate.²³ Together, this represented approximately 16 percent of RSA's total portfolio being invested in in-state interests. Since almost all in-state investments are ETIs, in-state investments can be used as a proxy for measuring ETIs.

FIGURE 2: 2014 IN-STATE INVESTMENT AS PERCENT OF TOTAL INVESTMENT



Source: The Pew Charitable Trusts; State Street Investment Analytics Summary of Performance ending September 30, 2014, as provided by RSA; CalPERS for California Annual Report 2014; Investing in New York State, September 2014; and State of Wisconsin Investment Board

Figure 2 demonstrates the dramatic disparity between Alabama’s in-state pension investments and those of other states. State pension programs with public data available on their ETIs include the California Public Employees’ Retirement System (CalPERS), New York State Common Retirement Fund and Wisconsin State Investment Board. Although CalPERS also has significant in-state investment at 8.5 percent of assets, Pew notes that the large amount of in-state investments for CalPERS are “driven by the size and volume of business activity in the state.”²⁴

Poor Performance of ETIs in Alabama

RSA’s ETIs are concerning, due to their large volume and poor performance. RSA publishes limited information regarding the performance of its ETIs. However, what is available indicates RSA’s ETIs have not performed well and are a major contributor to the state’s pension funds significantly underperforming the national average return for similar funds over the last 10 and 20-year time horizons. Table 3 shows how RSA’s portfolio has performed compared to the State Street and Wilshire Trust Universe Comparison Service’s (TUCS) medians. Both are considered industry benchmarks for the performance of pension assets. RSA’s investment underperformance is part of the reason the funding level of the state’s pensions has been on the decline.

TABLE 3: TEN-YEAR AND TWENTY-YEAR RETURNS AS OF SEPTEMBER 30, 2014

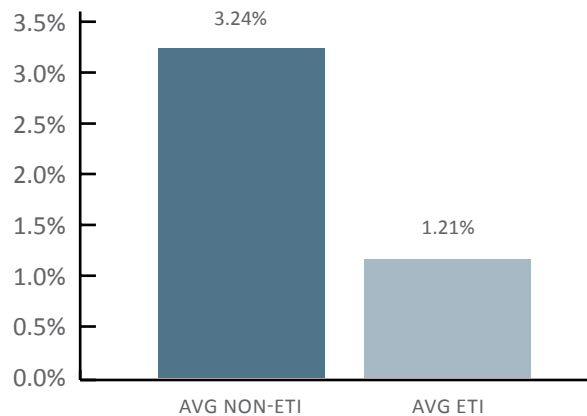
| | 10-YEAR GROSS OF FEES | 20-YEAR GROSS OF FEES |
|--|-----------------------|-----------------------|
| TRS | 6.43% | 7.51% |
| ERS | 6.15% | 7.32% |
| TOTAL RSA | 6.32% | 7.43% |
| STATE STREET MEDIAN | 7.28% | |
| TUCS MEDIAN | 7.35% | 8.48% |
| STATE STREET 75TH PERCENTILE (BOTTOM QUARTILE) | 6.71% | |
| TUCS 75TH PERCENTILE (BOTTOM QUARTILE) | 6.87% | 8.06% |

Source: The Pew Charitable Trusts; State Street Investment Analytics Summary of Performance ending September 30, 2014, as provided by RSA; Wilshire TUCS

ETIs Weigh Down RSA Investment Returns

RSA financial documents for the year ending September 30, 2014, the only year where public data is currently available for individual asset performance, show that Alabama’s ETIs have significantly underperformed their non-ETI counterparts. Unfortunately, RSA does not provide any longer-term performance data for these individual assets. Still, comparing the performance of ETIs with non-ETIs demonstrates their dramatic difference in performance and suggests ETI returns are unlikely to match non-ETI returns in the long term.

FIGURE 3: ALABAMA ETI VS. NON-ETI ONE-YEAR PERFORMANCE, YEAR ENDING SEPTEMBER 30, 2014



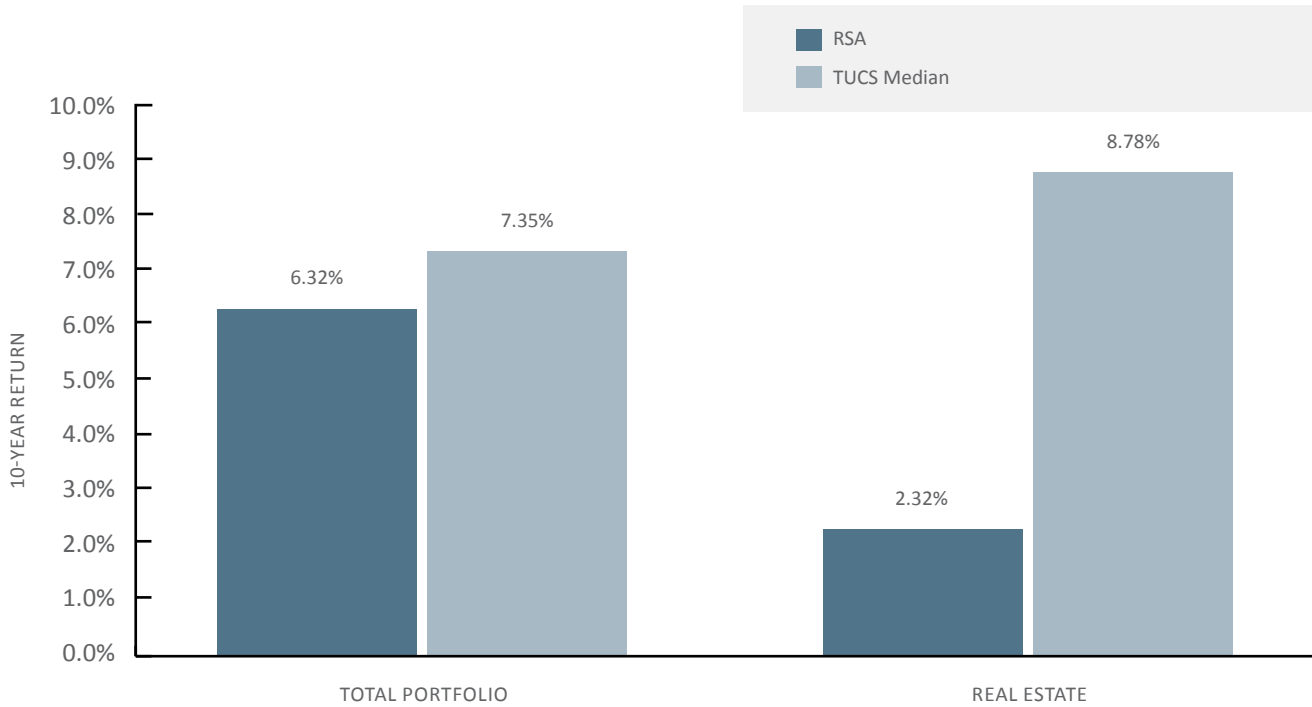
Source: Authors’ calculations, based on RSA data for preferred and private equity, private placements and real estate

As Figure 3 demonstrates, Alabama’s ETIs returned 1.21 percent for the year ending September 30th, 2014, while their non-ETIs returned 3.24 percent. In other words, RSA’s ETIs returned less than half of what their non-ETI counterparts returned. While it is only one year’s performance, the dramatic difference in returns indicates just how much RSA is losing by investing in ETIs.

RSA’s Real Estate Investments: A Key Contributor to Poor Performance

While many factors influence RSA’s poor performance, RSA’s local real estate portfolio is a key contributor. About half of RSA’s total real estate portfolio consists of in-state properties. A recent news article from an

FIGURE 4: 10-YEAR PERFORMANCE GROSS OF FEES, YEAR ENDING SEPTEMBER 30, 2014



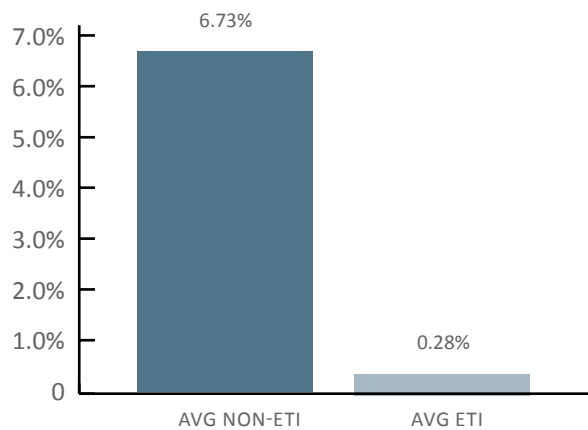
Source: The Pew Charitable Trusts; State Street Investment Analytics Summary of Performance ending September 30, 2014, as provided by RSA; Wilshire TUCS

Alabama investigative reporter citing data from September 2014 for ERS and TRS indicates that RSA’s Alabama real estate properties performed well below the RSA’s targeted eight percent rate of return over the past three years.²⁵

Figure 4 illustrates the poor performance of RSA’s real estate investments and how they have affected total portfolio performance.²⁶ The figure compares RSA’s 10-year performance, gross of fees, with the TUCS median. While the 10-year TUCS median for real estate was 8.78 percent, RSA’s real estate investments only achieved a disappointing 2.32 percent rate of return.²⁷

While these are disappointing returns for RSA’s total real estate portfolio, the 10-year performance for RSA’s local real estate alone may be far worse. The overall real estate portfolio is buoyed by strong returns from a New York City office building RSA invests in.²⁸ This single property makes up about half of RSA’s total real estate portfolio. Comparing the in-state (ETI) to out-of-state (non-ETI) real estate returns for the past year, the only time horizon for individual asset returns RSA provides, shows how poorly RSA’s local real estate investments have fared.

FIGURE 5: ALABAMA ETI REAL ESTATE VS. NON-ETI REAL ESTATE ONE-YEAR PERFORMANCE, YEAR ENDING SEPTEMBER 30, 2014



Source: Authors’ calculations, based on RSA real estate data

RSA’s non-ETI real estate, which appears to consist solely of the New York property, returned a reasonable 6.73 percent, while RSA’s ETI real estate, consisting of

multiple local investments, returned a dismal 0.28 percent. This means that for the year ending September 30, 2014, RSA's non-ETI real estate provided a return more than 24 times greater than RSA's ETI real estate.

RSA's poor real estate performance contrasts with the expectations set by Alabama Finance Director Bill Newton. According to Newton, meeting the target eight percent rate of return is, "the most important function of our investing approach. Everything else is not as important."²⁹ When RSA investments, such as real estate, fail to meet their own investment benchmarks, the financial wellbeing of retirees is on the line. As Dr. Henry Mabry, former Executive Secretary of the Alabama Education Association, explained:

"The facts point to losses caused by alternative investments such as real estate. Over the past five years, almost \$700 million have gone down a rat hole thanks to these 'investments.' To put it in perspective, \$700 million is more than twice what is spent on school transportation for the whole state or over 12,000 teacher units a year...Economic development of the state is great and wonderful, but economic development at the expense of active and retired TRS members does not pass muster."³⁰

RSA's Other ETIs Lead to Significant Losses

Not only has RSA's ETI real estate performed poorly, but RSA's other risky ETIs have put workers, retirees and taxpayers at risk. One example of a less than prudent ETI is the troubled firm Signal International. The Alabama-based oil repair and shipbuilding firm engaged in labor trafficking in 2006. The company enticed Indian guest workers to come to the United States to repair oil rigs, promising them they could receive green cards. In reality, workers had to pay \$1,050 per month to live in guarded labor camps.³¹

In 2008, RSA started investing in Signal, eventually owning up to 47 percent of the troubled company.³² According to September 2014 data, both ERS and TRS invested \$21 million in Signal, but these investments suffered a loss of 11 percent over the past three years.³³ Regardless of the poor rate of return, ERS subsequently loaned Signal \$24 million and TRS loaned Signal \$49 million.³⁴

In 2015, Signal agreed to pay \$20 million to settle lawsuits over labor trafficking that occurred in 2006. Bradley Myles, chief executive of the anti-human trafficking nonprofit, the Polaris Project, called the Signal lawsuits "one of the largest cases of labor trafficking in modern times."³⁵ Shortly after settling the lawsuits, Signal filed for Chapter 11 bankruptcy. According to the bankruptcy filing, Signal had, at that time, more than \$100 million in debt and less than \$50 million in assets.³⁶ In November of 2015, RSA purchased the bankrupt company for an estimated \$90 million.³⁷ RSA used the assets to start a new company, called World Marine.³⁸

In another case, RSA lost millions of dollars in a deal with National Alabama, a subsidiary of National Steel Car. In 2007, RSA loaned \$350 million to National Steel Car in a deal with its Chairman and CEO, Gregory Aziz. Aziz promised to build a railcar manufacturing facility in the state that would employ more than 1,800 Alabama citizens.³⁹ Instead, the results were quite different, as a Business Alabama article explains:

"Just before the recession hit in 2007, National Alabama — subsidiary of a Canadian rail car maker — built the plant to make rail cars for the U.S. freight market. When the bust came, those who helped finance the plant in support of jobs for the Shoals — chiefly the Retirement Systems of Alabama — were left with a plant instead of their expected return on investment."⁴⁰

Under Aziz, employment at the manufacturing facility never reached even 200 employees.⁴¹ Furthermore, Aziz later claimed that he would need an additional estimated \$400 million to complete the facility.⁴² RSA went on to spend another \$215 million to complete the project and took ownership of 100 percent of the stock in the facility from Aziz. The Alabama Securities Commission charged Aziz with 11 counts of securities fraud and arrested him.⁴³ Eventually the commission dropped the charges after Aziz agreed to pay RSA back \$21 million. Currently, RSA owns the property, with an estimated 1,150 citizens working at the facility.⁴⁴

Alabama's Weak Fiduciary Standards Enable ETIs

Alabama's weak fiduciary standards are one of the main reasons RSA has been able to dedicate such a

TABLE 4: COMPARISON OF ALABAMA FIDUCIARY PROVISIONS WITH UMPERSA FIDUCIARY PROVISIONS

| FIDUCIARY ELEMENT | STATES ADOPTING | ALABAMA STATUS |
|--|-----------------|----------------|
| Prudence requirement | 50 | Yes |
| Exclusive purpose of providing benefits | 27 | Yes |
| Solely in the interest of participants | 26 | No |
| Reasonable administrative expenses | 22 | No |
| Diversification of investments | 27 | No |
| Economically targeted investments, first prudent | 8 | No |

Source: The Pew Charitable Trusts

large percentage of its portfolio to ETIs over the years. The Pew Charitable Trusts recently reviewed Alabama’s fiduciary provisions and compared them to the fiduciary provisions recommended in the aforementioned Uniform Law Commission’s Uniform Management of Public Employee Retirement Systems Act (UMPERSA). Pew compared Alabama’s fiduciary provisions for pension trustees to six of the most relevant fiduciary provisions contained in UMPERSA. As the table shows, they found only two of Alabama’s statutorily-codified fiduciary provisions meet the standards set by UMPERSA.⁴⁵

While Alabama has adopted a prudence requirement, it is the weaker prudent person standard as opposed to the stronger prudent investor standard, subjecting the investment decisions of the state’s pension trustees to less scrutiny. To its credit, Alabama’s Constitution requires that RSA funds are held for the “exclusive purpose of providing benefits.” However, this has not stopped RSA’s pension boards from investing in ETIs, the purpose of which is not exclusively to provide retirement benefits, but instead to encourage economic development and pursue social goals.

Regarding the management of pension funds for the sole interest of plan participants, Alabama has some Constitutional and statutory language requiring pension funds are held “as in trust” and the Secretary-Treasurer is required to invest in the best interest of the funds. In addition, the Alabama Supreme Court has ruled the trust must be held “solely in the interest of the beneficiaries.” However, Pew research indicates that this provision is not explicit within Alabama statute and the state’s Supreme Court has not rigorously enforced this fiduciary provision found in its ruling.

Furthermore, language requiring the Secretary-Treasurer to invest in the fund’s best interest is ambiguous and has not stopped extensive investment in ETIs.

When it comes to administrative expenses, Alabama’s Constitution provides pension funds may be used only for benefits, refunds and expenses that are “diligently and honestly” deemed to be “current and necessary.” This vague language falls short of UMPERSA’s standards in regards to reasonable administrative expenses.

The state has some statutory requirements for a diversified portfolio and RSA investment policies call for this as well. However, Pew research indicates Alabama’s statutory requirements do not meet UMPERSA’s standards for diversification, and to the extent RSA’s own investment policies do, these are not properly codified in state statute.

Particularly relevant for Alabama, the state has not adopted UMPERSA’s standard for economically targeted investments. This standard allows fiduciaries to consider collateral benefits created by an investment in addition to the investment’s returns only if the trustee determines the investment providing these benefits would be prudent even without the collateral benefits. The state has no specific statutory language regarding ETIs, and RSA investment policies only mandate that ETIs have comparable returns to similar investments. While this language may seem reasonable, RSA is responsible for adhering to its own investment policies and, as has been demonstrated, the underperformance of ETIs has not stopped RSA from continuing to invest heavily in them.

Opaque Pension Reporting Conceals Performance of RSA's ETIs

Obtaining the full picture of RSA's ETIs is difficult, due to the lack of detailed reporting and transparency. RSA does not report individual asset returns for all of its investments, and provides only one year of returns for those they do. The fact that none of RSA's financial documents report ETIs as a distinct category and give their cumulative performance means the only way to get a picture of how ETIs have fared in RSA's portfolio is to piece together the limited reporting on individual investment returns across multiple categories, isolating the Alabama-based investments and aggregating their performance. While comparisons of ETI and non-ETI performance are possible, reporting ETIs as a distinct category would allow easier comparisons of their performance with the rest of the portfolio.

RSA could also improve its transparency by reporting longer time horizons for investment returns. This goes for both individual assets and asset classes. While RSA only reports one year returns for individual assets, RSA typically reports time horizons for asset classes between one month and 10 years. Reporting performance over longer time horizons for both would align with the long-term nature of pension liabilities and allow for greater perspective of how various investments have performed over the years. This would also allow more comprehensive comparisons between ETI and non-ETI performance. The fact that RSA provides only one year returns for individual assets may indicate a deliberate effort to obscure the long-term underperformance of ETIs in the portfolio.

RSA's lackluster pension reporting was noted by a recent Mercatus Center study, *Alabama at the Crossroads: An Economic Guide to a Fiscally Sustainable Future*, which explains,

*"There is a stark difference between investment reports from private companies, such as TIAA-CREF, and those coming from the RSA. In addition, little information is provided to the public on the performance of the RSA's private placement portfolio year to year or on the types of investments undertaken."*⁴⁶

Even with public information requests, the RSA has not been transparent. Since RSA comprehensive annual financial reports (CAFRs) state that more information is available to the public upon request, researchers from the Mercatus Center at George Mason University reached out to RSA on September 8th, 2015 and requested information. When RSA did not respond, the Mercatus Center then filed a formal Alabama Public Records Request on November 9th, 2015.⁴⁷ As of the time of this publication, RSA has still not responded.

Alabama's Poor Pension Board Composition and Governance Enables ETIs

Cronyism within the RSA may be due to its poor pension board composition. The RSA's two Boards of Control lack diversity in their representation and primarily consist of plan participants. Furthermore, board members are not statutorily required to have any financial expertise. The TRS Board of Control consists of three ex-officio members and 12 elected plan participants, including 10 current employees and two retired employees.⁴⁸ The ERS/JRF Board of Control consists of four ex-officio members and nine plan participants, including three appointees from the governor and six elected plan participants.⁴⁹ Notably, unlike many other states' pension boards, Alabama's Boards of Control have no public representatives.⁵⁰

Some may believe this does not represent a problem. After all, shouldn't plan participants, whose own retirement is tied to the pension plan, want to see the highest investment return possible to provide for a better funded pension? Unfortunately, evidence indicates board members, including plan participants, often have other priorities. Statistical analysis of pension investments indicates plan participant representatives tend to overinvest in local investments as a share of their total portfolio, despite their tendency to underperform.

According to a recent Hoover Institution study, a 10 percentage point increase in the proportion of participant-elected board members leads to a 1.34 percentage point higher predicted allocation to in-state investments. Further, a 10 percentage point increase in the proportion of state-appointed board members leads to a 2.48 percentage point higher predicted allocation to in-state investments. Lastly, a 10 percentage point increase in the proportion of state ex-officio board

TABLE 5: ALABAMA PENSION BOARDS' COMPOSITION COMPARED TO THE AVERAGE PENSION BOARD

| | TOTAL NUMBER OF BOARD MEMBERS | SHARE OF BOARD THAT IS | | | |
|--------------|-------------------------------|------------------------|-----------|----------------|-----------------------|
| | | EX OFFICIO | APPOINTED | MEMBER ELECTED | PUBLIC REPRESENTATIVE |
| ERS | 13 | 31% | 23% | 46% | 0% |
| TRS | 15 | 20% | 0% | 80% | 0% |
| AVERAGE PLAN | 9.1 | 17% | 20% | 35% | 28% |

Source: *The Pew Charitable Trusts; Andonov, Bauer, Cremers, Pension Fund Asset Allocation and Liability Discount Rates, June 2015*

members leads to a 1.31 percentage point higher predicted allocation to in-state investments. This analysis also finds that in-state overweighting by participant-elected, state-appointed and state ex-officio board members is even stronger for real estate and venture capital investments.⁵¹

So why would these types of board members support so much local investment, given the poor returns, relative to other investments? One possible explanation could be they lack the financial expertise or information necessary to appreciate the negative effect these investments have on overall pension fund performance. As previously discussed, states like Alabama do not report the performance of in-state investments as a distinct category, making it difficult to isolate exactly how these investments perform relative to the rest of the portfolio. Another possible explanation is that these types of board members are motivated to invest pension dollars in local businesses and other interests that have supported them. Yet another explanation may be that some board members are politically motivated to invest in local projects that promise to create jobs and generate economic growth for which the board member can take credit.

Whatever their motivations are, the Alabama Boards of Control have continued to permit a large share of the state's pension funds to go to ETIs. The boards have elected Dr. David Bronner Secretary-Treasurer for the past four decades and granted him essentially unchecked authority over all investment decisions, power he has used to direct a dramatic share of pension funds to ETIs.

While all members of the Boards of Control serve as trustees, the Secretary-Treasurer submits formal recommendations on pension investments.⁵² These recommendations need not be approved by the full board. Instead, a three person Investment Committee, elected by and composed of board members in each Board of Control, reviews all investment recommendations made by the Secretary-Treasurer.⁵³ In order for a proposal to move forward, the Secretary-Treasurer only needs approval from two of the three Investment Committee members.⁵⁴ Worse still, for years Bronner cast two of the three Investment Committee votes needed to approve his own investment recommendations.⁵⁵ This was done through proxy voting, where at least two Investment Committee members delegated their vote to Bronner.

After years of unchecked authority, the ERS/JRF Board of Control voted in 2013 to stop the proxy vote practice by requiring Investment Committee members to personally sign off on every investment recommendation from Bronner.⁵⁶ However, the board still relies on the Investment Committee to approve all investment recommendations. It is unclear if the TRS Board of Control permits proxy voting.

Repeated investment decisions that failed to pay off have led to increased scrutiny by state officials. Nonetheless, Bronner has remained Secretary-Treasurer for nearly half a century. Bronner himself attributes his survival to favorable board composition as reported in a recent *Governing* magazine article:

“80 percent of the board members for the teacher’s fund are elected by participants in the system. As long as Bronner keeps retirees and current workers happy, elected officials have limited options for telling him what to do. When asked why he’s never been fired with so many people after him, Bronner is frank: ‘Because,’ he says, ‘I’d snuggle up to the teacher board. [Otherwise], the politicians would have nailed me decades ago.’”⁵⁷

The Results of Alabama’s Pension Investment Model

Economically targeted investments have negatively impacted Alabama’s pension fund performance. For several years, the RSA has had a target of eight percent rate of return for ERS, TRS and JRF. However, according to the RSA’s CAFR for the period ending September 30, 2015, ERS only achieved a 5.43 percent rate of return, TRS, 5.41 percent, and JRF, 5.47 percent over the past decade.⁵⁸

These lower than expected returns have led to a precipitous decline in the plans’ funded ratios. According to official RSA accounting, based on RSA’s assumed rate of investment return, from 1997 to 2014, the ERS plan has declined from 111 percent funded to 63 percent funded. Meanwhile, the TRS plan has plummeted from 105 percent to 68 percent.⁵⁹ Together, these plans represent \$15 billion in unfunded liabilities, assuming RSA manages to meet its high predicted rate of investment return every year.

However, most financial professionals believe such high assumed rates of return are unlikely to be realized in the coming years. The ALEC Center for State Fiscal Reform study, *Unaccountable and Unaffordable 2016*, examines state pensions through the lens of a risk-free rate of return, as is recommended by the Society of Actuaries’ Blue Ribbon Panel. When Alabama’s pensions are examined through this more realistic valuation, the pension funding gap is much larger than reported in official state documents. In fact, Alabama’s pensions are merely 30 percent funded, while the state’s unfunded pension liabilities total an estimated \$75 billion.⁶⁰ For comparison, the state only collects an estimated \$10 billion per year in taxes.⁶¹ Divided evenly among all citizens, the price tag for Alabama’s unfunded liabilities is \$15,427 for every man, woman and child in the state.

ETIs Put Workers and Taxpayers at Risk

As the Alabama case study demonstrates, ETIs lead to lower returns for a state’s overall portfolio and put pensioners and taxpayers at risk. States should invest pension funds with the sole purpose of maximizing returns, rather than pursuing state economic and social benefits at the expense of worker’s retirement security. By adopting reforms to strengthen fiduciary responsibilities, enhance transparency and improve pension board diversity and management, lawmakers can keep their pension promises to retirees and workers without the need for difficult budget cuts or economically damaging tax increases.

Solutions for Fighting ETI Cronyism

- Trustees should manage the pension fund for the exclusive purpose of providing pension and other post-employment benefits to plan participants and beneficiaries. Other post-employment benefits should be defined to include healthcare and other benefits outlined in the pension plan and not the limited, tangential benefits local economic development and social projects may provide.
- Trustees should manage pension funds solely in the interest of plan participants and beneficiaries as a whole, impartially. Fulfilling this provision should require pursuing the best long-term, risk-adjusted returns for the pension fund.
- All investments, whether in-state or out-of-state, should be evaluated equally, being held to the same risk-return standards, without favoritism for local investments. States should not use pension investment funds to make in-state investments in a misguided attempt to give special preference to certain companies or industries based on political agendas.
- States and municipalities should dispense with any statutory language encouraging or permitting economically targeted investments which invariably reduce pension fund returns and increase investment risk.
- Reporting of investments should be done separately by asset class and by individual assets so it can be easily determined how investments are performing and increase accountability for fund managers.⁶²
- Pensions should report the fund's overall performance, asset class performance and individual asset performance over a 20 or more-year time horizon to show how assets have performed over time and allow stakeholders to see how actual performance has compared with the assumed rate of return.⁶³
- Pension boards should be diversified to provide representation for all stakeholders, including taxpayers. This will prevent any special interest group from gaining too much power on the board and using pension funds to overweight local investments.
- Pension boards should have a certain number of seats dedicated to independent financial professionals that serve as public representatives.

Chapter 3

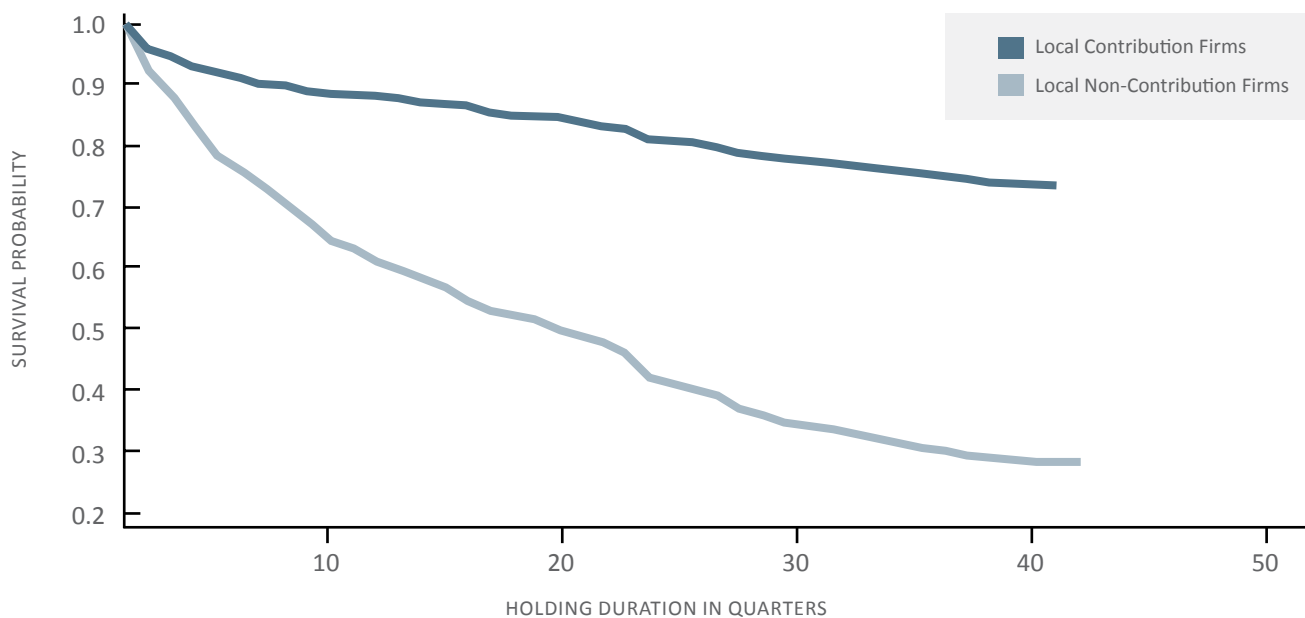
Political Kickbacks

Another common variety of pension fund cronyism occurs when kickbacks, in the form of pension investment funds, are directed to politically connected businesses and other interests. Sometimes, these political kickbacks come from elected board members who reward campaign supporters by investing pension funds in their businesses or other interests. Other times, ex officio and appointed members may feel there are political gains to be had by investing pension funds in popular local businesses to create or retain jobs and have a local, visible accomplishment for which they can take credit. Whatever the motivation, making investment decisions for personal political gain lowers pension returns, resulting in pensions that are less secure and taxpayers facing a greater risk of having to bail out pension funds in the future.

Political Bias in Public Pension Funds

While pension trustees should be considering all investment opportunities equally and impartially, they are frequently confronted by local businesses lobbying for pension fund investments. Research indicates this lobbying has significantly affected trustees' investment decisions. In a paper forthcoming in the *Journal of Financial Economics*, the authors find public pension funds overweight local firms in their portfolio by 26 percent, relative to a diversified, market portfolio. Further, estimates indicate public pension funds overweight local firms that make political contributions to local politicians by 23 percent, and overweight local firms that have significant lobbying expenditures by 17 percent.⁶⁴

FIGURE 6: PANEL A - POLITICAL CONTRIBUTIONS



Source: Bradley, Daniel, Pantzalis, Christos and Yuan, Xiaojing, *The Influence of Political Bias in State Pension Funds*

In addition, regression analysis indicates, other factors held constant, local contribution bias and local lobbying bias have statistically significant and negative effects on fund performance.⁶⁵ For example, a typical amount of political bias in a \$21 billion state pension fund (the average size based on their sample), is predicted to cost the fund between \$210 million and \$269 million per year in lower investment returns. Of course, funds with larger portfolios would experience even greater losses, as would those with a higher level of political bias. Simply put, the more that pension funds make investment decisions under the influence of political contributions and lobbying from local firms, the lower their returns will be.

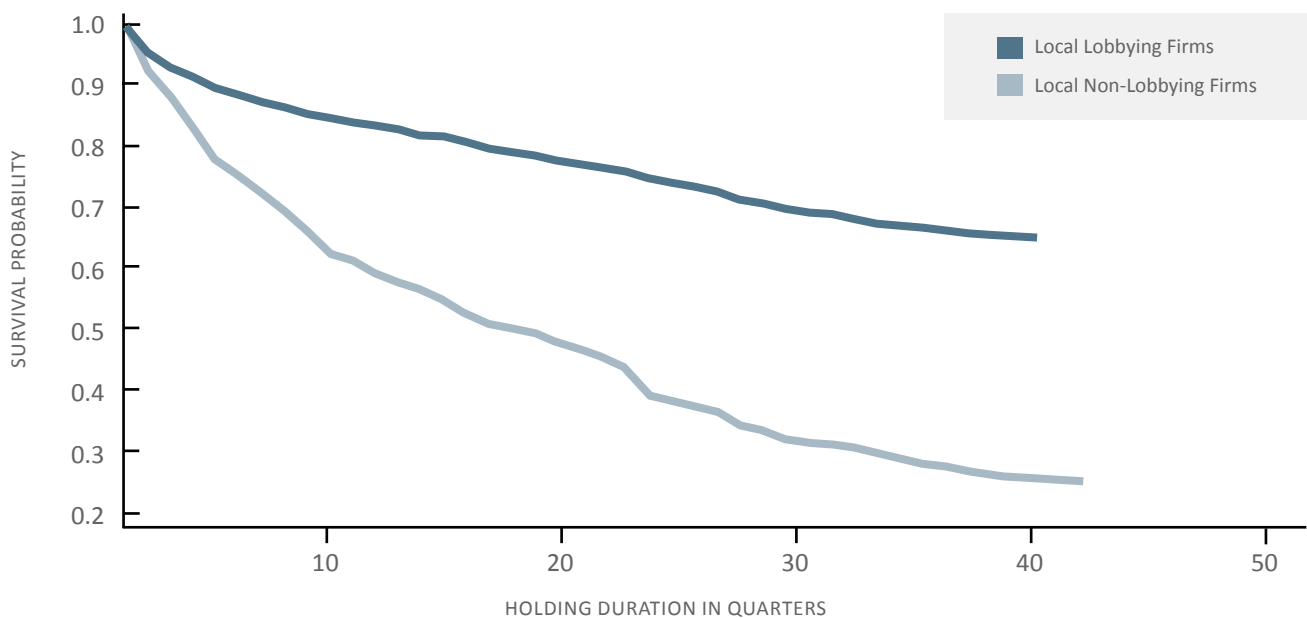
Furthermore, the same study found pension funds tend to retain investments for a far longer period of time for firms that engage in political contributions and lobbying compared to those firms that do not. As Figures 6 and 7 indicate, the difference is shocking. Figure 6 shows that after five years, funds were nearly twice as likely to retain investments in firms that gave political contributions than in those that did not. After 10

years, the local firms that gave political contributions had nearly three times better odds of being retained by the fund than those that did not.

The results were similar for lobbying. As Figure 7 shows, after five years, pension funds were nearly twice as likely to retain investments in local firms that engaged in lobbying efforts than in those that did not. After 10 years, investments in local firms engaging in lobbying were nearly three times as likely to be retained.⁶⁶ This demonstrates the significant influence that political contributions and lobbying from local firms have on pension fund investment decisions.

The negative effects of political bias on pension fund portfolios are thus twofold. Political contributions and lobbying efforts by local firms reduce fund performance by overweighting riskier local investments. They also raise the probability that pension funds retain these poorly performing assets for longer periods, compounding the effect of lower returns year after year.

FIGURE 7: PANEL B - LOBBYING



Source: Bradley, Daniel, Pantzalis, Christos and Yuan, Xiaojing, *The Influence of Political Bias in State Pension Funds*

CalPERS Kickbacks

The California Public Employees' Retirement System (CalPERS) is the nation's largest state-administered pension system and has been criticized for cronyist kickbacks over the years. As Steven Malanga explains in a *City Journal* article, CalPERS has made poor investment decisions:

*"CalPERS has also steered billions of dollars into politically connected firms. And it has ventured into 'socially responsible' investment strategies, making bad bets that have lost hundreds of millions of dollars. Such dubious practices have piled up a crushing amount of pension debt, which California residents—and their children—will somehow have to repay."*⁶⁷

Some of this occurred when union leader Charles Valdes, who had no investing experience and twice filed for personal bankruptcy, served as chair of CalPERS's Investment Committee. Valdes made several poor financial decisions, some of which appear to have been politically motivated. During his time as Investment Committee chair, CalPERS consistently granted investment contracts to some of the state's biggest political givers. In addition, Valdes accepted gifts from a fellow board member, Alfred Villalobos, who allegedly spent thousands of dollars trying to influence pension investments. When questioned about his relationship with Villalobos, Valdes invoked the Fifth Amendment 126 times.⁶⁸

One reason Valdes was not replaced as Investment Committee chair sooner was the board's composition, where 6 of the 13 board members were selected by government workers, an arrangement that led to an

increasingly strong union presence on the board.⁶⁹ This allowed Valdes to continue to serve despite his cronyist investments and the loss of returns for CalPERS. Malanga explains, "CalPERS's members, who elect representatives to the fund's board of directors, ignored concerns over Valdes's suitability because they liked how he fought for those plusher benefits."⁷⁰ Even *The New York Times*, usually sympathetic to union causes, noted critics worried the board had become increasingly partisan and doubted CalPERS's ability "to provide for the 1.3 million public employees whose pensions it guarantees."⁷¹

Despite the cronyism, Valdes was allowed to serve on the CalPERS board for 25 years, 13 of which he spent as Investment Committee chair. During his tenure as Investment Committee chair, CalPERS had one of the worst investment records of any public pension fund.⁷² The takeover of CalPERS board serves as a compelling example of the need for accountability in pension investment decisions.

Political Kickbacks Cost Pension Funds

Using pension funds to reward politically connected businesses and interest groups lowers investment returns and jeopardizes pensioner's retirement security. Pension trustees have an obligation to act in the best interest of pensioners and should never use pension funds to give political kickbacks to their supporters. Strong fiduciary standards defining how pension funds are to be managed can help prevent this. In addition, transparency in the investment process and a board with a greater diversity of ex officio, appointed and elected members, along with board seats for designated public representatives, would ensure public pensions cannot be hijacked by special interests willing to tolerate such cronyism so long as their interests are served.

Solutions for Fighting Political Kickback Cronyism

- States should adopt fiduciary duty of loyalty provisions which require pension trustees to act in the sole interest of beneficiaries as a whole, impartially, not just certain interest groups participating in the plan. Fulfilling this provision should require pursuing the best long-term, risk-adjusted returns for the pension fund.
- Trustees should be required to fully disclose any conflicts of interest, including money and gifts given to trustees that may influence their investment decisions, as well as affiliation with special interest groups.
- Before making any investment, trustees should be required to attest they have no conflict of interest with the investment. If they do, they should be required to recuse themselves from the decision-making process for that investment and any related votes.
- Trustees should be required to fully disclose campaign contributions they have received and recuse themselves from the decision-making process and any votes related to investing in those companies or interests.
- Pension boards should be diversified to provide representation for all stakeholders, including taxpayers. This will prevent any special interest group from gaining too much power on the board and using pension funds irresponsibly.
- Pension boards should have a certain number of seats dedicated to independent financial professionals that serve as public representatives.

Chapter 4 Political Crusades

One type of pension fund cronyism that has proliferated recently is the use of pension funds to advance certain political viewpoints or causes. These political crusades regarding such issues as the environment, political speech and income inequality are frequently waged through divestment initiatives and by promoting shareholder resolutions at publicly-traded companies. When pension funds pick a side in political disputes and decide they are going to use the pension fund as a weapon, investment returns decline and many citizens find their hard-earned retirement funds used to support political positions antithetical to their beliefs.

The Pension Divestment Movement Harms Pension Funds

One of the greatest threats to pension investment returns comes in the form of divestment from certain companies or industries. Pension divestment initiatives have been gaining traction recently, with many on the Left viewing them as a tool to advance their political agenda. By requiring pension funds to remove all investments from certain companies or industries, they hope to increase firms' cost of capital in an effort to put them out of business or change their behavior in some way. In order to examine this issue further, this report considers one of the most notable divestment efforts, fossil fuel divestment, and what it means for pensions.

Fossil Fuel Divestment

In recent years, various environmental organizations have been encouraging pension funds to divest from fossil fuel companies and other businesses that they believe are contributing to environmental harm. They have had some limited success, with several municipal-

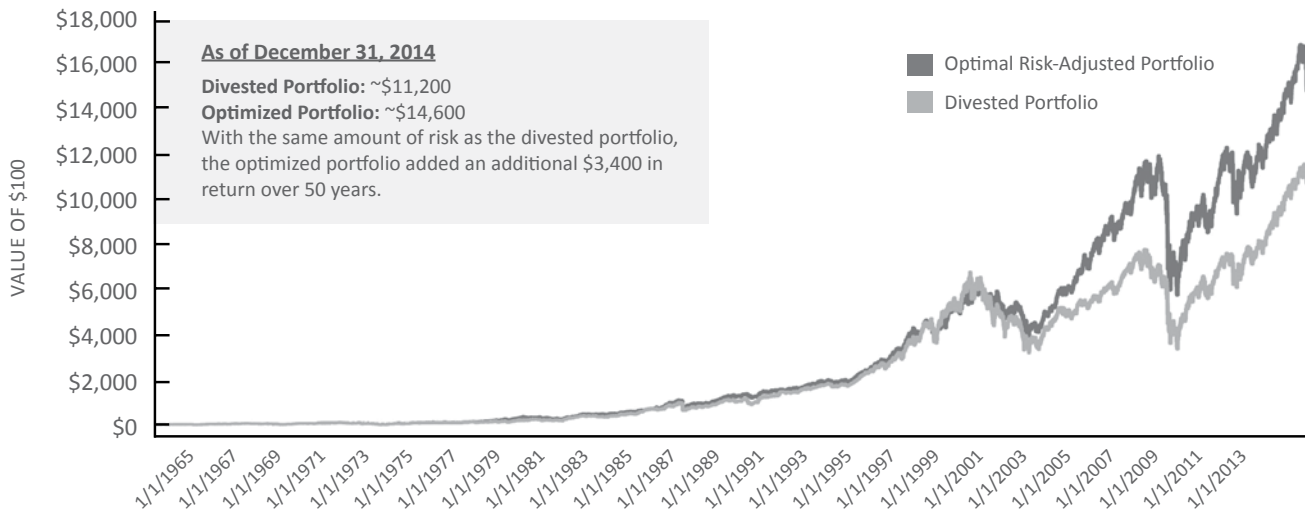
ities enacting plans over the years to divest from fossil fuel companies and other businesses calculated to have a large carbon footprint. Recently, California became the first state to pass a law requiring the state's public pension funds to divest from fossil fuel, specifically coal companies. While it remains the only state to enact such legislation, several governors have publicly called for their state's pension funds to divest from fossil fuel companies as well.

The financial losses from divestment are significant. A study conducted by University of Chicago Law School Professor Daniel Fischel found that a hypothetical portfolio diversified across all industries outperforms a hypothetical portfolio divested from energy stocks over the past 50 years.⁷³ The divested portfolio produced returns 0.7 percentage points lower on average per year than the optimal risk-adjusted portfolio that did not divest from energy, representing a massive 23 percent decline in investment returns over five decades.⁷⁴

Lower returns are not the only price of divestment. The initial cost of divestment should also be considered. This includes the costs of the initial review of existing investments, along with the commission fees to brokers and other trade costs accompanying every trade necessary to fully divest the portfolio. This is money that could be going to the pension system to improve its funding level and provide greater retirement security for workers and retirees in the future.

The ongoing administrative cost of complying with divestment rules is also significant.⁷⁵ Pension plans that divest must continually investigate prospective investments to see if they meet their state's ecological standards, while also monitoring their existing portfolio of investments to ensure none of those companies have begun to engage in business activity that necessitates divestment. This requires significant work on the part of the pension fund's managers, resulting in higher management fees. It also means additional trading

FIGURE 8: OPTIMAL RISK-ADJUSTED PORTFOLIO VS. DIVESTED PORTFOLIO 1965-2014



Notes:

- [1] The indices are value-weighted by market capitalization.
- [2] The Optimal Risk-Adjusted Portfolio is comprised of the energy index and 1-month Treasury bill, optimized by matching the standard deviation of the Divested Portfolio.
- [3] The Divested Portfolio is comprised of only the non-energy index.

Source: Fischel, Daniel, Fossil Fuel Divestment: A Costly and Ineffective Investment Strategy; Center for Research in Security Prices; French, Kenneth

fees from all the trades necessary to remain compliant with the divestment requirements.

Professor Hendrik Bessembinder of Arizona State University recently studied these “frictional” costs that college and university endowments incur when divesting from fossil fuel industries. Frictional costs in this case include the costs of ongoing monitoring, as well as the transaction costs associated with the trades and actions of the management strategy. Bessembinder writes, “Selling and buying assets, as fossil fuel divestment requires, involves transaction costs, which depend on the type of asset, the size of requisite trades, and the market institutes that facilitate trading.”⁷⁶

Bessembinder’s research suggests divesting funds means dramatically higher management fees. His study compared the net expense ratios of various investment funds and found a significant difference between the net expense ratios of “socially-conscious” funds and those of standard funds. The net expense ratio is a charge assessed to investors to cover the fund’s total annual operating expenses, often expressed as a percentage of a fund’s average net assets. While active, socially-conscious funds averaged a prospectus net expense ratio of 0.795 percent, passive standard funds averaged only 0.061 percent.⁷⁷ The additional expense of active management would be paid annually by funds choosing to divest from fossil fuels. This is money that could have been invested and gained additional

returns. Compounded over a 20-year term, the costs of actively managing a portfolio to keep it divested add up to significant losses.

Other frictional costs of divestment are transaction costs, which include fees and commissions paid to brokers and exchanges, as well as the implicit costs of the “bid-ask spread and the price impact of trades.” The bid-ask spread is the difference between the highest bid price and the lowest ask price in a market for a given security. This difference is “an implicit payment to the market-maker or other liquidity supplier” for providing the liquidity to execute the trade and is especially relevant to small trades like those that would be necessary to micro-manage a fossil fuel-free account.⁷⁸

The price impact is any additional cost traders may incur when executing very large orders. Just as the Laws of Supply and Demand teach us - when the quantity demanded of a given good increases, the price goes up, and similarly, when the quantity supplied of a given good increases, its price falls. In this case, it is the higher price paid when executing a large purchase, or the lower price received when executing a large sale, such as the trades that would be necessary upon the implementation of a fossil-fuel-free portfolio strategy.

In his regression analysis, Bessembinder finds these frictional costs would reduce the value of a large university endowment by 2 to 12 percent over the next 20

years. Results like these are one reason many universities have been hesitant to divest from fossil fuel and other industries despite pressure, often from their own students, to do so.

Fossil Fuel Divestment Fails to Achieve Its Goals

Climate activists often cite four main benefits to encourage funds to divest. The first holds that companies that allegedly contribute to climate change can be punished by reducing their stock prices through divestment, thereby reducing their access to sources of capital and increasing their costs. However, divestment is unlikely to accomplish this goal, and to the extent the effort is successful, the costs are often borne by the very investors choosing to divest. As was noted earlier, sales of large asset blocks typically occur at a discount to the market prices. Much of this discount is temporary, as it basically represents a wealth transfer from the divesting investors to the market liquidity providers who are “buying” the securities.⁷⁹ Little historical evidence would indicate any permanent price effect resulting from divestment.

Another argument from activists is that fossil fuel securities are overpriced, and thus likely to underperform in the long run. This too is not supported by the facts. According to Bessembinder, “Such claims are particularly prevalent at times when these stocks have recently performed poorly – even though price declines over the past several months actually appear to be associated with increased production of fossil fuels.”⁸⁰

Yet another common claim by activists is divestment can help stigmatize firms engaging in allegedly harmful activities, hopefully motivating a change in behavior. The channels by which this change would occur, however, are unclear. Research of past divestment behavior has found that divestment efforts have little to no effect.⁸¹ In addition, the Fischell study notes that there is no evidence of any discernable impact on the companies targeted by fossil fuel divestment supporters.⁸²

Finally, proponents of fossil fuel divestment claim that divestment will raise awareness of the issue of climate change. In examining this claim, Fischell conducted an empirical review of the amount of news coverage dedicated to the climate change issue and found evidence it is one of the most commonly reported topics in the United States today, indicating a divestment campaign is not necessary to raise public awareness of the matter.⁸³

The evidence indicates claims that divestment will reduce reliance on fossil fuels or spur institutions to change allegedly bad behavior are speculative at best, while the costs associated with divestment are real and significant. Nonetheless, the fossil fuel divestment effort continues to target public pension funds. Some of the most notable cases demonstrate that while divestment leads to foregone investment returns, this politically-motivated campaign is still gaining momentum.

California

On October 8, 2015, Governor Jerry Brown signed into law Senate Bill 185, entitled “Investing with Values and Responsibility.”⁸⁴ This signing was a noteworthy event, as according to California State Senate President Pro Tempore Kevin De León, it marked the first time a state had divested its pensions from coal.⁸⁵ This divestment had added significance because California manages the two largest state pension funds in the country by asset value, the California Public Employees’ Retirement System (CalPERS) and the California State Teachers’ Retirement System (CalSTRS), with \$293 billion and \$184 billion in assets, respectively.⁸⁶

Senate Bill 185 prohibits CalPERS and CalSTRS from renewing existing investments or making new investments in thermal coal companies. In regard to existing investments, the two funds must engage with these companies to determine if the companies are transitioning their business model to clean energy. They must liquidate their investments with thermal coal companies on or before July 1, 2017. Finally, the funds must file a report with the Legislature, listing which thermal coal companies they divested from and which current thermal coal companies have agreed to transition to clean energy. This report must be filed on or before January 1, 2018.⁸⁷

Senator De León, who authored the law, remarked upon its signing, “Coal is a losing bet for California retirees and it’s also incredibly harmful to our health and the health of our environment,” emphasizing that environmentalism was the primary motive for the divestment.⁸⁸ Assemblyman Rob Bonta, who presented the bill in the California Assembly, stated upon its passage in the Senate, “coal is the fuel of the past...it’s time to move on from this dirty energy source,” and “the law aligns investment policies with our values.”⁸⁹ Unsurprisingly, the signing of the law was applauded by leaders of several prominent environmentalist interest groups.⁹⁰

The bill's final vote of 43-27 was "mostly along party lines with some Democrats abstaining."⁹¹ This, combined with Governor Brown's strong support, indicates this may not be the last climate related divestment legislation California will enact.⁹² Before divestment, CalPERS had approximately \$167 million invested in 30 coal companies, while CalSTRS had an estimated \$40 million invested in the industry.⁹³

Despite the best intentions of supporters, divestment puts California's pensioners at financial risk. Chris Ailman, chief investment officer for CalSTRS, expressed misgivings over the economic and social consequences of divestment in California. Ailman explained:

"I've been involved in five divestments for our fund. All five of them we've lost money, and all five of them have not brought about social change."⁹⁴

Furthermore, many pensioners are concerned about the financial costs of divestment. A recent survey commissioned by the Independent Petroleum Association of America reveals that California pensioners are uneasy about divestment. The survey found that 54 percent of California pensioners thought divestment would decrease performance of the pension funds. Additionally, 64 percent of California pensioners stated that they would not recommend divestment from oil and gas to their fund managers.⁹⁵

California legislators should listen to the concerns of their constituents. The research suggests they are correct in believing divestment will adversely affect the state's pension funds' performance. Lawmakers should be directing their pension fund trustees to invest in a way that achieves the best returns for pensioners, not trying to use state pension funds to promote a political agenda.

New York

Similar to California, divestment is also a heated issue in New York. After California's CalPERS and CalSTRS pension funds, New York has the third largest public pension fund in the country. Oil and natural gas investments represented 5 percent of the total assets of New York's two largest pension plans from fiscal years 2005 to 2013. Furthermore, during that time frame, oil and

natural gas investments contributed 9.8 percent of the plans' total gains.⁹⁶

Despite this, State Senator Liz Krueger recently introduced Senate Bill S5873, the Fossil Fuel Divestment Act. This Act would "require the fund to sell off its stocks in the top 200 largest fossil fuel companies by 2020."⁹⁷ However, the Act does permit New York's Comptroller to cease divestment, as long as the Comptroller can convincingly demonstrate divestment has caused the fund to lose significant value.⁹⁸ If the Act became law, New York would be the second state in the nation to enact fossil fuel divestment.

The Fossil Fuel Divestment Act was first introduced and referred to the Rules Committee on June 9, 2015.⁹⁹ After seven months, the bill was referred to the Civil Service and Pensions Committee in January 2016 where it was approved. On April 11, 2016, the bill moved on to the Senate Finance Committee, where it stayed for the remainder of the 2016 legislative session.

During debate over the Act, State Comptroller Thomas DiNapoli expressed misgivings. He was concerned divestment could conflict with his fiduciary duty. As manager of New York State's pension funds, the Comptroller is required to generate the best possible returns for pensioners. In a December 2015 letter to Senator Krueger, Comptroller DiNapoli explained:

"My fiduciary duty requires me to focus on the long term value of the Fund. To achieve that objective, the Fund works to maximize returns and minimize risks. Key to accomplishing this objective is diversifying the Fund's investments across sectors and asset classes—including the energy sector, where fossil fuels continue to play an integral role in powering the world's electricity generators, industry, transportation, and infrastructure."¹⁰⁰

Hopefully, Comptroller DiNapoli's concerns will be taken seriously. Pursuing a political agenda through divestment would hinder the Comptroller's ability to wisely steward pension investments. New York pensioners deserve a well-managed, diversified portfolio that achieves the best possible returns to provide a secure retirement.

Vermont

Governor Peter Shumlin, who is leaving office in January 2017, has also called for pension divestment of coal companies. Beyond this, he has singled out ExxonMobil as a specific company the state's pension funds should target for divestment. The governor is not alone. He is joined in his demands by several environmental activists in the Green Mountain State.

Governor Shumlin argues Vermont has a "moral responsibility" to fight climate change and, as such, the state should divest its pension funds from fossil fuel companies.¹⁰¹ When it comes to ExxonMobil, the governor claims the company "hid what it knew about the dangers of climate change for decades."¹⁰² However, this statement is merely an unsubstantiated allegation, part of the broader bullying campaign by some state attorneys general to discourage investment in the fossil fuel industry.¹⁰³ For its part, ExxonMobil has fervently denied obstructing such information from the public.¹⁰⁴

Interestingly, one of the governor's most prominent opponents in regards to divestment is State Treasurer Beth Pearce, a fellow Democrat, who was appointed by Governor Shumlin six years ago.¹⁰⁵ Pearce opposes divestment, explaining:

*"We have a fiduciary responsibility of stewardship of those taxpayer dollars, and the dollars for the members of the system. When those dollars go into a trust we are obliged to maximum return for those individuals," she says. "So ... I'm going to be guided by facts not by politics."*¹⁰⁶

Despite the treasurer's strong opposition, she agreed to at least review the divestment issue.¹⁰⁷ However, it appears Pearce still believes that the foremost obligation of the state's pension funds should be to provide financial security for retirees, considering her recent statement that her "zeal on behalf of retirees' pension funds hasn't diminished as a result of her consideration of divestment."¹⁰⁸

Pearce's concerns are well-founded. According to the Vermont Treasury, divestment would cost state pension funds \$10 million per year in lost returns. Furthermore, the state pension funds would have to pay \$8.5 million to implement the divestment process.¹⁰⁹ Thomas Golonka, chair of the Vermont Pension Investment

Committee, agrees that divestment is a complex and costly process.¹¹⁰

Despite the significant costs of divestment, Pearce still drew an ardently pro-divestment primary challenger, financial analyst Richard Dunne. This demonstrates how contentious fossil fuel divestment has become in Vermont politics. However, Pearce soundly beat Dunne in the 2016 Democratic primary.¹¹¹

For now, at least, Vermonters are protected from the costs of fossil fuel divestment. As the state's own treasury estimate indicates, there are significant costs to divestment, costs ultimately borne by pensioners and taxpayers.

Pension Divestment at the Municipal Level

In December of 2012, Seattle became the first major city to announce it would divest from fossil fuels.¹¹² By April 2013, it was joined by nine other cities, including Madison, Wisconsin and San Francisco, California.¹¹³

As part of Seattle's divestment process, then Mayor Mike McGinn personally issued a letter to Seattle City Employees' Retirement System (SCERS) and the City of Seattle Voluntary Deferred Compensation Plan Committee, the city's two major pension funds.¹¹⁴ In the letter to SCERS, Mayor McGinn wrote "divesting the pension fund from these companies is one way" the city of Seattle can "discourage" them from extracting fossil fuel.¹¹⁵

On April 26, 2013, San Francisco's Board of Supervisors voted unanimously to urge its \$16 billion pension fund to divest over \$583 million from the fossil fuel industry.¹¹⁶ However, less than six months later, the board of the San Francisco Employees' Retirement System (SFERS), which manages the pension fund, voted to reject the city's call for divestment. On December 9, 2015, the SFERS board adopted a more limited proposal to divest from thermal coal companies, which amounted to about \$21 million of its portfolio.¹¹⁷

These examples demonstrate fossil fuel divestment is not just a state issue, but one that municipalities also face. However, as demonstrated by the relatively few cities that have enacted divestment, most local lawmakers and pension board members realize that using pension funds to advance political causes is a costly decision that jeopardizes workers' retirement security.

Fossil Fuel Divestment Threatens Pensioners’ Retirement

As the case studies in California, New York, Vermont and various cities demonstrate, fossil fuel divestment is a major initiative that several states and municipalities are considering. However, using public pension funds to advance a political agenda comes at the price of investment returns. With the current underfunded status of so many public pension systems, state and local governments cannot afford to play politics with pension funds.

Divestment from Individuals Based on Personal Beliefs

Another form of divestment is the effort by some interest groups to pressure pension funds to divest from certain fund managers on account of their personal beliefs. Perhaps the most notable example of this effort has been led by the American Federation of Teachers (AFT). In recent years, the AFT has promoted a divestment campaign targeting hedge-fund managers who have supported initiatives with which they disagree. The AFT has targeted some hedge-fund managers for their actions supporting school choice and favoring defined-contribution public pension systems. This is particularly threatening given AFT’s influence over an estimated \$1 trillion in public defined-benefit plans, many

of which hold investments in hedge-funds as part of their portfolio.¹¹⁸

By thoroughly examining financial reports and the charitable deductions of hedge-fund managers, AFT created a “blacklist” of roughly three dozen individuals.¹¹⁹ Individuals earned a spot on the dubious list by personally supporting causes and organizations disapproved of by AFT. Union pension funds then used the AFT blacklist as a guide to divest from the hedge-funds managed by these individuals. As Figure 9 shows, state pension funds in California, Illinois, New Jersey, New York, Oklahoma, Rhode Island and Washington state have all divested from hedge-funds to some degree.¹²⁰

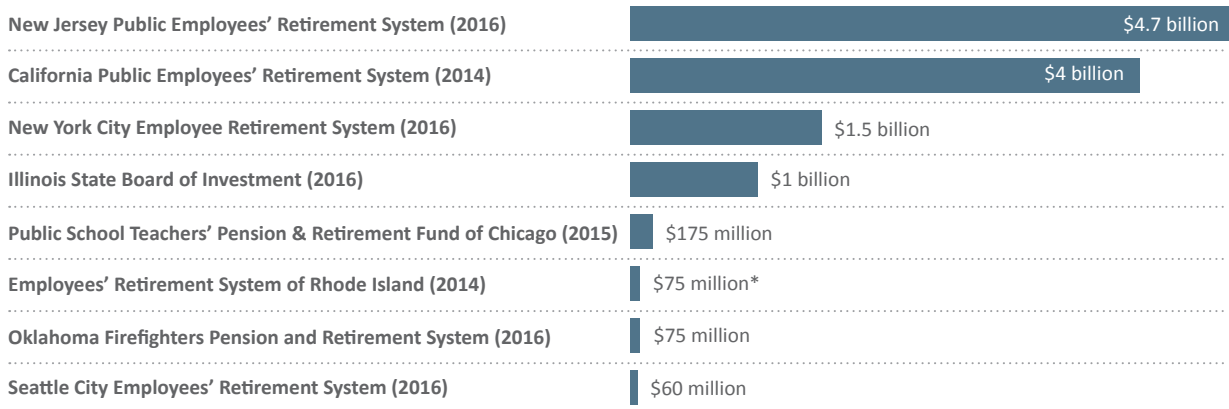
Not only have state pension funds succumbed to divestment pressure, but fund managers have been personally targeted to try to change their behavior. For example, a recent *Wall Street Journal* article detailed what happened when a hedge-fund manager, Cliff Asness, recently found himself on the blacklist.

Asness appears to have been originally blacklisted for serving on the board of the Manhattan Institute for Policy Research, an organization that promotes economic choice and individual responsibility and which supports, among other things, state and local governments moving from defined-benefit public pension plans to defined-contribution plans. Shortly after his firm paid \$25,000 to help found a pension policy group with AFT President Randi Weingarten, Asness was removed from the list.¹²¹ However, Asness continued to

FIGURE 9: PUBLIC-EMPLOYEE PENSION FUND DIVESTMENT FROM HEDGE-FUNDS

Getting Out of Hedge-Funds

Public-employee pension funds have pulled billions of dollars from hedge-funds in recent years, sometimes with the encouragement of the American Federation of Teachers.



*voted to divest from Third Point LLC

Source: *The Wall Street Journal*; pension officials; published reports

serve on the Manhattan Institute board, and when CalSTRS later considered increasing their hedge-fund investments, Weingarten saw an opportunity to apply pressure. Her aide spoke with a CalSTRS official about Cliff Asness's service as a Manhattan Institute board member and shortly after, a CalSTRS official spoke with Asness. Later that year, Asness announced that he would step down from the Manhattan Institute's board. While his spokesperson said Asness already made the decision at the time of the call, the timing is certainly interesting. In a letter to *The Wall Street Journal*, Asness claimed that his decision was not made on account of pressure from AFT.¹²² In any case, the fact that such a powerful organization is able and willing to threaten an individual's personal livelihood through divestment is concerning.

Regrettably, AFT's intimidation campaign comes at a great cost—the security of retirees. Pension funds should be managed to generate the best investment returns for pensioners, not target political enemies. By picking and choosing funds based on fund managers' personal beliefs, rather than their funds' investment performance, pension fund returns will likely decline and the financial stability of the fund could be at risk. As a recent *Wall Street Journal* article aptly explains:

*"Sander Read, chief executive officer of Lyons Wealth Management, which hasn't been targeted, likened what Ms. Weingarten is doing to 'hiring a dentist because of their political beliefs. You may see eye to eye on politics, but you may not have great, straight teeth.'"*¹²³

State and local governments should adopt fiduciary standards that prevent this type of personal divestment and put pensioners first by requiring investment decisions be made based on financial considerations, not on political agendas.

Rhode Island Trades Investment Returns for Politics

Another example of targeting individuals for divestment comes from Rhode Island, where an apparently politically-driven decision to divest from a high performing hedge-fund cost the state access to some of the best returns its pension portfolio had earned in re-

cent years. It is perhaps worse considering the decision makers in this case were financially-savvy professionals who should know better than to sacrifice substantial pension fund gains for political capital.

The Employees' Retirement System of Rhode Island (ERSRI) is significantly underfunded. ALEC, in its most recent pension liabilities report, *Unaccountable and Unaffordable 2016*, found Rhode Island's total pension funding ratio was a mere 29.6 percent, with a total unfunded pension liability of more than \$18.6 billion.¹²⁴ This unfunded liability is equivalent to \$17,644 for every man, woman and child in Rhode Island.¹²⁵ Knowing that ERSRI is already significantly underfunded makes any further losses from politically-motivated decisions all the more serious.

Rhode Island Governor Gina Raimondo is a key figure in the story. Raimondo was once a strong ally of pension reform. A former venture capitalist, Raimondo seemed to understand the limitations of the market, and why assuming unrealistically high investment returns was not in the best interest of the people of Rhode Island. Before she was elected to the state's highest office, Raimondo served as Rhode Island's General Treasurer, championing reform and a shift toward a hybrid pension model that incorporated elements of managing the pre-existing defined-benefit system with elements of a 401(k)-style defined-contribution system, as well as reforms to cost-of-living-adjustments (COLAs). As observed by former Utah State Senator Dan Liljenquist in the 2013 ALEC publication, *Keeping the Promise: State Solutions for Government Pension Reform*:

*"Gina Raimondo, the state's treasurer and a Democrat, led pension reform in the state and defended it as a moral imperative. After declaring that Rhode Island had to choose between maintaining the pension system as it was and reducing other spending priorities, she said to a disgruntled public employee, 'I would ask you, is it morally right to do nothing [on pension reform], and not provide services to the state's most vulnerable citizens? Yes, sir, I think this [reform] is moral.'"*¹²⁶

In 2012, *The Wall Street Journal* ran a feature, "The Democrat Who Took on the Unions," cataloguing the reform processes Raimondo spearheaded and the Rhode Island General Assembly eventually implemented.¹²⁷ Another

2012 *Wall Street Journal* article, “Rhode Island Miracle Explained,” described Raimondo’s visit with the Manhattan Institute:

“The plan enacted in November cuts \$3 billion of the state’s \$7 billion unfunded liability by raising the retirement age, suspending cost-of-living increases until the pension system is 80% funded, and even moving workers into a hybrid plan that has a smaller guaranteed annuity along with a 401(k)-style defined-contribution plan.”¹²⁸

These efforts demonstrate how Raimondo and Rhode Island officials put in the hard work to start reforming the state’s pension system. However, after years of give-and-take with state employee unions, Raimondo seemed to cave under political pressure when it came to one critical decision, leaving doubts about how Rhode Island’s public pensions are governed.

Among Raimondo’s duties while serving as Rhode Island’s General Treasurer was leading the Rhode Island State Investment Commission. During her tenure, Third Point Partners’ Dan Loeb was tasked by the Commission to manage \$74.3 million of Rhode Island’s \$8 billion pension fund, an amount that was small considering the size of Third Point’s \$14 billion portfolio.¹²⁹ Loeb had the reputation of being a strong hedge-fund manager, capable of providing better returns than many of his peers. In 2013, Loeb was recognized as one of the elites of his industry, making *Institutional Investor’s Alpha’s* “Rich List,” a ranking of the hedge-fund industry’s 25 highest earners.¹³⁰ Loeb earned Rhode Island “a 24.71 percent return that ranked Third Point as the state’s best performing hedge-fund in 2013, according to state documents.”¹³¹ That nearly doubled the pension fund’s overall 14.01 percent return for the year.¹³² According to a Third Point spokesperson, “Rhode Island’s pensioners earned 49 percent, net of fees, over the two years they invested with us,” and Third Point’s fund had earned “a net annualized rate of return of 21.3 percent since 1995.”¹³³

In a role unrelated to his management of Rhode Island pension assets, Loeb was an advocate for government reform, and served as director for a New York City-based non-profit, Success Academy Charter Schools.¹³⁴ He also sat on the board of StudentsFirst, an organization that advocates for teacher accountability.¹³⁵ In

a June 2013 *Bloomberg* article, Loeb was described as “escalating a battle between hedge-fund managers and American Federation of Teachers (AFT) President Randi Weingarten over public-worker pensions.”¹³⁶ A part of his personal activism was having “donated an extra \$1 million to a group of charter schools to show his opposition to the head of the second-biggest U.S. teachers union.” These actions earned him a distinction from the AFT for being “hostile to traditional public pensions.”¹³⁷

AFT began to pressure Rhode Island to divest from Loeb’s fund. Alarming, “AFT wanted pension trustees to consider fund managers’ ties to groups that oppose defined-benefit retirement systems as a reason when hiring or firing them.”¹³⁸ Ultimately, the Rhode Island State Investment Commission, chaired by Raimondo, unanimously decided to divest from hedge-funds, claiming hedge-funds were not a sound investment.

The Commission cited fees paid to the hedge-fund managers as part of the justification for their decision. They noted that, for three hedge-funds alone, Rhode Island paid a collective \$2.6 million in fees in 2012. However, given that Third Point was the best performing hedge-fund in 2013, and the outstanding investment returns they provided, questions persist about the reasoning behind Third Point’s dismissal.

An informative *Wall Street Journal* editorial, “The Education of Gina Raimondo,” stated:

“It’s hard to avoid the conclusion that Ms. Raimondo is trying to neutralize union opposition by throwing Mr. Loeb over the side. But Ms. Raimondo is fooling herself if she thinks that divesting from Third Point will atone for her pension-reform heresy. The unions will still try to end her political career. Ms. Weingarten wants to make an example of Ms. Raimondo by showing other Democrats that favoring pension reform is politically fatal.”¹³⁹

When politics enters the policy equation, pension officials can find themselves pressured to make poor investment decisions. Raimondo found herself in such a situation and appears to have been willing to sacrifice the state’s pension performance for political considerations.

The Manhattan Institute and Dan Loeb once honored Raimondo for her work reforming the Rhode Island pension system, but even after a successful reform process had begun, AFT was able to apply political pressure to get state officials to punish Loeb for his support of school choice and public pension reform. So long as pension officials are subject to political pressure, there exists a risk that pension funds will be governed with politics, not pensioners, in mind. As noted by *The Wall Street Journal*, “Ms. Raimondo is a politician, and politicians do what they feel they must to get elected.”¹⁴⁰ Regardless of whether Raimondo acted on questionable motives, the fact that questions can be so easily and reasonably raised is enough to provide a case study of the potential harm politics can have on proper pension fund governance.

Shareholder Activism in Pension Fund Management

Another startling misuse of pension fund assets occurs when managers use their large equity holdings to promote shareholder resolutions that advance particular political agendas. This is inconsistent with what should be pension fund managers’ fiduciary duty to pursue the best investment returns possible for plan participants.

Engagement in politically-driven shareholder activism does not relate to this mandate and wastes valuable time which trustees should be using to seek better fund performance. It also subjects important decisions on how to vote on shareholder resolutions to political concerns, as opposed to basing these decisions on what is best for investment returns. When a pension board considers introducing or supporting a resolution, it should only be considering one thing: what is best for plan participants, in other words, what will help the company achieve the best performance. Finally, politically-driven shareholder activism is unfair to plan participants and taxpayers because it appropriates the pension fund, made up of employee contributions, employer contributions and taxpayer dollars to advance a political agenda with which many of these stakeholders may disagree.

Public Pension Funds Advance Political Shareholder Resolutions

Recently, there has been an increase in public pensions attempting to use shareholder resolutions to advance political agendas. The number of these resolutions is cause for concern. The Manhattan Institute’s Proxy Monitor tracks shareholder activism for the Fortune 250 companies and provides a good barometer for what is happening with shareholder resolutions across the country.

Proxy Monitor reports that resolutions to modify corporate activities affecting the environment, to disclose political spending and lobbying activity and to alter executive compensation packages are some of the most common types of shareholder proposals. According to their research, of the 301 shareholder proposals for Fortune 250 companies in 2016, 58 related to environmental concerns, 54 to political spending or lobbying, 11 to equity compensation and 6 to other executive compensation.¹⁴¹

For the Fortune 250, labor-affiliated investors constituted 53 percent of those proposing political spending or lobbying related shareholder resolutions from 2006 to 2016.¹⁴² Labor-affiliated investors generally include state or municipal pension funds or multiemployer pension funds for private labor unions. The New York Common Retirement System, New York City Pension Funds and the American Federation of State, County and Municipal Employees (AFSCME) have been the shareholders most frequently sponsoring political spending and lobbying-related resolutions, with a combined 89 proposals from 2006 to 2016.¹⁴³

Environmental activists continue to step up their efforts as well, submitting 459 environment-related shareholder proposals to Fortune 250 companies in just the last 10 years.¹⁴⁴ Of those, 135 were resolutions relating to corporate policy on climate change or greenhouse gas emissions and 82 related to environmental sustainability.¹⁴⁵ Further, social investing, religious and public policy-related institutional shareholders sponsored 74 percent of the 10-year total for environment-related proposals, with 38 percent attributed solely to social investing institutions.¹⁴⁶ Typically, these resolutions ask the company to create a report on the financial risks of climate change, set targets for reducing greenhouse gas emissions or create plans for more “sustainable” operations. Public pensions have also played a signifi-

cant role in environment related shareholder activism, collectively issuing the second largest number of proposals over the last 10 years. The New York State Common Retirement Fund and New York City Pension funds sponsored 16 and seven, respectively.¹⁴⁷

Shareholder Activism to Silence Free Speech

In her recent book, *The Intimidation Game*, *Wall Street Journal* columnist Kimberley Strassel details organized efforts to chill free speech. “In June 2011, California state treasurer Bill Lockyer and New York City public advocate Bill de Blasio – both die-hard Democrats and both charged with overseeing the investment of pension-fund money – wrote letters to their respective pension funds calling on them to use their heft to demand corporate political spending disclosure. Both CalPERS and CalSTRS quickly moved to formally adopt policies to do just that.”¹⁴⁸ New York’s Bill de Blasio was recently quoted in a Media Matters memo about the political Left’s real goals regarding corporate disclosure of political activity. In the memo, de Blasio was quoted as saying, “We will use every tool, whether it is actions among consumers up to boycotts, whether it’s shareholder actions, whether it’s work from pension funds – to use the pension funds to direct Corporate America to change its ways—legal action, you name it, it’s on the table.”¹⁴⁹

This is unsettling because it shows some pension fund managers are more interested in using the fund to silence political views they disagree with than managing the fund to get the best returns possible for workers. Pension trustees should not be using public pension funds to advance their own political crusades and should instead be focused on diligently managing the fund they have been entrusted with to earn the best returns possible and provide a secure retirement for plan participants.

Shareholder Activism and Executive Compensation

Another issue where pension funds are pushing political agendas through shareholder resolutions is executive and CEO compensation. Shareholder proposals relating to stock option compensation or other executive compensation are increasingly prevalent, with 17

being introduced among Fortune 250 companies in 2016 alone.¹⁵⁰

One notable example of these efforts comes from Washington state. In his 2016 State of the State Address, Governor Jay Inslee directed the State Investment Board to vote against executive compensation packages deemed too high. As a large shareholder in many companies, the Board may already vote against the salary of any executive if they believe it does not represent the financial health of the company. However, Governor Inslee wants the State Investment Board to go further by using their voting power to “reduce the widening pay gap between CEOs and their workers,” and encouraged the board to “promote this policy with other states and institutional investors.”¹⁵¹ This is not the first time executive compensation has been politicized. Large institutional shareholders such as CalPERS, CalSTRS and AFSCME have regularly demanded decision rights on executive pay at the annual meetings of companies, both domestic and multinational.¹⁵²

Attempts to influence compensation decisions, or any other significant financial actions of private companies, by public pension funds or government for political reasons, are a grave misuse of the time that pension managers should be spending to perform their fiduciary duties. They are an abuse of employee contributions, employer contributions and taxpayer dollars for the politicization of private issues.

Political Crusades Put Pensioners at Risk

As these examples have shown, when pension trustees place their own political agendas ahead of their responsibility to achieve the best returns for the pension fund, pension returns often decline, placing pensioners’ retirements in jeopardy. This activism is also unfair to both pensioners and taxpayers because it uses public funds to speak in their name, even when pension trustees take political positions contrary to their deeply-held views. Pension trustees should not be spending their time, and risking other people’s money, on political crusades. Rather, they should use their time to research new investment opportunities and provide the best returns for the pension fund. Individuals serve on pension boards as trustees, not political activists.

Solutions for Fighting Political Crusade Cronyism

- Trustees should manage pension funds solely in the interest of plan participants and beneficiaries as a whole, impartially. Fulfilling this provision should require pursuing the best long-term, risk-adjusted returns for the pension fund.
- Enact fiduciary provisions requiring any introduction of or vote on shareholder resolutions to be based solely on pursuing the best long-term, risk-adjusted returns for the pension fund.
- Dispense with any existing divestment requirements for specific companies or industries.
- Require a comprehensive report from an independent financial consultant before any divestment action is approved detailing the estimated short-term and long-term cost of the proposed divestment.
- Require all introductions of and votes on shareholder resolutions to be made in consultation with the whole pension board.
- Require reporting each year of how a pension fund voted on each shareholder resolution and the justification for their decision.

Conclusion

While significantly underfunded, public pension funds represent the retirement future of millions of American workers. As such, lawmakers have an obligation to public employees to ensure these funds are managed in workers' best interest. When pension trustees misuse public pension funds to promote local economic development and social goals, reward supporters or promote political agendas, it endangers investment returns and jeopardizes the future of pensioners.

Workers deserve better. Policymakers have the opportunity to secure the promises made to pensioners and their families by keeping politics out of pension policymaking. This can be achieved by adopting strong fiduciary standards for pension trustees, transparency rules that allow the public to see how pension funds are being managed and smart pension board reforms that hold trustees accountable. These reforms will guarantee proper pension fund management, which in turn will help state and local governments keep the pension promises they have made.

Appendices

APPENDIX A: SOLUTIONS FOR PRUDENT PENSION INVESTMENT AND GOVERNANCE

States can keep their pension promises to workers and retirees through wise pension investment and governance. These solutions fall into three important categories: fiduciary standards, transparency rules and pension board governance reforms.

States should adopt strong fiduciary standards for public pension trustees that require:

- Trustees should manage the pension fund for the exclusive purpose of providing pension and other post-employment benefits to plan participants and beneficiaries. Other post-employment benefits should be defined to include healthcare and other benefits outlined in the pension plan and not the limited, tangential benefits local economic development and social projects may provide.
- Trustees should manage pension funds solely in the interest of plan participants and beneficiaries as a whole, impartially. Fulfilling this provision should require pursuing the best long-term, risk-adjusted returns for the pension fund.
- Dispensing with any economically targeted investments and industry divestment requirements which invariably reduce pension fund returns and increase investment risk.
- Adopting the prudent investor standard for pension fiduciaries.
- Any introduction of or vote on shareholder resolutions to be based solely on pursuing the best long-term, risk-adjusted returns for the pension fund.
- Trustees may only incur administrative costs and fees that are appropriate and reasonable in relation to the assets of the retirement system.
- Trustees should diversify the investments of the retirement system, unless it is reasonably determined that, because of special circumstances, the purposes of the retirement system are better served without diversifying.
- Trustees should be held personally liable for losses deriving from failure to adhere to fiduciary standards.

State should adopt transparency rules that allow lawmakers, board members, pensioners and the public to see how pension funds are being managed, including:

- Reporting of investments should be done separately by asset class and by individual assets so it can be easily determined how investments are performing and increase accountability for trustees.¹⁵³
- Pensions should report the fund's overall performance, asset class performance and individual asset performance over a 20 or more-year time horizon to show how assets have performed over time and allow stakeholders to see how actual performance has compared with the assumed rate of return.¹⁵⁴
- Require a comprehensive report from an independent financial consultant before any divestment action is approved detailing the estimated short-term and long-term costs of the proposed divestment.
- Require reporting each year of how a pension fund voted on each shareholder resolution and the justification for their decision.
- Pension board meetings should be live-streamed, recorded and easily accessible to the public.
- All pension related documents should be readily available to the public with necessary exceptions for confidentiality.
- Trustees should be required to disclose all personal investments, gifts, affiliations and other interests that may influence their investment decisions to allow the public to evaluate any potential conflicts of interest.

States should adopt board reforms that require and enable trustees to serve as watchdogs, ensuring that fiduciary provisions are being followed and that pension funds are wisely managed:

Board composition:

- Pension boards should be diversified to provide representation for all stakeholders, including taxpayers. This will prevent any special interest group from gaining too much power on the board and using pension funds to overweight local investments, grant political kickbacks or advance political crusades.
- Pension boards should have a certain number of seats dedicated to independent financial professionals that serve as public representatives.

Trustee responsibilities:

- Trustees should be required to report any failure by other trustees, including board members and pension fund managers, to adhere to fiduciary standards and other applicable law.
- Before making any investment, trustees should be required to attest they have no conflict of interest with the investment. If they do, they should be required to recuse themselves from the decision-making process for that investment and any related votes.
- Trustees should be required to fully disclose campaign contributions they have received and recuse themselves from the decision-making process and any votes related to investing in those companies or interests.
- While trustees may represent a specific group's interests, they should be expected to act impartially to achieve the best returns for the fund.¹⁵⁵
- Trustees should not be allowed to delegate their voting authority by proxy voting.
- Trustees dealing with day-to-day investment decisions, such as those serving on investment committees, should:
 - Be required to have a minimal amount of financial experience and some form of industry certification.
 - Not be allowed to change the bylaws governing pension investments without approval from the full pension board.¹⁵⁶

Board management and operations:

- All trustees should be regularly apprised of investment performance, with specific details of how all individual assets have performed.
- Require all introductions of and votes on shareholder resolutions to be made in consultation with the whole pension board.
- Pension boards should be required to consult with outside, independent financial advisors regarding their investment strategy and investment decisions.
- States and municipalities should consider creating an independent investment board, apart from the pension board, made up of financial professionals to manage day-to-day investment decisions. Working with a pension fund's chief investment officer, this independent board would work to achieve the pension board's investment objectives with far less risk of political influence.
- Boards should provide education and training to all trustees to develop necessary core competencies for their service:
 - All new trustees should be evaluated to determine their education needs in regards to fulfilling their fiduciary and financial responsibilities.
 - All new trustees should be provided with and required to complete pension investment and finance training to assist them in making investment decisions and improve their ability to understand the effect certain investments have on overall portfolio performance.
 - Periodic educational opportunities should be provided that help to improve core competencies and apprise trustees of any changes in their obligations as fiduciaries.

APPENDIX B: ALEC MODEL POLICIES

Model Policies: Wise Pension Investment and Governance

ALEC offers several model policies that states can reference as they refine their policies toward wise pension stewardship. These documents have the goals of promoting best practices for pension investment and governance. All ALEC model policies can be obtained by visiting www.alec.org.

ALEC Statement of Principles on Sound Pension Practices

- **Stability** – Government pensions should be secure and safe from high risk assumptions. State and local governments should eliminate incentives to underfund pension commitments, or to over-expend benefits beyond available revenues.
- **Predictability** – The pension obligations of states should be predictable and structured to foster certainty for taxpayers and policymakers. Contribution levels should be stable. Benefits of government pensions should be comparable to plans available by private citizens, and the costs and benefits should be sustainable.
- **Adequacy** – An unrealistically high assumed rate of return is a guaranteed way to underfund the government pension systems. State legislatures should fund 100 percent of Annually Required Contributions (ARC). Government pension systems should use assumptions that are consistent with Governmental Accounting Standards Board (GASB) and/or Generally Accepted Accounting Principles (GAAP) standards.
- **Affordability** – Government pension plans should be properly structured within affordable employee contributions and government financial support of their core functions, without imposing an undue burden on taxpayers.
- **Transparency** – Government pension systems should be transparent, open and non-political. Comprehensive Annual Financial Reports (CAFR) should be reasonably simple to understand and published in a timely manner.
- **Responsibility** – Risks should be balanced equitably among employees, government and taxpayers. Lawmakers and fund managers should be accountable for the adequacy and solvency of retirement funds.
- **Ownership** – Pension plans should ultimately benefit, reward, and compensate the work of government employees. Employees should share in the benefits, risks, and decisions of their retirement plans and their money, while protecting against potentially risky or ill-informed individual decisions.
- **Choice** – Employees should be able to choose defined-contribution investment plans to help balance risk and gain within individual investment needs and strategies.
- **Transportability** – Government pension plans should move with employees throughout their careers, without locking employees into government jobs or penalizing those who chose to move in or out of the public sector.
- **Liquidity** – Government pension plans should consider adequate liquidity to allow employees to use or sell some of their assets, especially during personal or family emergencies.
- **Safety** – Legislators and other appropriate government organizations should have sufficient oversight and protections to protect employees against security risks to pension plans, including waste, fraud, and abuse, and crimes such as embezzlement, identity theft, and cyber theft.

Retirement System Board of Trustees and Employees Prudent Investor Act

Summary

This Act promotes security, stability, and accountability in state retirement systems. A trustee or director of a state retirement system must comply with a series of prudent investor guidelines. These guidelines include risk and return objectives, diversification, loyalty, investment costs, compliance, and delegation of management functions. This Act shall be known and may be cited as the “{insert state} Retirement System Board of Trustees and Retirement System Employees Prudent Investor Act.”

Model Policy

Section 1. {Prudent Investor Rule}

(A) Except as otherwise provided in subsection B of this section, a trustee or director of any {insert state} retirement system who invests and manages, or delegates the approval of the investment or management of retirement system assets owes a duty to the beneficiaries of the system to comply with the prudent investor rule set forth in the “{insert state} Retirement System Board of Trustees and Retirement System Employees Prudent Investor Act.”

(B) A trustee or director or retirement system employee is not liable to a beneficiary or state taxpayer to the extent that the trustee, director or retirement system employee acted in reasonable reliance on the statutory provisions and rules of the retirement system. A trustee or director or retirement system employee who exercises reasonable care, skill, and caution in performance of actions as a trustee or director or retirement system employee is not liable to a beneficiary for the actual investment return results or retirement system operational results.

Section 2. {Standard of Care - Portfolio Strategy - Risk and Return Objectives}

(A) A trustee or director or retirement system employee shall invest and manage or approve the investment and management of retirement system assets as a prudent investor would, by considering the purposes, terms, distribution requirements, and other circumstances of the retirement system. In satisfying this standard, the trustee or director or retirement system employee shall exercise reasonable care, skill, and caution.

(B) A trustee or director or retirement system employee’s investment and management decisions or approval of investment and management decisions respecting individual assets of the retirement system must be evaluated not in isolation, but in the context of the retirement system’s portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the statutory and rules governing the system. Investment and management decisions shall be made on an impartial basis.

(C) Among circumstances that a trustee or director or retirement system employee shall consider in investing and managing retirement system assets or the delegation of approval of investing and managing retirement system assets are those of the following as are relevant to the retirement system or its beneficiaries:

- (1) General economic conditions;
- (2) The possible effect of inflation or deflation;
- (3) The expected tax consequences of investment decisions or strategies;
- (4) The role that each investment or course of action plays within the overall retirement system portfolio, which may include financial assets, interests in closely held enterprises, tangible and intangible personal property, and real property;

- (5) The expected total return from income and the appreciation of capital;
- (6) Other resources of the retirement system on behalf of beneficiaries;
- (7) Needs for liquidity, regularity of income, and preservation or appreciation of capital; and
- (8) An asset's special relationship or special value, if any, to the purposes of the retirement system or to the beneficiaries.

(D) A trustee or director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets shall make a reasonable effort to verify facts relevant to the investment and management of retirement system assets.

(E) A trustee or director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets may invest in any kind of property or type of investment consistent with the standards of the “[insert state] Retirement System Board of Trustees and Retirement System Employees Prudent Investor Act.”

(F) A trustee or director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets shall not make a determination to invest or increase the investment of retirement system assets based on ideological or non-financial related criteria for or against specific industries. A trustee or director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets shall not make a determination to avoid investment of or reduce the investment of retirement system assets based on ideological or non-financial related criteria for or against specific industries. A trustee or director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets shall not make a determination to employ or terminate employment of an investment manager or consultant based on ideological or non-financial related criteria. Prior to a determination by a trustee or director or retirement system employee to avoid investment of or reduce the investment of retirement system assets in a specific industry, or employ or terminate employment of an investment manager or consultant, external expertise from an independent third-party must be consulted. The results and recommendation of the consulted expertise shall be made available for public review.

Section 3. {Diversification}

A trustee or director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets shall diversify the investments of the retirement system unless it is reasonably determined that, because of special circumstances, the purposes of the retirement system are better served without diversifying.

Section 4. {Loyalty}

A trustee or director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets shall invest and manage the retirement assets solely in the interest of the beneficiaries.

Section 5. {Investment Costs}

In investing and managing retirement system assets, a trustee or director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets may only incur costs that are appropriate and reasonable in relation to the assets of the retirement system.

Section 6. {Reviewing Compliance}

Compliance with the prudent investor rule is determined in light of the facts and circumstances existing at the time of a trustee director or retirement system employee or a trustee or director or retirement system employee who delegates approval of investing and managing retirement system assets' decision or action and not by hindsight.

Section 7. {Delegation of Investment and Management Functions}

(A) A trustee or director or retirement system employee may delegate investment and management functions. The trustee shall exercise reasonable care, skill, and caution in:

- (1) Selecting an agent;
- (2) Establishing the scope and terms of the delegation, consistent with the purposes and terms of the retirement system; and
- (3) Periodically reviewing the agent's actions in order to monitor the agent's performance and compliance with the terms of the delegation.

(B) In performing a delegated function, an agent owes a duty to the retirement system to exercise reasonable care to comply with the terms of the delegation.

(C) A trustee or director or retirement system employee of a retirement system who complies with the requirements of subsection A of this section is not liable to the beneficiaries or to the retirement system for the decisions or actions of the agent to whom the function was delegated.

(D) By accepting the delegation of a retirement system function from the trustee or director or retirement system employee of a retirement system that is subject to the laws of this state, an agent submits to the jurisdiction of the courts of this state.

Section 8. {Severability clause.}**Section 9. {Repealer clause.}****Section 10. {Effective date.}**

Other ALEC Model Policies:

The summaries of other relevant ALEC model policies are provided below in the interest of space. The full text of all ALEC model policies can be accessed at www.alec.org.

The Promoting Transparency in State Unfunded Liabilities statement of principles says that each retirement plan should report, in full, both its obligations and assets. It says, in part, “It is clear that citizens are demanding greater transparency in accounting for the costs of state and local government. Given the large and growing unfunded liabilities in pension and other post-employment benefit plans, it is crucial for state and local governments to meet accounting standards for these plans established by the Governmental Accounting Standards Board (GASB).”

The Resolution Calling for Enhanced Integrity in Public Employee Pension Plan Reporting calls upon the relevant standard-setting body, the Government Accounting Standards Board (GASB), to adopt reporting standards that require reporting as a liability on a governmental entity’s balance sheet any unfunded pension plan obligation for which it is responsible; reporting as a current expense the cost of any changes in benefits awarded on the basis of past service; clear disclosure of discount rates used in the calculation of pension liabilities; why such discount rates were selected; and the liabilities which would result if alternative discount rates were applied. It also requests GASB to send an official representative to present information and answer inquiries at a public hearing to be held by the relevant committee or committees.

The Unfunded Pension Liabilities Accounting and Transparency Act would require state retirement boards or other responsible entities to issue reports to the legislature on the funds they oversee. The reports would give the legislature several different ways of understanding the liabilities of each fund, including the outcomes of several “what if” scenarios. The act’s summary statement declares the following: “The legislature finds that the future liabilities of the state’s several post-retirement pension and benefits plans may exceed the ability of these plans to fully pay future claims, possibly requiring taxpayers to make unforeseen future contributions to ensure the solvency of these plans or the reduction or elimination of benefits to future and current retirees. Believing both of these alternatives to be unacceptable, the legislature seeks to identify the extent to which the several pension plans lack the necessary capital to pay all future obligations.”

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Appendix 3

Fischel, "Fossil Fuel Divestment"

Fossil Fuel Divestment and Public Pension Funds¹

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June 2017

I. Introduction

1. The fossil fuel divestment movement promises that the problem of climate change can be ameliorated if investors in certain companies refuse to hold the securities of those companies in their portfolios. In 2015, Professor Fischel, an author of this report, released a study examining this claim from an economic and financial perspective.² Based on well-accepted economic theory and the academic literature studying previous divestment attempts, the study concluded that fossil fuel divestment has minimal or no environmental impact because it is highly unlikely to affect the production or distribution of fossil fuels on the part of targeted companies. Moreover, not only is fossil fuel divestment ineffective, it is also costly to investors.

2. In particular, based on a 50-year retrospective sample period, the study found that an optimal equity portfolio including fossil fuel stocks outperforms a portfolio of equal risk that is divested of energy stocks by an average of 0.5 percent per year.³ These annual losses add up to a 23 percent reduction in the value of a divested portfolio over a 50-year period.⁴ This loss

1. Our qualifications are described in Appendix A. We have been assisted in preparing this report by other members of Compass Lexecon's professional staff. This study has been commissioned and financed by the Independent Petroleum Association of America (IPAA).

2. Daniel R. Fischel (2015) "Fossil Fuel Divestment: A Costly and Ineffective Investment Strategy".

3. *Id.* ¶ 24. Before adjusting for differences in risk, the divested portfolio underperforms the non-divested portfolio by 0.7 percent per year.

4. *Id.*

from divestment is due to the simple fact that a divested portfolio is suboptimally diversified, as it excludes one of the most important sectors of the economy. In fact, the diversification benefits of the energy sector exceed those of any other major sector of the economy.

3. These costs of diversification are in addition to other costs discussed in the study, including transaction costs from selling divested securities and buying substitute securities, and ongoing research costs of maintaining compliance with a divestment goal.⁵ Bessembinder (2016) estimates these additional costs for a sample of universities, and concludes that they are substantial, reducing the value of a university endowment divested of fossil fuel securities by between two percent and twelve percent over a twenty-year period.⁶

4. The previous study by Prof. Fischel focused on an optimally-weighted equity-only portfolio, but as stated in that study, actual portfolios vary in composition, and hence, vary in the costs of divestment. Therefore, although the basic fact that fossil fuel divestment generates losses as a consequence of suboptimal diversification is unassailable, estimates of these losses can vary depending on the actual portfolio composition. Cornell (2015) estimated these losses from potential divestment actions at five large U.S. university endowments, and concluded that, on a weighted average basis, fossil fuel divestment would cost these endowments approximately 0.23 percent per year.⁷

5. Likely as a consequence of these and other substantial costs, most of the major universities that have considered divestment have rejected it,⁸ or at best implemented it in a very

5. *Id.* ¶ 6.

6. Hendrik Bessembinder (2016) “Frictional Costs of Fossil Fuel Divestment”.

7. Bradford Cornell (2015) “The Divestment Penalty: Estimating the Costs of Fossil Fuel Divestment to Select University Endowments,” ¶ 8.

8. Schools that have rejected divestment include Harvard University, Princeton University, Columbia University, MIT, New York University, and the University of Michigan. For a more complete list, *see* <http://divestmentfacts.com/category/what-theyre-saying/>

limited fashion.⁹ Given the apparent failure to convince university endowments to divest, advocates appear to be increasingly turning to state and local public pension funds. The same basic economics of diversification and other costs of divestment apply to pension funds as well as they apply to university endowments. In fact, the California Public Employees' Retirement System (CalPERS) recently said the following:¹⁰

Divestment, as an active investment decision, represents a form of active risk-taking that must be considered, first and foremost, within the context of the Board's fiduciary duty. As a mature, cash-flow negative system, CalPERS is obligated to seek out and implement the portfolio construction methods that best serve our mission – the sustainable delivery of promised benefits. In efficient markets, however, limiting the opportunity set for investments has generally been shown to have a detrimental effect on performance.

6. Of course, the magnitude of the costs of divestment depends on the particular holdings of a pension fund. The purpose of this study is to analyze the costs of lost diversification due to fossil fuel divestment for major U.S. public pension funds. A key advantage of studying pension funds is that detailed data on specific securities holdings is often available, so that cost estimates can be more closely tailored to actual fund holdings. By contrast, specific holdings of university endowments are often not public information, and hence, proxies must be used. For this study, we considered 11 major U.S. public pension funds, including the largest state pension fund (CalPERS) and all of the major funds for the municipalities of New York City, Chicago, and San Francisco, as reported below.

9. Schools that have implemented divestment in a limited fashion include Stanford University, Georgetown University, and the University of Maine.

10. <https://www.calpers.ca.gov/docs/board-agendas/201702/invest/item06b-00.pdf>

Exhibit A

Public Pension Funds Analyzed

| Pension Fund | Most Recent Reported Portfolio Value (\$MM) |
|--------------------------------------|--|
| CalPERS | \$ 299,760 |
| <i>New York City</i> | |
| Teachers' Retirement System | \$ 63,652 |
| Police Pension Fund | \$ 34,930 |
| Fire Department Pension Fund | \$ 11,341 |
| NYCERS | \$ 55,945 |
| Board of Education Retirement System | \$ 4,728 |
| <i>Chicago</i> | |
| Policemen's Annuity & Benefit Fund | \$ 2,371 |
| LABF | \$ 1,141 |
| Firemen's Annuity & Benefit Fund | \$ 797 |
| MEABF | \$ 4,289 |
| <i>San Francisco</i> | |
| Employees' Retirement System | \$ 20,428 |
| Total | \$ 499,382 |

Sources: Respective pension funds.

7. Using data on these funds' current holdings, we estimated the returns on the same or similar holdings over the past 50 years, and compared them with the returns over that period from an otherwise identical portfolio, stripped of stocks targeted by divestment advocates. In particular, we considered divestment of all coal, oil, and natural gas companies, and then separately considered a broader divestment that also included utility companies.

8. A divested portfolio may differ from a non-divested portfolio not only in terms of its average return, but also in terms of riskiness. Therefore, to estimate the cost of lost diversification alone, we adjusted the divested portfolio to match the risk profile of the non-divested portfolio. With that adjustment, the narrower divestment approach (divesting only coal,

oil, and gas companies) led to risk-adjusted returns that were, depending on the specific pension fund, between 0.05 percent and 0.27 percent per year lower. The weighted average across the 11 funds was a reduction in risk-adjusted returns of 0.15 percent per year. The broader divestment approach (targeting utilities as well as coal, oil, and gas) led to risk-adjusted returns that were, depending on the specific pension fund, between 0.09 percent and 0.27 percent per year lower, with a weighted average across the 11 funds of 0.20 percent per year lower.

9. These costs of divestment add up over time. We estimate that over the past 50 years, on a risk-adjusted basis, the weighted average portfolio of the 11 funds would have suffered a 7.1 percent loss due to the narrower divestment approach, and a 9.3 percent loss due to the broader divestment approach. The expected loss due to fossil fuel divestment for particular funds varies, but we estimate that all 11 funds will suffer a shortfall as a consequence of divestment. For example, the estimated loss over 50 years for CalPERS is 6.9 percent in the narrow divestment approach and 9.4 percent in the broader divestment approach, which respectively amounts to \$2.3 trillion and \$3.1 trillion. For the group of 11 funds as a whole, the estimated losses over 50 years are \$3.8 trillion in the narrow divestment approach, and \$4.9 trillion in the broader divestment approach. (As noted above, there are also additional costs to divestment, including transaction costs and compliance costs, that serve to further reduce the value of divesting pensions.) These are funds that will be unavailable to pension recipients and which will have to be made up in some way, either with lower pension payouts, or through taxpayer bailouts.

10. Many public pension funds in the U.S. are currently deeply underfunded. The 100 largest public pensions in the U.S. are funded below 70 percent, and total unfunded

liabilities are approximately \$1.25 trillion.¹¹ Particularly given this situation, anything that reduces expected returns on pension investments, as fossil fuel divestment would, is likely to directly harm pension benefits and increase the likelihood of taxpayer bailouts.

11. The following section describes our methodology in detail and provides estimates of the losses that would be imposed upon specific pension funds due to divestment.

II. Calculation of Divestment Costs

12. For each of the 11 funds, we sought the most recent detailed information on equity holdings available.¹² For seven funds, this information was provided in publicly available reports from the fund, or was sent to us by the fund upon request.¹³ For four funds, information was available regarding portfolio allocation to various asset classes, but not specific holdings within those classes.¹⁴ In these cases, we proxied for the specific holdings of the pension fund by using the holdings of the largest U.S. mutual funds with the same benchmarks that were identified by the pension as benchmarks for each asset class.¹⁵ Appendix B provides details on a pension fund-by-pension fund basis regarding the availability of data on specific holdings and the use of benchmark mutual fund proxies for specific holdings when necessary.

13. For each equity holding of a given pension fund, we identified an industry for the company that issued the security by assigning to each holding a standard industry code

11. See, “Moody’s: U.S. states’ FY 2015 net pension liabilities reach \$1.25 trillion, with more growth to come,” Moody’s Press Release, October 6, 2016. See also, “2016 Public Pension Funding Study,” Milliman White Paper.

12. We included common stock, preferred stock, and warrants in the analysis, but excluded REITs, even though these are sometimes classified by the pension funds as equity.

13. This was the case for CalPERS, New York City Employees’ Retirement System, New York City Board of Education Retirement System, Chicago Laborers’ and Retirement Board Employees’ Annuity and Benefit Fund, Chicago Fireman’s Annuity and Benefit Fund, Chicago Municipal Employees’ Annuity and Benefit Fund, and the San Francisco Employees’ Retirement System.

14. This was the case for the New York City Teachers’ Retirement System, New York City Police Pension Fund, New York City Fire Department Pension Fund, and Chicago Policemen’s Annuity and Benefit Fund.

15. This is similar to the methodology used by Cornell (2015), *supra*.

("SIC").¹⁶ In some cases, pension funds hold mutual funds or exchange traded funds ("ETFs") which include stocks from many companies in many industries. In these cases, we replaced the mutual fund or ETF in the pension fund's portfolio with the specific holdings of that mutual fund or ETF as of the most recent date for which data are available prior to the date of the pension fund holdings information. Each of these specific holdings was then assigned an SIC code as described above.

14. Exhibit B reports the total value of equity holdings for each of the pension funds, and the total value of all holdings for which we were able to identify an SIC. Overall, for the 11 funds as a whole, we were able to identify an SIC for 92.1 percent of all holdings by value.¹⁷ Holdings lacking an SIC were dropped from the analysis.

15. We then analyzed historical returns to these holdings over the 50-year period 1966 to 2015. However, if we were to analyze the past returns of the actual securities held by the pension, two problems would arise: First, not all stocks currently held by the funds exist continuously throughout the sample period. As a result, the analysis of returns many years into the past would result in stocks currently held by the pension being dropped from the sample. Second, analyzing the past returns of securities in the current portfolio would result in "survivorship bias," in which the companies that failed during the sample period would be omitted from the analysis. Hence, instead, for each stock and for each month throughout the

16. SIC codes were identified through Capital IQ using the stock's CUSIP or ISIN when available, or the name of the stock.

17. SIC code 6798 is associated with Real Estate Investment Trusts, and, as noted above, all securities classified in this SIC code were eliminated from the analysis. Furthermore, SIC codes 6722 and 6726 are associated with open-end and closed-end funds, respectively. As noted above, we attempted to identify the specific holdings of these funds and classify each of those specific holdings into an SIC. If holdings were not available for assets with these two codes, they were determined to be unclassified. In addition, assets that were classified as funds by the pension itself, but for which holdings were not available, were also determined to be unclassified.

Exhibit B
Industry Classification of Pension Funds' Equity Holdings

| Pension Fund | Equity Portfolio | Amount Classified into Sectors | Percent Classified into Sectors |
|--------------------------------------|---------------------------|-----------------------------------|------------------------------------|
| CalPERS | \$ 150,230,914,537 | \$ 145,420,720,481 | 96.8% |
| <i>New York City</i> | | | |
| Teachers' Retirement System | \$ 11,507,149,221 | \$ 10,299,384,153 | 89.5% |
| Police Pension Fund | \$ 16,985,124,953 | \$ 16,238,551,231 | 95.6% |
| Fire Department Pension Fund | \$ 5,098,113,691 | \$ 4,888,100,748 | 95.9% |
| NYCERS | \$ 35,640,863,975 | \$ 26,391,786,575 | 74.0% |
| Board of Education Retirement System | \$ 3,057,967,874 | \$ 2,543,588,391 | 83.2% |
| <i>Chicago</i> | | | |
| Policemen's Annuity & Benefit Fund | \$ 1,222,807,486 | \$ 1,179,070,523 | 96.4% |
| LABF | \$ 593,803,410 | \$ 593,792,583 | 100% |
| Firemen's Annuity & Benefit Fund | \$ 498,912,194 | \$ 497,714,796 | 99.8% |
| MEABF | \$ 1,962,751,715 | \$ 1,951,763,893 | 99.4% |
| <i>San Francisco</i> | | | |
| Employees' Retirement System | \$ 8,950,397,480 | \$ 7,078,109,498 | 79.1% |
| Total | \$ 235,748,806,535 | \$ 217,082,582,871 | 92.1% |

Notes: Equity portfolio lists the total market value of equity securities held by the pension. Amount Classified into Sectors refers to the market value of securities for which it was possible to assign an SIC code. Percent Classified into Sectors shows Amount Classified into Sectors as a percent of the Equity Portfolio.

Sources: Respective pension funds; Capital IQ; Morningstar

sample period, we calculated the value-weighted return of all stocks in the CRSP database in the same industry sector as the stock. These returns therefore proxy for the returns a fund would earn by holding a portfolio similar to what it holds today.¹⁸

16. Through this methodology, we were able to calculate the historical average return and standard deviation (a measure of riskiness) to each pension fund's equity portfolio over a 50-

18. On some dates, there were no stocks in CRSP that matched the four-digit SIC code of a particular stock. In that case, we matched by the first three digits of the SIC code. If there were still no such stocks, then we matched the stock to all stocks with the same first two digits. Finally, if no such stocks were available, we matched the stock to all stocks in the same ten-sector classification given on Kenneth French's website: http://mba.tuck.dartmouth.edu/pages/faculty/ken_french/data_library.html.

Exhibit C-1
Average Annual Cost of Divestment Due to Lost Diversification
Narrow Divestment Approach: Coal, Oil, and Natural Gas

| Pension Fund | <i>Non-Divested Portfolio</i> | | <i>Divested Portfolio</i> | | <i>Divested Portfolio (Risk-Adj.)</i> | | Annual Cost of Divestment |
|--------------------------------------|-------------------------------|--------------------|---------------------------|--------------------|---------------------------------------|--------------------|---------------------------|
| | Average Excess Return | Standard Deviation | Average Excess Return | Standard Deviation | Average Excess Return | Standard Deviation | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
| CalPERS | 7.39% | 16.84% | 7.38% | 17.15% | 7.25% | 16.84% | 0.14% |
| <i>New York City</i> | | | | | | | |
| Teachers' Retirement System | 7.69% | 17.72% | 7.56% | 18.03% | 7.43% | 17.72% | 0.27% |
| Police Pension Fund | 8.09% | 17.16% | 8.09% | 17.41% | 7.97% | 17.16% | 0.11% |
| Fire Department Pension Fund | 8.20% | 17.48% | 8.25% | 17.85% | 8.07% | 17.48% | 0.13% |
| NYCERS | 7.67% | 17.26% | 7.66% | 17.61% | 7.51% | 17.26% | 0.16% |
| Board of Education Retirement System | 7.62% | 17.36% | 7.61% | 17.73% | 7.45% | 17.36% | 0.17% |
| <i>Chicago</i> | | | | | | | |
| Policemen's Annuity & Benefit Fund | 7.83% | 17.40% | 7.87% | 17.75% | 7.72% | 17.40% | 0.12% |
| LABF | 7.94% | 17.93% | 7.95% | 18.07% | 7.89% | 17.93% | 0.05% |
| Firemen's Annuity & Benefit Fund | 7.56% | 17.96% | 7.58% | 18.23% | 7.47% | 17.96% | 0.08% |
| MEABF | 7.64% | 17.72% | 7.64% | 17.98% | 7.53% | 17.72% | 0.11% |
| <i>San Francisco</i> | | | | | | | |
| Employees' Retirement System | 7.75% | 16.95% | 7.75% | 17.31% | 7.59% | 16.95% | 0.16% |
| Weighted Average | 7.53% | 17.00% | 7.52% | 17.31% | 7.38% | 17.00% | 0.15% |

Notes:

[1] The Narrow Divestment Approach divests from SIC Codes 1200-1399, and 2900-2999.

[2] Excess return is the annual return of the portfolio less the 3-month secondary market Treasury bill rate.

[3] The Divested Portfolio is a result of removing the divested assets from the Non-Divested Portfolio. The Risk-Adjusted Divested Portfolio allocates a fraction of the portfolio to treasury bills so that the standard deviation of the portfolio matches the standard deviation of the Non-Divested Portfolio.

[4] The Annual Cost of Divestment is the average excess return of the Non-Divested Portfolio less the average excess return of the Risk-Adjusted Divested Portfolio.

Sources: Respective pension funds; Federal Reserve Bank of St. Louis (FRED); Capital IQ; Morningstar; Calculated based on data from CRSP US Stock and Index Databases ©2017 Center for Research in Security Prices (CRSP), The University of Chicago Booth School of Business.

year period. These are reported in the first two columns of Exhibits C-1 and C-2, and reflect the best available estimate of the expected future returns to similar portfolios. For the 11 pension funds as a whole, the average annual excess return is 7.53 percent and the standard deviation is 17.0 percent.¹⁹

19. Excess return is the return minus the 3-month secondary market Treasury bill rate. To calculate the average annual excess return for a particular stock, we subtracted the Treasury bill rate from each month, quoted on a monthly basis, from the monthly return of the stock. Then, we found the average of the excess return over all months in the sample, and annualized this average by multiplying by 12. Similarly, the standard deviation was found by finding the standard deviation of excess returns over all months in the sample, and then by multiplying by $\sqrt{12}$.

Exhibit C-2
Average Annual Cost of Divestment Due to Lost Diversification
Broad Divestment Approach: Coal, Oil, Natural Gas, and Utilities

| Pension Fund | <i>Non-Divested Portfolio</i> | | <i>Divested Portfolio</i> | | <i>Divested Portfolio (Risk-Adj.)</i> | | Annual Cost of Divestment |
|--------------------------------------|-------------------------------|--------------------|---------------------------|--------------------|---------------------------------------|--------------------|---------------------------|
| | Average Excess Return | Standard Deviation | Average Excess Return | Standard Deviation | Average Excess Return | Standard Deviation | |
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
| CalPERS | 7.39% | 16.84% | 7.47% | 17.50% | 7.19% | 16.84% | 0.20% |
| <i>New York City</i> | | | | | | | |
| Teachers' Retirement System | 7.69% | 17.72% | 7.56% | 18.03% | 7.43% | 17.72% | 0.27% |
| Police Pension Fund | 8.09% | 17.16% | 8.14% | 17.56% | 7.96% | 17.16% | 0.13% |
| Fire Department Pension Fund | 8.20% | 17.48% | 8.32% | 18.07% | 8.04% | 17.48% | 0.16% |
| NYCERS | 7.67% | 17.26% | 7.79% | 18.04% | 7.45% | 17.26% | 0.22% |
| Board of Education Retirement System | 7.62% | 17.36% | 7.72% | 18.13% | 7.39% | 17.36% | 0.23% |
| <i>Chicago</i> | | | | | | | |
| Policemen's Annuity & Benefit Fund | 7.83% | 17.40% | 7.96% | 18.07% | 7.67% | 17.40% | 0.17% |
| LABF | 7.94% | 17.93% | 8.01% | 18.29% | 7.85% | 17.93% | 0.09% |
| Firemen's Annuity & Benefit Fund | 7.56% | 17.96% | 7.64% | 18.48% | 7.43% | 17.96% | 0.13% |
| MEABF | 7.64% | 17.72% | 7.71% | 18.25% | 7.49% | 17.72% | 0.15% |
| <i>San Francisco</i> | | | | | | | |
| Employees' Retirement System | 7.75% | 16.95% | 7.89% | 17.76% | 7.53% | 16.95% | 0.22% |
| Weighted Average | 7.53% | 17.00% | 7.61% | 17.64% | 7.33% | 17.00% | 0.20% |

Notes:

[1] The Broad Divestment Approach divests from SIC Codes 1200-1399, 2900-2999, and 4910-4939

[2] Excess return is the annual return of the portfolio less the 3-month secondary market Treasury bill rate

[3] The Divested Portfolio is a result of removing the divested assets from the Non-Divested Portfolio. The Risk-Adjusted Divested Portfolio allocates a fraction of the portfolio to treasury bills so that the standard deviation of the portfolio matches the standard deviation of the Non-Divested Portfolio

[4] The Annual Cost of Divestment is the average excess return of the Non-Divested Portfolio less the average excess return of the Risk-Adjusted Divested Portfolio

Sources: Respective pension funds; Federal Reserve Bank of St. Louis (FRED); Capital IQ; Morningstar; Calculated based on data from CRSP US Stock and Index Databases ©2017 Center for Research in Security Prices (CRSP), The University of Chicago Booth School of Business

17. We then calculated similarly the average return for “divested” versions of each pension fund portfolio. We considered two types of divestments: a “narrow” divestment excluding only stocks in the coal, oil, and natural gas industries,²⁰ and a “broader” divestment that also includes utilities.²¹ As discussed in Professor Fischel’s previous study, divestment advocates do not come close to agreeing with each other on which companies are “fossil fuel” companies and should be targeted for divestment;²² hence, it is reasonable to consider alternative approaches to divestment.

20. SIC 1200-1399 and 2900-2999.

21. SIC 1200-1399, 2900-2999, and 4910-4939.

22. Fischel (2015), *supra*, ¶¶ 30-31.

18. The third and fourth columns of Exhibits C-1 and C-2 report the average annual return and standard deviation for the narrow and broader divested portfolios, respectively. For the 11 pension funds as a whole, the average annual excess return for the “narrow” divested portfolio (Exhibit C-1) is 7.52 percent and the standard deviation is 17.3 percent. In the case of the “broader” divestment (Exhibit C-2), the average annual excess return is 7.61 percent and the standard deviation is 17.6 percent.

19. As shown in Exhibits C-1 and C-2, a divested portfolio is, on average, riskier than a non-divested portfolio. In order to compare the divested and non-divested portfolios on an apples-to-apples basis, we adjusted the divested pension fund portfolios for differences in riskiness that occur when the composition of a portfolio changes. In particular, we scaled the mean and standard deviation of each divested portfolio by the same factor that makes the standard deviation of the divested portfolio equal to the standard deviation of the equivalent non-divested portfolio.²³ This is reported in columns 5 and 6 of Exhibits C-1 and C-2.

20. Finally, we compared the average annual historical return of each pension fund with the average return of the risk-adjusted equivalent divested pension fund. This is the expected cost of fossil fuel divestment due to lost diversification benefits, and it is reported in column 7 of Exhibits C-1 and C-2. In all cases, both narrow and broader divestment is costly. For narrow divestment, the risk-adjusted diversification cost of divestment ranges between 0.05 percent per year for the Chicago Laborers’ and Retirement Board Employees’ Annuity and Benefit Fund and 0.27 percent per year for the New York City Teachers’ Retirement System. For broader divestment, the risk-adjusted diversification cost of divestment ranges between 0.09 percent per year and 0.27 percent per year for the same two pension funds.

23. Scaling the mean and standard deviation by the same factor essentially amounts to investing a portion of the portfolio in 3-month Treasury bills and the remaining portion in the unadjusted divested portfolio, with precise weights chosen so that the volatility of the risk-adjusted divested portfolio matches the volatility of the original non-divested portfolio.

21. Overall across all 11 funds, the weighted average risk-adjusted diversification cost of divestment is 0.15 percent for narrow divestment and 0.20 percent for broader divestment.

22. Exhibits D-1 and D-2 show how these costs translate into real dollars each year. The average annual cost of divestment in dollars in the case of narrow divestment ranges from more than \$324,000 for the Chicago Laborers' and Retirement Board Employees' Annuity and Benefit Fund to \$210 million for CalPERS. For the case of broad divestment, the cost of divestment ranges from more than \$518,000 to \$289 million for these same funds, respectively.

23. These losses also add up quickly over time to dramatically reduce the value of a pension fund. Exhibits D-1 and D-2 also show the cost of fossil fuel divestment for each fund over 50 years by determining what the value each portfolio would have been in 2015, had the fund invested the current value of its equity portfolio in 1966. In other words, these calculations reflect actual equity returns over the past 50 years, applied to the current value of the equity portfolio. On average across these 11 funds, after 50 years, the divested portfolio value is 7.1 percent lower in the narrow divestment case and 9.3 percent lower in the broad divestment case, compared with the value of the equivalent non-divested portfolio.

24. The total expected loss over 50 years for these 11 pension funds due to fossil fuel divestment is \$3.8 trillion in the narrow divestment case, and \$4.9 trillion in the broad divestment case. CalPERS in particular, being the largest of the pension funds we considered, would be expected to lose \$2.3 trillion in the narrow divestment case, and \$3.1 trillion in the

Exhibit D-1
Divestment Shortfall Over 50 Years (\$MM)
Narrow Divestment Approach: Coal, Oil, and Natural Gas

| Pension Fund | Annual Cost of Divestment | | Cost of Divestment over 50 years | | |
|--------------------------------------|---------------------------|------------------|----------------------------------|-------------------|------------------|
| | Portfolio Value | Return Shortfall | Current Dollar Shortfall | Percent Shortfall | Dollar Shortfall |
| CalPERS | \$ 145,421 | 0.14% | \$ 210.336 | 6.90% | \$ 2,313,271 |
| <i>New York City</i> | | | | | |
| Teachers' Retirement System | \$ 10,299 | 0.27% | \$ 27.370 | 12.25% | \$ 313,070 |
| Police Pension Fund | \$ 16,239 | 0.11% | \$ 18.472 | 5.44% | \$ 280,535 |
| Fire Department Pension Fund | \$ 4,888 | 0.13% | \$ 6.427 | 6.26% | \$ 100,009 |
| NYCERS | \$ 26,392 | 0.16% | \$ 41.453 | 7.45% | \$ 502,519 |
| Board of Education Retirement System | \$ 2,544 | 0.17% | \$ 4.294 | 7.98% | \$ 50,267 |
| <i>Chicago</i> | | | | | |
| Policemen's Annuity & Benefit Fund | \$ 1,179 | 0.12% | \$ 1.376 | 5.59% | \$ 18,033 |
| LABF | \$ 594 | 0.05% | \$ 0.324 | 2.65% | \$ 4,329 |
| Firemen's Annuity & Benefit Fund | \$ 498 | 0.08% | \$ 0.418 | 4.03% | \$ 4,554 |
| MEABF | \$ 1,952 | 0.11% | \$ 2.168 | 5.33% | \$ 25,125 |
| <i>San Francisco</i> | | | | | |
| Employees' Retirement System | \$ 7,078 | 0.16% | \$ 11.524 | 7.72% | \$ 149,358 |
| Total | \$ 217,083 | 0.15% | \$ 324.162 | 7.10% | \$ 3,761,071 |

Notes:

[1] The Narrow Divestment Approach divests from SIC Codes 1200-1399, and 2900-2999.

[2] Portfolio Value is the Amount Classified into Sectors, given by Exhibit B.

[3] Annual Return Shortfall is the Annual Cost of Divestment in Exhibit C-1. Current Dollar Shortfall is obtained by applying this cost to the portfolio value.

[4] The Percent Shortfall over 50 years is calculated as the difference between the Non-Divested and Risk-Adjusted Divested Portfolio after the 50 year period, 1966-2015, taken as a percent of the Non-Divested Portfolio. The analysis assumes that the portfolio value on January 1, 1966 is given by the Portfolio Value listed above.

[5] The Dollar Shortfall over 50 years is calculated as the difference between the Non-Divested and Risk-Adjusted Divested Portfolio after the 50 year period, 1966-2015. The analysis assumes that the portfolio value on January 1, 1966 is given by the Portfolio Value listed above.

Sources: Respective pension funds; Federal Reserve Bank of St. Louis (FRED) Capital IQ; Morningstar; Calculated based on data from CRSP US Stock and Index Databases ©2017 Center for Research in Security Prices (CRSP), The University of Chicago Booth School of Business.

Exhibit D-2
Divestment Shortfall Over 50 Years (\$MM)
Broad Divestment Approach: Coal, Oil, Natural Gas, and Utilities

| Pension Fund | Annual Cost of Divestment | | Cost of Divestment over 50 years | | |
|--------------------------------------|---------------------------|------------------|----------------------------------|-------------------|------------------|
| | Portfolio Value | Return Shortfall | Current Dollar Shortfall | Percent Shortfall | Dollar Shortfall |
| CalPERS | \$ 145,421 | 0.20% | \$ 289.133 | 9.37% | \$ 3,140,972 |
| <i>New York City</i> | | | | | |
| Teachers' Retirement System | \$ 10,299 | 0.27% | \$ 27.370 | 12.25% | \$ 313,070 |
| Police Pension Fund | \$ 16,239 | 0.13% | \$ 21.455 | 6.30% | \$ 324,686 |
| Fire Department Pension Fund | \$ 4,888 | 0.16% | \$ 7.728 | 7.49% | \$ 119,596 |
| NYCERS | \$ 26,392 | 0.22% | \$ 57.890 | 10.26% | \$ 692,150 |
| Board of Education Retirement System | \$ 2,544 | 0.23% | \$ 5.829 | 10.69% | \$ 67,309 |
| <i>Chicago</i> | | | | | |
| Policemen's Annuity & Benefit Fund | \$ 1,179 | 0.17% | \$ 1.957 | 7.87% | \$ 25,389 |
| LABF | \$ 594 | 0.09% | \$ 0.518 | 4.21% | \$ 6,885 |
| Firemen's Annuity & Benefit Fund | \$ 498 | 0.13% | \$ 0.634 | 6.07% | \$ 6,865 |
| MEABF | \$ 1,952 | 0.15% | \$ 2.994 | 7.29% | \$ 34,390 |
| <i>San Francisco</i> | | | | | |
| Employees' Retirement System | \$ 7,078 | 0.22% | \$ 15.771 | 10.42% | \$ 201,663 |
| Total | \$ 217,083 | 0.20% | \$ 431.280 | 9.34% | \$ 4,932,975 |

Notes:

[1] The Broad Divestment Approach divests from SIC Codes 1200-1399, 2900-2999, and 4910-4939.

[2] Portfolio Value is the Amount Classified into Sectors, given by Exhibit B.

[3] Annual Return Shortfall is the Annual Cost of Divestment in Exhibit C-2. Current Dollar Shortfall is obtained by applying this cost to the portfolio value.

[4] The Percent Shortfall over 50 years is calculated as the difference between the Non-Divested and Risk-Adjusted Divested Portfolio after the 50 year period, 1966-2015, taken as a percent of the Non-Divested Portfolio. The analysis assumes that the portfolio value on January 1, 1966 is given by the Portfolio Value listed above.

[5] The Dollar Shortfall over 50 years is calculated as the difference between the Non-Divested and Risk-Adjusted Divested Portfolio after the 50 year period, 1966-2015. The analysis assumes that the portfolio value on January 1, 1966 is given by the Portfolio Value listed above.

Sources: Respective pension funds; Federal Reserve Bank of St. Louis (FRED) Capital IQ; Morningstar; Calculated based on data from CRSP US Stock and Index Databases ©2017 Center for Research in Security Prices (CRSP), The University of Chicago Booth School of Business.

broad divestment case, over 50 years due to fossil fuel divestment. These are amounts that would be unavailable to pay to pension recipients, and as a consequence, pensions would either need to pay less to pensioners or else seek other sources of funds, such as taxpayer bailouts, to compensate for the losses due to divestment.

25. The costs estimated above are solely those attributable to lost diversification benefits for the equity portion of these pension funds' portfolios. There are likely to also be costs from lost diversification when a fund divests its non-equity holdings as well, including corporate bonds, alternative strategy holdings such as hedge funds or private equity, and other investments. Moreover, as discussed above, these diversification costs of fossil fuel divestment are only one category of costs that a pension fund would incur. In addition, there are transaction costs from selling fossil fuel securities (and replacing them with other securities), such as the bid-ask spread and the price impact of trades, as well as commissions that may be owed on transactions. There are also likely to be ongoing compliance costs to maintain a pension fund's adherence to their pledged standard of fossil fuel divestment. All of these costs are in addition to the substantial costs of fossil fuel divestment for pension funds we estimated above.

26. Of course, other pension funds besides the 11 we discuss here may have different holdings, and hence, different costs of divestment. But these data show that the costs of divestment are likely to be substantial in any case. Overall, fossil fuel divestment very likely has no environmental benefits and only serves to penalize public pension funds at a time when these funds desperately need higher returns to cover their current and future obligations.

Appendix A: Qualifications

Professor Daniel R. Fischel

I am President of Compass Lexecon, a consulting firm that specializes in the application of economics to a variety of legal and regulatory issues. I am also the Lee and Brena Freeman Professor of Law and Business Emeritus at The University of Chicago Law School. I have served previously as Dean of The University of Chicago Law School, Director of the Law and Economics Program at The University of Chicago, and as Professor of Law and Business at The University of Chicago Graduate School of Business, the Kellogg School of Management at Northwestern University, and the Northwestern University Law School.

Both my research and my teaching have concerned the economics of corporate law and financial markets. I have published approximately fifty articles in leading legal and economics journals and am coauthor, with Judge Frank Easterbrook of the Seventh Circuit Court of Appeals, of the book *The Economic Structure of Corporate Law* (Harvard University Press, 1991). Courts of all levels, including the Supreme Court of the United States, have cited my articles as authoritative.

I have served as a consultant or adviser on economic issues to, among others, the United States Department of Justice, the United States Securities and Exchange Commission, the National Association of Securities Dealers, the New York Stock Exchange, the Chicago Board of Trade, the Chicago Mercantile Exchange, the New York Mercantile Exchange, the United States Department of Labor, the Federal Deposit Insurance Corporation, the Resolution Trust Corporation, the Federal Housing Finance Agency, and the Federal Trade Commission.

I am a member of the Board of Governors of the Becker Friedman Institute at the University of Chicago and an Advisor to the Corporate Governance Project at Harvard University. I am also a former member of the Board of Directors of the Center for the Study of

the Economy and the State at The University of Chicago, and former Chairman of the American Association of Law Schools' Section on Law and Economics. I have testified as an expert witness in multiple proceedings in federal and state courts across the country.

Christopher R. Fiore

I am a Vice President at Compass Lexecon, where I have been employed since 2012. In this role, I have applied financial and economic analysis to a variety of legal and regulatory matters. Prior to joining Compass Lexecon, I received my Ph.D. in Economics from Yale University, where I specialized in financial economics, macroeconomics, and applied econometrics, and served as a teaching assistant in a variety of economics courses. I also hold a bachelor's degree in economics and mathematics from the University of Rochester, as well as a bachelor's degree in classical guitar performance from the Eastman School of Music. I have also previously worked as an intern at the Federal Reserve Board of Governors. I continue to conduct research, and have published articles in academic finance journals.

Todd D. Kendall

I am an Executive Vice President at Compass Lexecon. Prior to joining Compass Lexecon in 2008, I served for five years on the faculty of the economics department at Clemson University, and taught in the undergraduate, professional, and economics Ph.D. programs at that university. I have published more than a dozen articles in academic economics journals and collected volumes on the topic of applied economic theory, and which employ statistical and econometric methods.

I have been employed at Compass Lexecon since 2008, during which time I have consulted on a wide range of regulatory, litigation, merger and other business matters, and

testified in court as an expert witness. I received a bachelor's degree in mathematics from the University of Chicago in 1998 and a doctorate in economics from the University of Chicago in 2003.

Appendix B: Data sources for individual pensions

1. CalPERS

A detailed list of holdings is available online.²⁴ Holdings are divided into the following asset classes: Cash Equivalents, Debt Securities, Domestic REITs, International REITs, Domestic Equity, International Equity, Derivatives, Real Estate, Private Equity, Infrastructure, and Forestland. We have analyzed the portfolio of Domestic Equity and International Equity, totaling approximately \$150.2B in value.

2. *New York City Teachers' Retirement System*

Information about holdings as of June 30, 2016 of the funds available through the Teachers' Retirement System is available online.²⁵ Six different funds are listed: Pension Fund, Diversified Equity Fund, Bond Fund, International Equity Fund, Inflation Protection Fund, and Socially Responsive Equity Fund. We analyze the Pension Fund, but detailed holdings are not available for this fund. Of the fund's \$62.1B in market value, \$11.5B is invested in a mutual fund that tracks the EAFE Index. To proxy for the holdings of this fund, we found the holdings of the largest U.S. mutual fund, by AUM, which lists the MSCI EAFE Index as its benchmark.

24. See, "2014-2015 Annual Investment Report," <https://www.calpers.ca.gov/docs/forms-publications/annual-investment-report-2015.pdf>

25. See, "Investment Portfolios, June, 30, 2016," <https://www.trsnyc.org/ASPENMemberPro/WebContent/publications/financialReports/investmentPortfolio.pdf>

3. *New York City Police Pension Fund*

The Annual Financial Report of the Police Pension Fund is available online.²⁶ The report contains a list of broad investment funds that the pension invests in, with performance benchmarks. Since the pension does not provide detailed holdings, the holdings of the largest U.S mutual funds with those benchmarks as their own benchmarks were used as proxies for the holdings of the funds.

4. *New York City Fire Department Pension Fund*

The broad classification of holdings is available online as of June 30, 2016, in the “Monthly Performance Review” document.²⁷ The document contains a list of broad investment funds that the pension invests in, with performance benchmarks. Since the pension does not provide detailed holdings, the holdings of the largest U.S mutual funds with those benchmarks as their own benchmarks were used as proxies for the holdings of the funds.

5. *New York City Employees’ Retirement System*

We received holdings directly from the pension fund, divided into equity and fixed income holdings. The fund further classified equity holdings into the following categories: Common Stock, Common Stock Unit, Depository Receipts, Limited Partnership Units, Mutual Funds, Non-Security Asset-Stock, Preferred Stock, Real Estate Investment Trust, Rights, and Warrants. All securities identified as Real Estate

26. See, “Police Pension Fund, A Pension Trust Fund of the City of New York, for fiscal years ended June 30, 2016 and June 30, 2015,” <http://www.nyc.gov/html/nycppf/downloads/pdf/CAFR%202016.pdf>

27. See, “Monthly Performance Review, June 2016,” <https://comptroller.nyc.gov/wp-content/uploads/documents/PDF-Package-Fire-8.2016-Monthly-Performance-Review-Material-10.0-Version.pdf>

Investment Trusts were excluded from the analysis, and the resulting portfolio had market value totaling \$35.6B. Assets were considered to be classified as funds by the pension if they were listed as part of one of the following categories: Mutual Funds, Limited Partnership Units, or Non-Security Asset-Stock.

6. *New York City Board of Education Retirement System*

We received holdings directly from the pension fund, divided into equity and fixed income holdings. The fund further classified equity holdings into the following categories: Common Stock, Common Stock Unit, Depository Receipts, Limited Partnership Units, Mutual Funds, Non-Security Asset-Stock, Preferred Stock, Real Estate Investment Trust, Rights, and Warrants. All securities identified as Real Estate Investment Trusts were excluded from the analysis, and the resulting portfolio had market value totaling \$3.06B. Assets were considered to be classified as funds by the pension if they were listed as part of one of the following categories: Mutual Funds, Limited Partnership Units, or Non-Security Asset-Stock.

7. *Chicago Laborers' & Retirement Board Employees' Annuity & Benefit Fund*

We received detailed holdings as of 11/23/2016 directly from the pension, but market values are as of 10/31/2016. Holdings are divided into two asset classes: Equities and Fixed Income. Equities are further classified into the following sub-categories: Common Stock, Funds – Common Stock, Funds – Equities ETF, Other Equity Assets, Preferred Stock, Rights/Warrants, and Stapled Securities. Assets were considered to be classified as funds by the pension if they were listed as part of one of the following categories: Funds – Common Stock and Funds – Equities ETF.

8. *Chicago Fireman's Annuity and Benefit Fund of Chicago*

We received holdings as of 9/30/2016 directly from the pension. The list of holdings did not divide the holdings into asset classes, so we eliminated keywords that suggested that the holding could be a part of a non-equity asset class. The process left a portfolio with value of \$498.9M, short of the \$533.5M cited by the fund as the value of its equity.²⁸

9. *Chicago Municipal Employees' Annuity and Benefit Fund of Chicago*

We received detailed holdings of the pension as of August 2016. The holdings are divided into the following asset classes: Equity, Fixed Income, Real Estate, Venture Capital and Partnerships, Other Assets, Derivative Offsets, Hedge Funds, Recoverable Taxes, Cash and Cash Equivalents, and Adjustments to Cash. We analyzed the equity portfolio, which had market value of approximately \$2.0B. Equities were further classified into the following categories: Common Stock, Preferred Stock, Stapled Securities, Rights/Warrants, Equity Derivatives – futures, and Funds – Equities ETF. Assets were considered to be classified as funds by the pension if they were classified as: Funds – Equities ETF.

10. *Chicago Policemen's Annuity & Benefit Fund*

28. See, "Firemen's Annuity and Benefit Fund of Chicago, Asset Allocation and Performance, September 30, 2016," <http://www.fabf.org/PDF/Financial/Asset/09-30-2016.pdf>

The broad allocation of the pension fund is available online.²⁹ The broad asset classes are: U.S. Equity, Non-U.S. Equity, Fixed Income, Global Asset Allocation, Private Equity, Hedge Funds, Real Estate, Real Assets, Infrastructure, and Cash. The total value of U.S. equity is \$589.3M and the total value of Non-U.S. Equity is \$633.5M. Benchmarks were provided for each of these two asset classes, and the holdings of the largest U.S. mutual funds by AUM citing those benchmarks as its own benchmarks were used as proxies for the holdings of the U.S. Equity and Non-U.S. Equity asset classes.

11. San Francisco Employees' Retirement System

We received equity and fixed income holdings directly from the fund. Equity holdings included Real Estate Investment Trusts, so we eliminated any holding with key words "REIT" or "REAL ESTATE". The equity portfolio we analyzed totaled \$9.0B in value.

29. See, "Policeman's Annuity and Benefit Fund of Chicago, Performance Update as of September 30, 2016," <http://www.chipabf.org/ChicagoPolicePension/PDF/Investments/Performance.pdf>

Appendix 4

Savidge, "Tennessee Public Pensions"

TENNESSEE PUBLIC PENSIONS:

A Model for Pension Reform

THOMAS SAVIDGE

A POLICY STUDY OF



Political Economy
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MIDDLE TENNESSEE STATE UNIVERSITY

“Tennessee Public Pensions: A Model for Pension Reform”

A Policy Study by the Political Economy Research Institute at MTSU

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Abstract: Tennessee’s public pension system recent reforms passed in 2014 have helped make Tennessee one of the best public pension systems in the United States. This paper will first examine the reforms made by Tennessee. The sections that follow will examine how Tennessee’s public pension plans have fared compared to other states that have made reforms (i.e. Michigan and Wisconsin) and states where no reforms to defined benefit pension plans have been made (i.e. Alabama, Connecticut, and Illinois) in terms of contribution rates, funding ratios, and liability valuations. The second part of this paper will make recommendations for future reform that will help keep Tennessee one of the most competitive public pension plans in the United States.

JEL Subject Codes: H72; H75

Keywords: public pensions, Tennessee, pension reform

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INDEX

| | |
|---|-----------|
| An Overview of the Tennessee Consolidated Retirement System | 5 |
| Calculation of Benefits for Defined Benefit Legacy Plans | 6 |
| Calculating Benefits for the TCRS Hybrid Pension Plans | 8 |
| GASB 67 and 68: Nationwide Changes for Calculating Pension Obligations | 10 |
| TCRS Contribution Rates Compared to the Rest of the Country | 13 |
| TCRS Actuarial Valuations | 15 |
| Methods for Liability Valuation | 18 |
| Unfunded Liability Growth: How TCRS Compares Across the Nation | 22 |
| Keeping TCRS Competitive: Recommendations for Further Reform | 25 |
| Conclusion | 27 |
| References | 28 |

An Overview of the Tennessee Consolidated Retirement System

The Tennessee Consolidated Retirement System (TCRS) was established in 1972 by an Act of the Tennessee General Assembly. The Act consolidated seven existing retirement systems to provide retirement, disability, and death benefits to state employees, public school teachers, higher education employees, and employees of participating local governments.¹ The Board of Trustees consists of 20 members: nine *ex officio* members from the executive, legislative, and judicial branches of state government, nine active TCRS members, and two retired TCRS members. All members must be vested members of the TCRS.² By state law, the State Treasurer serves as chairman of the Board of Trustees and as a custodian of TCRS funds.³ Starting on July 1, 1981, the TCRS became noncontributory for most state employees. The State of Tennessee assumed the employee contributions to the TCRS on behalf of those employees of up to 5% of the employees' earnable contributions.⁴ State employees and retirees who became members of the pension system before July 1, 1981, had the employer-assumed contributions credited to their respective retirement accounts.⁵ State employees who became members of the TCRS after July 1, 1981, do not contribute to this pension plan.⁶

Two major changes occurred in 2014, one nationwide and the other in Tennessee.

Nationwide, the Government Accounting Standards Board (GASB) issued statements 67 and 68,

¹ State of Tennessee Department of Treasury. "Tennessee Consolidated Retirement System Comprehensive Annual Financial Report (CAFR) For the Fiscal Year Ended June 30, 2019." 30 June 2019. p. 81 Retrieved from: https://treasury.tn.gov/Portals/0/Documents/Retirement/CAFR%20Reports/2019/2019%20CAFR_Full%20Report.pdf

² State of Tennessee Department of Treasury. "Tennessee Consolidated Retirement System CAFR." p. 81.

³ State of Tennessee Department of Treasury. "Tennessee Consolidated Retirement System CAFR." p. 81.

⁴ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees." Retrieved from: <https://treasury.tn.gov/Retirement/Information-and-Resources/Forms-and-Guides>

⁵ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees."

⁶ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees."

affecting how pension liabilities were reported (discussed in detail in the next section). In Tennessee, all employees hired after June 30, 2014 (the end of fiscal year 2014) were enrolled in the new Hybrid Pension plans, and employees hired on or before June 30, 2014, remained in the traditional defined benefit plan (now known as the Legacy plans). The Hybrid plans consist of a defined benefit pension and a defined contribution portion (401(k) and 457 plans where an employee can make before or after-tax contributions and select their own investment options).⁷ Currently, members must complete five years of creditable service for both Legacy and Hybrid plans to a TCRS covered employer in order to become eligible to receive a pension (also known as vested).⁸

Calculation of Benefits for Defined Benefit Legacy Plans

TCRS plans are a traditional defined benefit plan, a plan that provides participants with a predefined benefit based on a formula that takes into account an employee's compensation, years of service (30 years of completed service), age (starting at 60), or a combination.⁹ The general formula for calculating the annual service retirement allowance (the benefits a retiree receives each year) is expressed in equation 1 below¹⁰:

$$(1) \text{ Annual Benefit} = \text{Benefit Accrual Factor} \times \text{AFC} \times \text{Years of Service}$$

⁷ State of Tennessee Department of Treasury. "TCRS Key Pension Terms." Retrieved from: <https://publicreports.treasury.tn.gov/>

⁸ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees."

⁹ State of Tennessee Department of Treasury. "TCRS Key Pension Terms." Retrieved from: <https://publicreports.treasury.tn.gov/>

¹⁰ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees." Sept. 2019. Retrieved from: <https://treasury.tn.gov/Portals/0/Documents/Retirement/Forms%20and%20Guides/Active%20Members/LegacyStateandHigherEdMemberGuide.pdf>

Tennessee state law sets the benefit accrual factor, which is currently 1.5%.¹¹ For public safety workers, instead of a Benefit Accrual Factor, a “Bridge Factor” of 0.75% is used to determine the Annual Benefit.¹² Divide the Annual Benefit by 12 to determine the member’s monthly retirement allowance. Any changes to the Tennessee Consolidated Retirement System must be made through the legislative branch. The Average Final Compensation (AFC) is the average of the member’s five highest consecutive years of earnable compensation (although federal law limits the maximum amount of compensation that can be recognized by a defined benefit plan) and the maximum annual base benefit payable at retirement is limited to 94.5% of the member’s AFC.¹³ Years of Creditable Service consist of membership service under the Legacy Plan and any other periods of public service under an employer participating in the TCRS.¹⁴ The TCRS also notes that members may establish creditable service time if they have previously withdrawn service, military, educational, or peacekeeping service that interrupted member’s public employment, and unused accumulated sick leave at retirement.¹⁵ A vested member becomes eligible for early retirement benefits when they reach age 55, but benefits are permanently reduced by 0.4% for each month the date of retirement precedes the service retirement eligibility (age 60 or 30 years of service).¹⁶ It is important to note that, in terms of the TCRS, early retirement is distinct from retirement due to disability. Disability retirement is defined as either

¹¹ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees.”

¹² State of Tennessee Department of Treasury. “TCRS Supplement for State Public Safety Officers-Legacy State Employees Guide.” Dec. 2019. Retrieved from:

<https://treasury.tn.gov/Portals/0/Documents/Retirement/Member/LegacyMemberSupplementGuideStatePublicSafetyOfficers.pdf>

¹³ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees.”

¹⁴ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees.”

¹⁵ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees.”

¹⁶ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Legacy Retirement Plans for State and Higher Education Employees.”

ordinary disability¹⁷ or accidental disability¹⁸ and it categorized and calculated separately in annual financial reports.

The general formula for calculating early retirement is expressed in equation 2 below:

$$(2) \text{ Annual Benefit} = \text{Benefit Accrual Factor} \times \text{AFC} \times \text{Years of Service} \times \text{Early Reduction Factor}$$

Utilizing these different benefit calculations is one way the TCRS is prepared to adequately fund Legacy pension plans. The Legacy plans also make cost-of-living adjustments based on the Consumer Price Index.¹⁹

Calculating Benefits for the TCRS Hybrid Pension Plans

The TCRS Hybrid Pension plans are a combination of a defined benefit plan and a 401(k) deferred compensation plan.

The benefit formula for the defined benefit plan is similar to the formula in the Legacy Pension plans but with a few key differences. First, the Benefit Accrual Factor in the hybrid plan is lower than the legacy plan, set to 1% (compared with 1.5% for the Legacy Plan). Second, a member becomes eligible for unreduced retirement benefits upon reaching age 65 (5 years older than the eligibility age for the Legacy Plan) and completion of five years of credible service or reaching the Rule of 90.²⁰ The Rule of 90 is when a member's age and years of credible service

¹⁷ When a member has at least five years of credible service and suffers from a total and permanent disability that existed at and since the member's separation from employment.

¹⁸ When a member suffers a disability that is the result of a job-related accident or incident that occurred without the negligence on part of the member while the member was on the job. No minimum service requirement is necessary but members must apply within one year of the member's last paid day of employment or within two years of the accident or incident causing the disability.

¹⁹ According to the Legacy Pension Plans description, any retired member who has received monthly retirement benefits for at least 12 full months on July 1 of each year is eligible to receive an increase in benefits if there is a Consumer Price Index of at least 0.5% for the preceding calendar year. The amount of increase will be 1% if the CPI increases 0.5% to just below 1%. If the CPI increases 1% or more in any year, retired members will receive an amount equal to the increase of the CPI but no greater than 3%.

²⁰ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Hybrid Retirement Plans for State Employees and Teachers." April 2019. P. 6 Retrieved from: <https://treasury.tn.gov/Portals/0/Documents/Retirement/Forms%20and%20Guides/Active%20Members/HybridMemberGuide.pdf>

sum to 90 (i.e., a member age 55 with 35 years of credible service reaches the Rule of 90).²¹ In addition, a member becomes eligible for early retirement upon reaching age 60 (5 years older than the eligibility age for the Legacy Plan) and completion of five years of credible service or the Rule of 80 (similar to the Rule of 90 except member age and years of credible service sum to 80). There is also a permanent actuarial reduction determined by how far the member is away from service retirement at the date of early retirement (which could be larger than early reduction factor for the Legacy plan, depending on the member's particular circumstances).²² The Early Reduction Factor is calculated in equation 3 below²³:

$$(3) \text{ Reduction Multiplier} \times \text{Months Preceding Service} = \text{Early Reduction Factor}$$

Third, the maximum benefit accrual is limited to the lower of 90% of the member's AFC or the base benefit in effect at the time of the member's retirement (\$87,815.51 based on Tennessee law).²⁴ This limit is subject to adjustment based on the plans' cost-of-living adjustments, just like the Legacy Pension plans.²⁵ These differences from the Legacy defined benefit structure reflect demographic changes (i.e. increases in life expectancy) while keeping the defined benefit portion sustainable for future members.

²¹ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Hybrid Retirement Plans for State Employees and Teachers." April 2019. P. 6 Retrieved from: <https://treasury.tn.gov/Portals/0/Documents/Retirement/Forms%20and%20Guides/Active%20Members/HybridMemberGuide.pdf>

²² State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Hybrid Retirement Plans for State Employees and Teachers." p. 6

²³ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Hybrid Retirement Plans for Public Safety Officers." Dec. 2019. p. 6 Retrieved online: <https://treasury.tn.gov/Portals/0/Documents/Retirement/Member/HybridMemberSupplementGuideStatePublic%20SafetyOfficers.pdf>

²⁴ State of Tennessee Department of Treasury. "TCRS Active Member Resource Guides for Hybrid Retirement Plans for State Employees and Teachers." p. 6

²⁵ According to the Hybrid Pension Plans description, any retired member who has received monthly retirement benefits for at least 12 full months on July 1 of each year is eligible to receive an increase in benefits if there is a Consumer Price Index of at least 0.5% for the preceding calendar year. The amount of increase will be 1% if the CPI increases 0.5% to just below 1%. If the CPI increases 1% or more in any year, retired members will receive an amount equal to the increase of the CPI but no greater than 3%.

The defined contribution plan, as previously stated, allows members to invest pre-tax and after-tax dollars in investment options of their choice that are offered by the plan. A member is immediately vested in the 401(k) and can decide how the contributions should be invested given their specific goals, risk tolerance, and timeline. Upon retirement, members receive the payment based on the amount saved plus any accumulated earnings from investments.²⁶ In addition to the 401(k), state and higher education employees may enroll in the 457(b) defined contribution plan, allowing members to save and invest additional money for retirement.²⁷ The 457(b) option is also available for teachers whose employers have elected to offer the plan.²⁸ Members of the Legacy plans are also eligible to enroll into the 401(k) and 457(b) plans, but they must opt into the plans themselves.²⁹

GASB 67 and 68: Nationwide Changes for Calculating Pension Obligations

The Governmental Accounting Standards Board (GASB) statements 67 and 68 went into effect in FY 2014 and 2015, respectively. In addition to complying with GASB statements, the TCRS also utilizes a user-friendly website where employers and employees can easily access plan information, investment education, financial documents, and actuarial valuations of each pension plan.

The new information required by GASB 67 and 68 is reported in the “Required Supplementary Information” section at the end of each state’s comprehensive annual financial

²⁶ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Hybrid Retirement Plans for State Employees and Teachers. p. 3

²⁷ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Hybrid Retirement Plans for State Employees and Teachers. p. 3

²⁸ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Hybrid Retirement Plans for State Employees and Teachers. p. 3

²⁹ State of Tennessee Department of Treasury. “TCRS Active Member Resource Guides for Hybrid Retirement Plans for State Employees and Teachers.” p. 11

report (CAFR) and in actuarial valuation documents for each pension plan.³⁰ These notes include a breakdown of the asset valuations and Fiduciary Net Position for all pension plans, Actuarially Determined Contribution (ADC), how the pension plan discount rate is calculated, and information about liability valuations. The net pension liability is shown in equation 4 below:

$$(4) \text{ Net Pension Liability} = \text{Actuarial Value of Assets} - \text{Actuarially Accrued Liabilities}$$

If the value of the Actuarially Accrued Liabilities is greater than the Actuarial Value of Assets, the Net Pension Liability will show that there are unfunded pension liabilities. Another important measure of the health of a defined benefit pension plan is the plan's funding ratio. That is expressed in equation 5 below:

$$(5) \text{ Funding Ratio} = \frac{\text{Actuarial Value of Assets}}{\text{Actuarial Accrued Liabilities}}$$

The larger the value of liabilities, the lower the funding ratio, and the less "healthy" a defined benefit pension plan becomes. As recommended by the American Academy of Actuaries, plans should strive for 100% funding ratio or greater.³¹

Under GASB 68, state and local governments were now obligated to report unfunded pension liabilities on state balance sheets as opposed to just the actuarial determined contribution or ADC (previously known as the Annual Required Contribution or ARC). The ADC is an annual payment made by employers that consists of the normal costs for the year and the amortization payment (a catch-up payment for any unfunded liabilities over the past 30 years).³²

³⁰ Weinberg, Sheila and Norcross, Eileen. "GASB 67 and GASB 68: What the New Accounting Standards Mean for Public Pension Reporting." Mercatus Center Policy Briefs. June 15, 2017. Retrieved from: <https://www.mercatus.org/publications/urban-economics/gasb-67-and-gasb-68-what-new-accounting-standards-mean-public-pension>

³¹ American Academy of Actuaries. "The 80% Pension Funding Standard Myth." American Academy of Actuaries Issue Brief. July 2012. Retrieved from: https://www.actuary.org/sites/default/files/files/80_Percent_Funding_IB_071912.pdf

³² Weinberg and Norcross. "GASB 67 and GASB 68: What the New Accounting Standards Mean for Public Pension Reporting."

Prior to GASB 68, state and local governments followed GASB 27 in disclosing pension funding information. GASB 27 advised state governments to list the ADC and the actual amount the employer contributed for that fiscal year. The difference between these two amounts was called the “net pension obligation.”³³

Improved reporting and more accurate estimates of state obligations have shed light on the actual value of unfunded pension liabilities. GASB 67 also provided guidance on how liabilities were to be valued. Prior to GASB 67, public pension plans used the expected return on pension assets to assess the value of liabilities. Economists objected to this valuation, stating that legally guaranteed pension promises should be valued with a lower discount rate. Weinberg and Norcross note that GASB 67 attempts to “split the difference” by valuing liabilities covered by pension assets with a higher discount rate and unfunded liabilities with a lower discount rate based on the low-risk return on tax-exempt municipal bonds.³⁴ Unfortunately, pension plan managers can still alter the actuarial value of assets (and with it, a plan’s funding ratio). GASB 68 allows pension plans to delay the recognition of any differences between the assumed and actual return on investments through a “deferred inflow of resources” occurring over a 5-year period. Weinberg and Norcross (2017) note that this allows pension plans to “smooth” assets by gradually recognizing market declines and gains. By introducing these market declines and gains gradually, the volatility of pension asset portfolios remains hidden and incentivizes plan managers to take greater investment risks.³⁵

³³ Weinberg and Norcross. “GASB 67 and GASB 68.”

³⁴ Weinberg and Norcross, “GASB 67 and GASB 68.”

³⁵ Weinberg and Norcross, “GASB 67 and GASB 68.”

TCRS Contribution Rates Compared to the Rest of the Country

In the TCRS system, employers and members of both the Legacy and Hybrid plans make contributions to the pension plans. In both the Legacy and Hybrid plans, employers make contributions based upon the ADC to cover normal costs and amortization payments of previously unfunded liabilities. Figure 1 below shows the employers have consistently made the full actuarial required contribution for all years of available data.

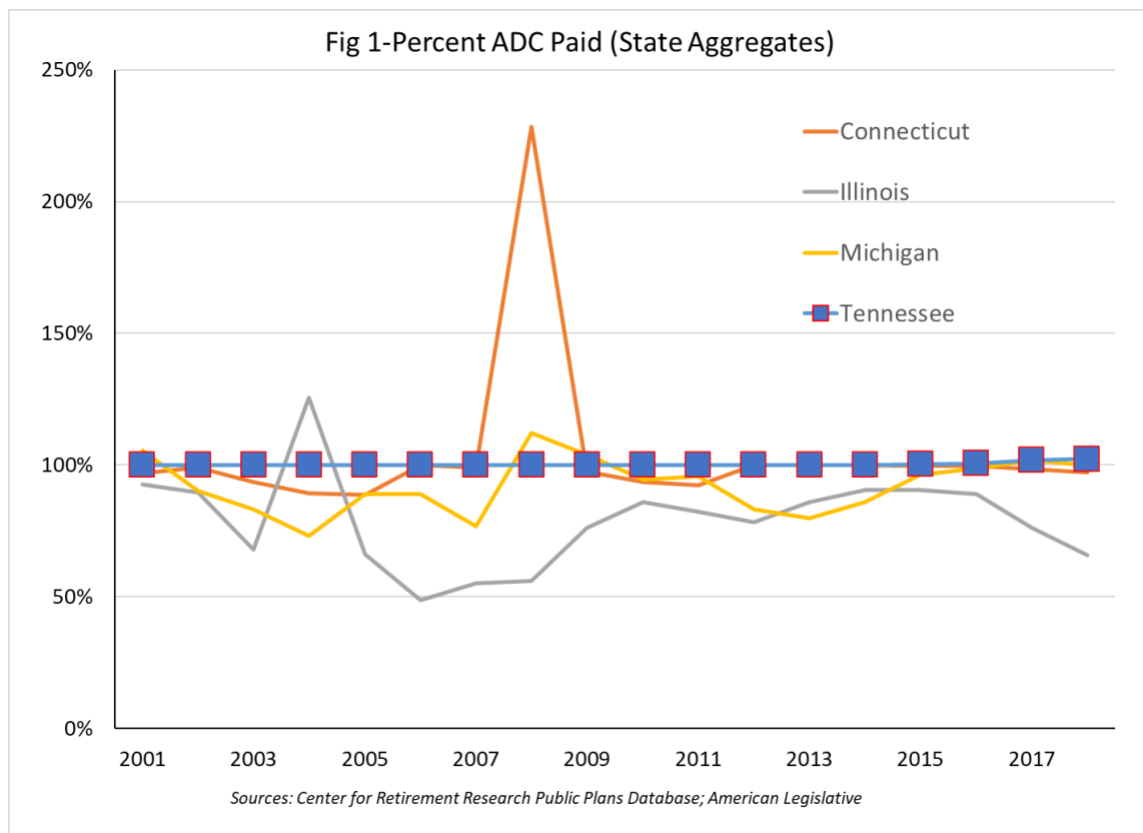


Figure 1 shows that Tennessee has consistently paid its full ADC payment for all available years of data, which helps prevent the rapid growth of unfunded liabilities. In addition, Alabama and Wisconsin also made their full ADC payments for all years available. It also shows a cautionary tale of improper pension funding. Note the spikes in the line graphs for Illinois in FY 2004 and for Connecticut in FY 2008. These spikes are the results of both states issuing pension obligation bonds. When a state issues pension obligation bonds, it takes the bond revenue and invests it into

the pension's asset portfolio. The goal for plan managers is to earn a rate of return on investments that is greater than the interest that is owed on the bonds. It is essentially like a household using a credit card to pay mortgages and utility bills.

In 2004, Illinois issued \$10 billion in general obligation bonds to be used for pension funding. The entire \$9.2 billion fund balance was sent to the state's retirement system in FY 2004, \$1.9 billion was put towards ADC payments, and the remaining revenue was allocated to all of the state retirement plan asset portfolios and invested.³⁶ To make matters worse for Illinois, state law (IL Public Acts 100-0023 and 100-0340) uses an actuarial valuation that does not conform with GASB standards, which means that state contributions to the pension system are always less than what is necessary to cover costs for the year and pay down unfunded liabilities.³⁷ Similarly, in 2008, Connecticut's Teachers Retirement System issued \$2 billion of general obligation bonds and used the bond revenue to invest in its pension fund.³⁸ In both cases, neither plans' investments were able to beat the interest rate owed on the bonds, and both pension systems are locked into making payments on those bonds. As of FY 2018, Connecticut and Illinois have two of the worst funded pension systems in the country.

While Michigan made similar reforms to Tennessee, state plans have not always made the full ADC, and thus, Michigan has consistently had larger unfunded liabilities than Tennessee.³⁹ Tennessee, Alabama, and Wisconsin have consistently made 100% of the

³⁶ Illinois Office of the State Comptroller. "Illinois Comprehensive Annual Financial Report for the Fiscal Year 2004." State of Illinois. June 30, 2004. P.34 Retrieved from: <https://illinoiscomptroller.gov/Ledger-Temp/assets/File/CAFR/CAFR%202004.pdf>

³⁷ Illinois Office of the State Comptroller. "Notes to Required Supplementary Information" Illinois Comprehensive Annual Financial Reports. June 30, 2018. Retrieved from: https://www.trsil.org/sites/default/files/documents/CAFR-FY2018_1.pdf

³⁸ Gabriel Roeder Smith & Company. "Connecticut State Teachers Retirement System Actuarial Valuation." June 30, 2008. Retrieved from: <https://portal.ct.gov/TRB/Content/Other-Resources/Statistics-and-Research/Actuarial-Valuation>

³⁹ Williams et al. *Unaccountable and Unaffordable*, 2019.

respective ADC payments. While that has helped make Wisconsin and Tennessee some of the best-funded pension plans in the country, it is not the only factor for success. As will be shown with Alabama, contributions alone will not save a pension plan.

For the TCRS Hybrid plan, both employers and members make contributions to the TCRS and 401(k) account as a percent of earnable compensation. The table below is recreated from the TCRS Hybrid Plan guide:

| Plan | Employer Contributions | Member Contributions | Total Contributions |
|--------|------------------------|----------------------|---|
| TCRS | 4% | 5% | 9% |
| 401(k) | 5% | 2%* | 7%* |
| Total | 9% | 7% | Amount Equal to 16% of member earned compensation |

Source: TCRS Hybrid Pension Plan Guide for State Employees and Teachers

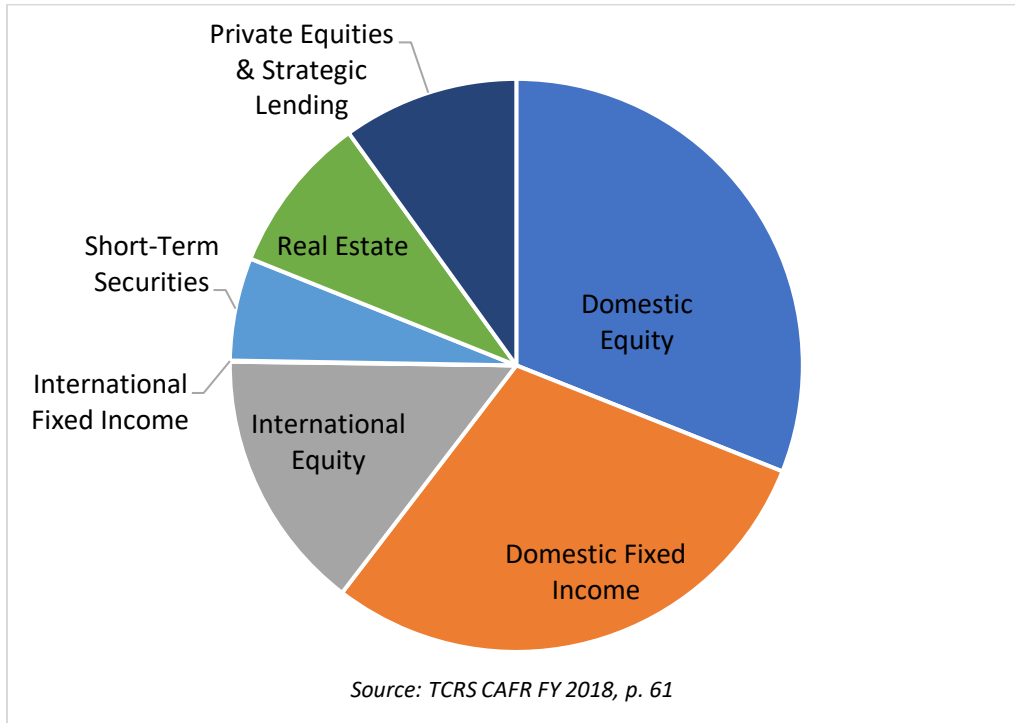
Note that members are automatically enrolled in the 401(k) plan to make member contributions of 2% of earnable compensation, and the member may opt-out or alter their contributions at any time. Members may make contributions greater than 2% up to the allowable amount by the IRS.

TCRS Actuarial Valuations

The Tennessee Retiree Group Trust (TRGT) was established in 2015 by a statutory enactment of the Tennessee General Assembly. This group trust pools funds from the various TCRS plans along with other assets in the custody of the State Treasurer solely for investment purposes. The stated primary investment objective is, “to establish a stable, diversified investment portfolio that, in the long term, will meet or exceed the assumed rate of return, as

adopted by the Board, in order to provide sufficient liquidity to pay beneficiaries in a timely manner.”⁴⁰

The figure and table below show the asset allocation of the TGRT as of the end of FY 2018:



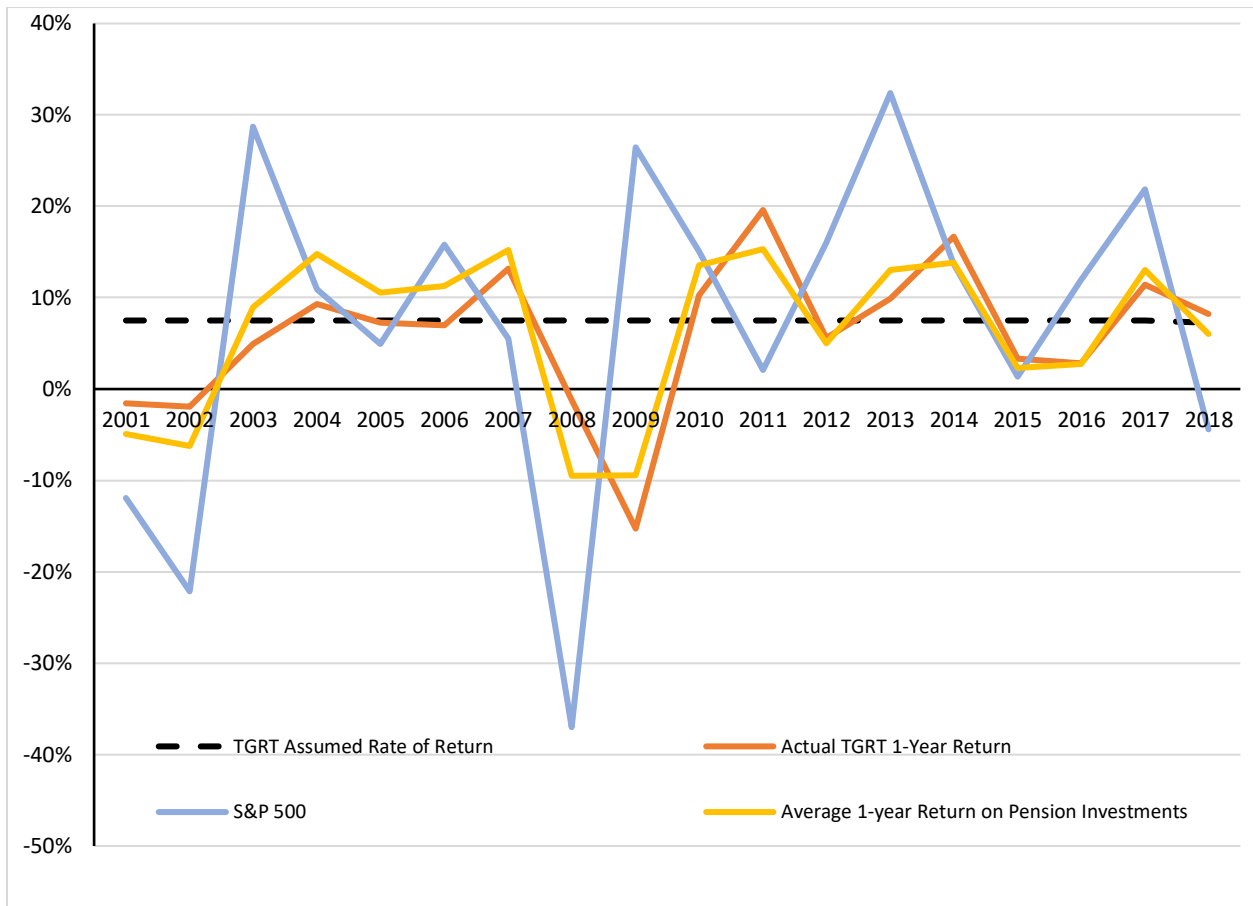
| Asset Class | Fair Value | Percentage |
|--------------------------------------|----------------------------|----------------|
| Domestic Equity | \$15,382,953,801.00 | 31.04% |
| Domestic Fixed Income | \$14,558,721,699.00 | 29.37% |
| International Equity | \$7,333,130,584.00 | 14.79% |
| International Fixed Income | \$33,250,847.00 | 0.07% |
| Short-Term Securities | \$2,876,812,549.00 | 5.80% |
| Real Estate | \$4,452,048,359.00 | 8.98% |
| Private Equities & Strategic Lending | \$4,928,734,870.00 | 9.94% |
| Total | \$49,565,652,709.00 | 100.00% |

Investment performance is another important aspect of fund stability as well. Investing in riskier assets means that the investment returns will be more volatile year over year. In years that

⁴⁰ State of Tennessee Department of Treasury. “Tennessee Consolidated Retirement System CAFR.” p. 59.

investment returns fall short, any shortfall will have to be covered by member and state contributions.

The figure below shows the assumed rate of return and the actual 1-year return on investments for the TGRT:



Sources: TGRT data came from the TCRS CAFR for FY 2018. Data on the S&P 500 was gathered from Yahoo Finance. Data on the average pension return was collected from the Center for Retirement Research's Public Plans Database and calculated by the author.

The TGRT has performed relatively close to the average return on pension investments, while the assumed rate of return has stayed at 7.5% until it was lowered to 7.25% in FY 2018.

Research from Andonov, Hochberg, and Rauh note that pension funds whose boards have high fractions of *ex officio* members or members appointed by a state official underperform the most,

followed by funds whose boards have a high fraction of members elected by participants.⁴¹ The Alabama Employee Retirement System and Judges Retirement System (both share the same Board of Control) and the Teachers Retirement System share a similar structure to the board of trustees for the TGRT (a 13-person board consisting of elected plan members and *ex officio* members).⁴² However, it is key to look at the role fiduciary responsibility plays in asset performance. The TGRT is focused on long-term investment, whereas Retirement Systems of Alabama (RSA) has different stated goals. Dove and Smith (2016) find the RSA has been shifting to riskier investment strategy, such as golf courses, luxury hotels, office buildings and print media.⁴³ The RSA is investing in private placements, specifically investments meant to encourage economic development in Alabama.⁴⁴ Dove and Smith (2016) note that while the Alabama Supreme Court ruled such investments are within RSA's authority,⁴⁵ the increased risk has cost the RSA investment returns and left the RSA in a worse position than the TCRS. Ultimately, the RSA is more volatile than the TGRT due to its sporadic investment policies.

Methods for Liability Valuation

As noted in the section discussing GASB 67 and 68, most state pension plans, including the TCRS, use a "blended discount rate" to determine the present value of liabilities. However, using a risk-free discount rate would better reflect the state's inability to default on liabilities.

⁴¹ Andonov, Aleksandar; Hochberg, Yael V; and Rauh, Joshua D. "Pension Fund Board Composition and Investment Performance: Evidence from Private Equity." Hoover Institution Economics Working Papers. March 2016. Retrieved from: https://www.hoover.org/sites/default/files/research/docs/16104_-_pension_fund_board_composition_and_investment_performance_-_andonov_hochberg_and_rauh.pdf

⁴² Retirement Systems of Alabama. "Boards of Control for the TRS, ERS, and JRF." 2020. Online. Retrieved from: <https://www.rsa-al.gov/jrf/board-of-control/> and <https://www.rsa-al.gov/ers/board-of-control/>

⁴³ Dove and Smith. "Alabama at the Crossroads." p. 43.

⁴⁴ Dove, John and Smith, Dan. "Alabama at the Crossroads: An Economic Guide to a Fiscally Sustainable Future." Mercatus Center at George Mason University. March 22, 2016. p. 42. Retrieved online: <https://www.mercatus.org/publications/urban-economics/alabama-crossroads-economic-guide-fiscally-sustainable-future>

⁴⁵ Dove and Smith. "Alabama at the Crossroads." p. 43.

The Society of Actuaries' Blue-Ribbon Panel on Public Pension Plan funding recommends, "the rate of return assumption should be based primarily on the current risk-free rate plus explicit risk premium or on other similar forward-looking techniques."⁴⁶ This is similar to the blended discount rate recommended by GASB. The blended discount rate used by TCRS remained at 7.5% from 2000-2017 until it was lowered to 7.25% in FY 2018.

Because U.S. Treasury bonds are insured with the full faith and credit of the United States government, the rate of return for these bonds is the best proxy for a risk-free rate. A valuation of liabilities based on a risk-free rate contrasts sharply with the overly optimistic assumptions used by nearly every public sector pension plan. Rauh (2018) comments:

*The logic of financial economics is very clear that measuring the value of a pension promise requires using the yields on bonds that match the risk and duration of that promise. Therefore, to reflect the present value cost of actually delivering on a benefit promise requires the use of a default-free yield curve, such as the Treasury yield curve. Financial economists have spoken in near unison on this point. The fact that the stock market, whose performance drives that of most pension plan investments, has earned high historical returns does not justify the use of these historical returns as a discount rate for measuring pension liabilities.*⁴⁷

For this reason, it is recommended that states use the lower discount rate. In its annual pension report *Unaccountable and Unaffordable*, researchers at the American Legislative Exchange Council use a risk-free rate (based on U.S. Treasury bond yields) and a fixed discount rate (4.5%) in comparison to discount rates provided in state financial documents. For the 2019 report, a 15-year midpoint, using a hypothetical 15-year U.S. Treasury bond yield, is used to

⁴⁶ *Report of the Blue-Ribbon Panel on Public Pension Plan Funding*. Society of Actuaries. 2014. Retrieved from: <https://www.soa.org/brpreport364/>

⁴⁷ Rauh, Jonathan D. Testimony Before the Joint Select Committee on Solvency of Multiemployer Pension Plans. United States Senate & United States House of Representatives. July 25, 2018. <https://www.pensions.senate.gov/sites/default/files/25JUL2018RauhSTMNT.pdf>

derive an estimated risk-free discount rate of 2.96%. This is calculated as the average of the 10-year and 20-year bond yields.⁴⁸

The 15-year midpoint comes from the GASB recommendation that a pension plan take no longer than 30 years to pay off its pension liabilities. While state financial documents are not required to report their liabilities projected over a time series (i.e., reporting total liability due per year for the next 75 years), this report must assume the midpoint of state liabilities in order to recalculate state liabilities under different discount rate.⁴⁹ The floating risk-free discount rate is shown in the table below:

| Risk-Free Rate by Year of Fiscal Year | | | | | | | | | |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| 3.69% | 3.63% | 3.20% | 2.17% | 2.74% | 2.81% | 2.35% | 2.03% | 2.49% | 2.96% |

Source: Savidge, et al. *Unaccountable and Unaffordable 2019*.

This methodology was developed by Bob Williams and Andy Biggs when this report was created by State Budget Solutions, which is now a project of the Center State Fiscal Reform at ALEC. It normalizes the liability values across plans and presents a more prudent valuation of liabilities than many state benefit plans with more rosy assumptions (such as higher discount rates). The inclusion of the fixed discount rate of 4.5%, was added by Thurston Powers in *Unaccountable and Unaffordable, 2018*.⁵⁰

Discount rates used for pension plans can vary even among plans within a state. The use of a risk-free discount rate normalizes discount rates across pension plans, providing the means to assess present value of liabilities across plans. This provides a basis of comparison for liabilities and funding ratios across the 50 states. Other variables provided by state financial

⁴⁸ Williams, et al. *Unaccountable and Unaffordable*

⁴⁹ Williams, et al. *Unaccountable and Unaffordable 2020*.

⁵⁰ Powers, Thurston; Smith, Christine; Williams, Bob; and Williams, Jonathan. *Unaccountable and Unaffordable 2018*. American Legislative Exchange Council. 2018. Retrieved from <https://www.alec.org/publication/unaccountable-and-unaffordable-2018/>

documents such as mortality rates, demographics and health care costs were assumed to be correct and not normalized across plans.

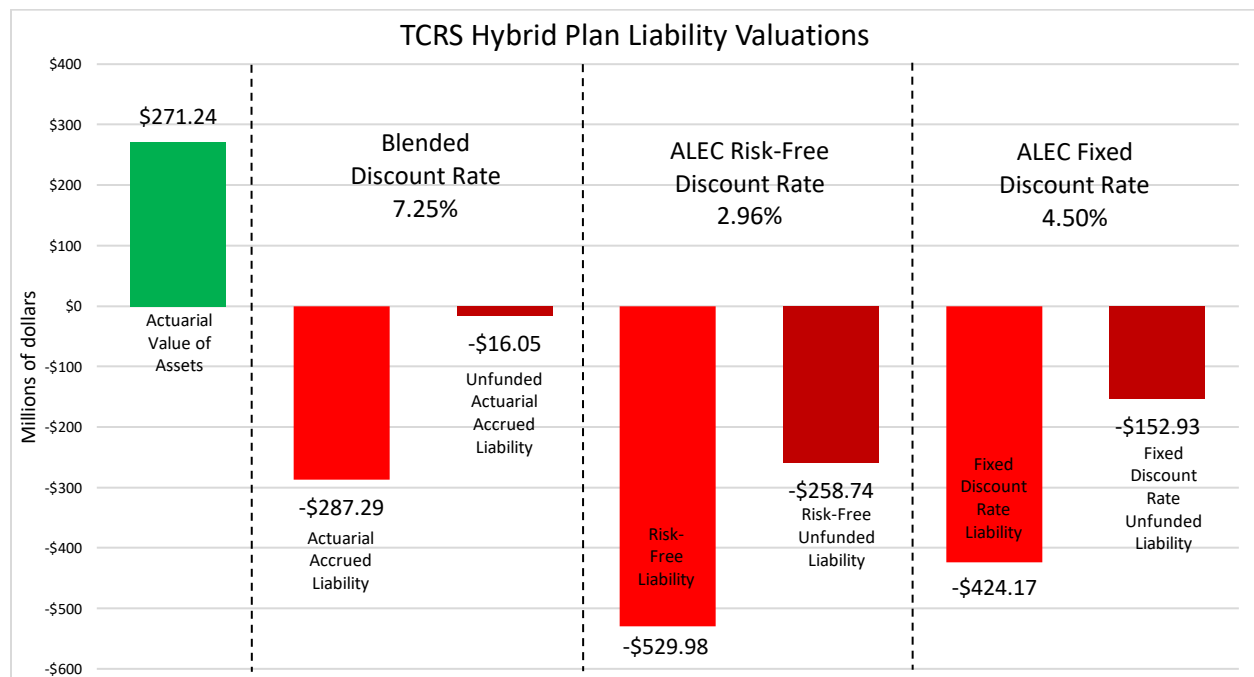
This is a more prudent discount rate than many plans offer. The formula for calculating a risk-free present value for a liability requires first finding the future value of the liability. That formula, in which “*i*” represents a plan’s assumed discount rate, is shown by equation 6⁵¹:

$$(6) \text{ Future Value} = \text{Actuarial Accrued Liability} \times (1 + i)^{15}$$

The second step is to discount the future value to arrive at the present value of the more reasonably valued liability. That formula is shown in equation 7 below, where “*i*” represents either the risk-free or fixed discount rates⁵²:

$$(7) \text{ Present Value} = \frac{\text{Future Value}}{(1 + i)^{15}}$$

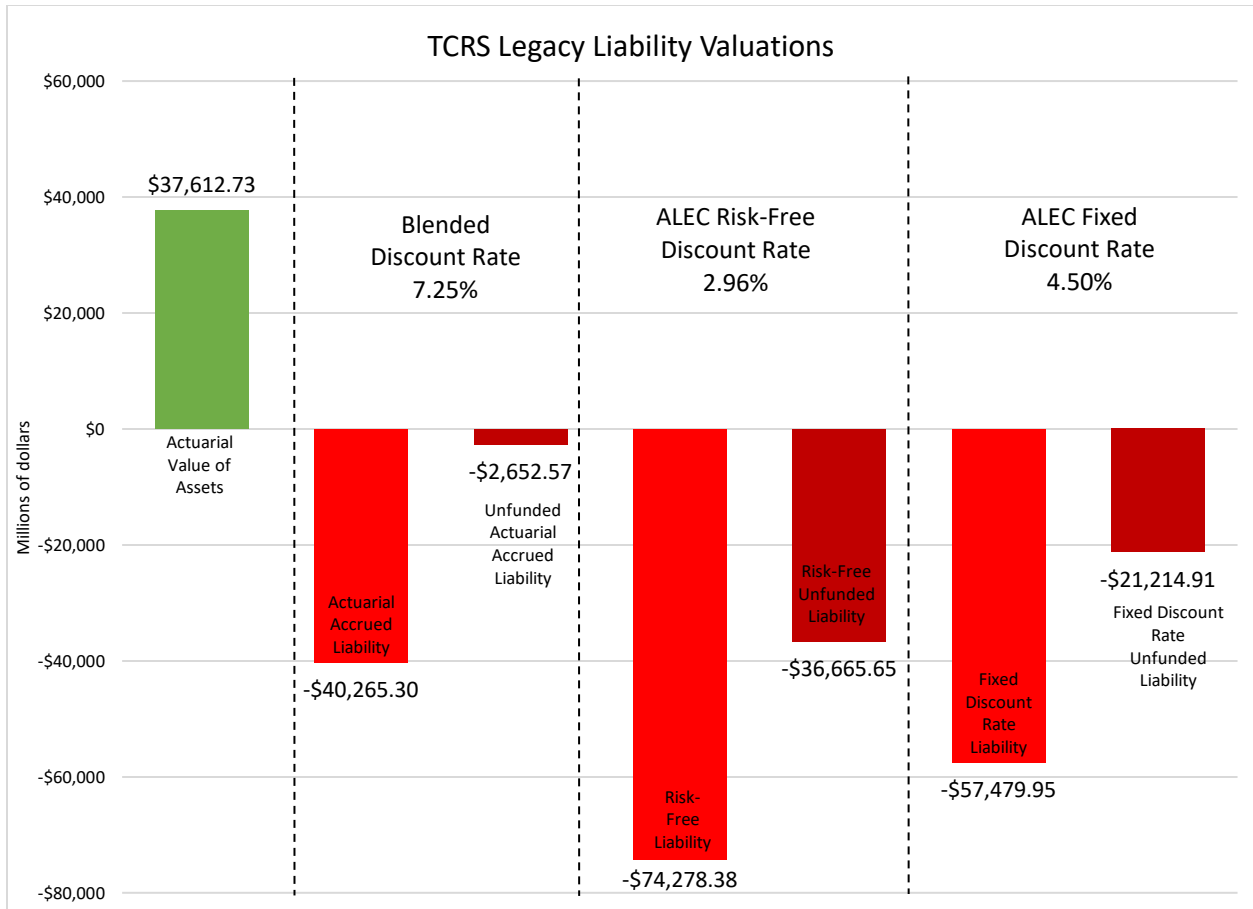
The differences in liability valuations for the TCRS Legacy and Hybrid plans (aggregated) in FY 2018 can be seen in the chart below:



Source: Savidge, et al. *Unaccountable and Unaffordable* 2019.

⁵¹Williams, et al. “Unaccountable and Unaffordable” 2020.

⁵² Williams, et al. “Unaccountable and Unaffordable” 2020.



Source: Savidge, et al. *Unaccountable and Unaffordable* 2019.

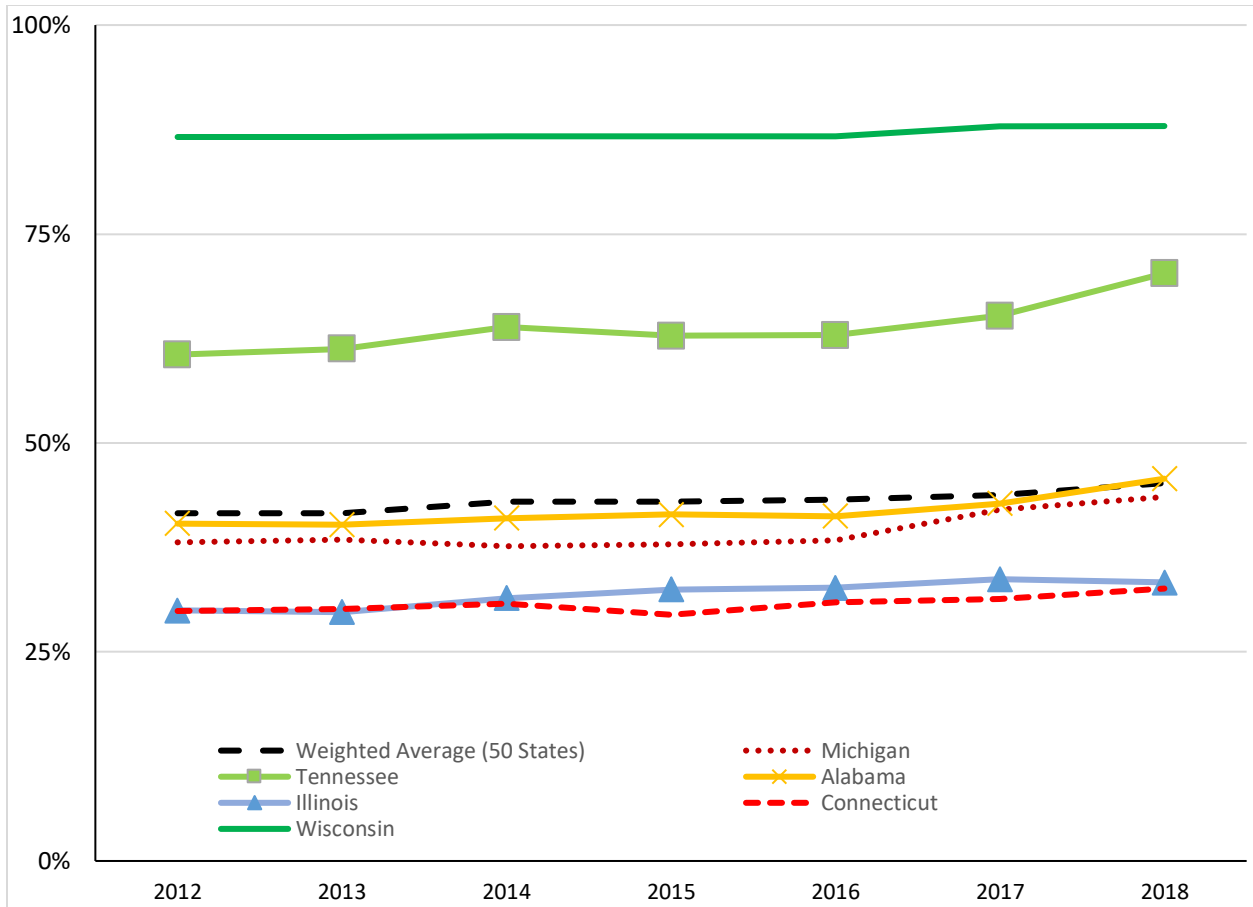
Note that these liability valuations vary greatly, even with relatively small changes to the discount rate assumptions.

Unfunded Liability Growth: How TCRS Compares Across the Nation

Most state government public pension systems are drastically underfunded. A report from the American Legislative Exchange Council Found that, when controlling for discount rates, unfunded pension liabilities from state pension plans reached \$4.9 trillion in Fiscal Year 2018.⁵³ Generally, public pension underfunding is due to a combination of four attributes: intentional underfunding, poor management, market conditions and volatility, and benefit design issues.

⁵³ Williams, et al. "Unaccountable and Unaffordable" 2020.

Intentional underfunding and poor management often go together. State policymakers consistently do not make the necessary actuarially determined contributions. Another important indicator of the health of a defined benefit pension plan is the funding ratio. The figure and table below show the funding ratios using the ALEC fixed discount rate of 4.5% to control for discount rates over time:



| State | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Weighted Average (50 States) | 41.60% | 41.60% | 43.00% | 43.00% | 43.20% | 43.80% | 45.20% |
| Wisconsin | 86.61% | 86.63% | 86.66% | 86.66% | 86.67% | 87.91% | 87.92% |
| Michigan | 38.11% | 38.44% | 37.65% | 37.88% | 38.34% | 42.02% | 43.55% |
| Tennessee | 60.58% | 61.25% | 63.85% | 62.84% | 62.89% | 65.23% | 70.30% |
| Alabama | 40.37% | 40.23% | 41.03% | 41.43% | 41.24% | 42.76% | 45.74% |
| Illinois | 29.95% | 29.76% | 31.45% | 32.49% | 32.68% | 33.71% | 33.30% |
| Connecticut | 29.88% | 30.17% | 30.80% | 29.46% | 30.97% | 31.35% | 32.59% |

Source: Savidge, et al. *Unaccountable and Unaffordable* 2019.

The dark dotted line in the middle indicates a weighted average of all the state public pension funding ratios. Consistently, Wisconsin and Tennessee have performed well above average since 2012. Michigan, Illinois, and Connecticut have funding ratios below average. Alabama's funding ratio has hovered around the weighted average. While Alabama changed their pension plans to a two-tiered system in 2012, these reforms have not been enough to stave off the growth in liabilities.⁵⁴

It is important to note that while Michigan transitioned its State Employee Retiree System to a hybrid plan in 1996 and the Public School Employee Retiree plan in 2016, Michigan also made mistakes. By failing to make the full ADC payments consistently and properly funding retirement plans, unfunded liabilities still accumulated in both the hybrid plans and traditional defined benefit plans in Michigan. The situation in Michigan, however, could have been much worse. A study conducted by Dreyfuss (2011) found that Michigan's reforms saved taxpayers \$167 million in pension liabilities, \$2.3 billion to \$4.3 billion in unfunded liabilities, and improved the political incentives of pension funding.⁵⁵ Another study by Randazzo and Bui (2016) found that unfunded liabilities would have been \$2 billion greater. However, they also discovered that if management of the pension plans been improved (specifically making necessary contributions and matching assumed rates of return with actual rates of return), the Michigan State Retirement System would be roughly \$7.7 billion better off in 2016 than if no reforms were made.⁵⁶ By reforming the retirement system so that all new members are enrolled in a hybrid plan like Tennessee, Michigan can steadily improve its retirement plans and reduce

⁵⁴ Dove and Smith. "Alabama at the Crossroads." p. 25.

⁵⁵ Dreyfuss, Richard C. "Policy Brief: Estimated Savings from Michigan's 1997 State Employees Pension Plan Reform." Mackinac Center for Public Policy. 23 June 2011. Retrieved from: <https://www.mackinac.org/15672>

⁵⁶ Randazzo, Anthony and Bui, Truong. "Did Pension Reform Improve Sustainability of Pension Plans? Evidence from Counterfactual Analysis of Michigan and Alaska." Reason Foundation Policy Study No. 450. Mar 2016. Retrieved online: https://reason.org/wp-content/uploads/files/ps450_pension_reform_sustainability_effects.pdf

its unfunded liabilities. Meanwhile, Illinois and Connecticut have consistently had funding ratios well below the weighted average, with two of the worst risk-free funding ratios in the ALEC reports.⁵⁷ In addition, even when using the more prudent ALEC risk-free rate, Tennessee has consistently been ranked as one of the best-funded pension plans in the country.⁵⁸ In another study by the Pew Charitable Trusts listed the TCRS as one of the best-funded and managed pension systems in the country.⁵⁹

Keeping TCRS Competitive: Recommendations for Further Reform

One reform the TCRS could immediately adopt to remain competitive is lowering their discount rate to the private sector average of 4.00%⁶⁰, or better yet, to a risk-free rate. Given the variance in discount rates, the Powers et al. (2018) incorporated a fixed discount rate of 4.50%.⁶¹ The fixed discount rate provides a basis of comparison in years that see large changes to the risk-free discount rate.

A second reform is to vary benefit or contribution rates based on the funding of the plan, such as in Wisconsin and Maine. Wisconsin has the best-funded ratio of any public pension system in the country at 70.37%, controlling for difference in discount rates, because it has a variable benefit rate, meaning the disbursement varies over time. State retirees are entitled to a low, guaranteed pension payment paired with a variable payment based on the pension system's funding ratio.⁶² when tax revenue is lower during economic recessions, the fund lowers payments to retirees and allows the fund to recover rather than exhausting the fund or taking on

⁵⁷ Williams, et al. "Unaccountable and Unaffordable" 2020.

⁵⁸ Savidge, et al. "Unaccountable and Unaffordable" 2020 and Powers, et al. "Unaccountable and Unaffordable" (Multiple Years).

⁵⁹ "The State Pension Funding Gap: 2017." Pew Charitable Trusts. June 2019. Retrieved online:

<https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/06/the-state-pension-funding-gap-2017>

⁶⁰ "ERISA 4022 Lump Sum Interest Rates." Pension Benefit Guaranty Corporation (PBGC). Last updated Nov. 2019. Retrieved from: <https://www.pbgc.gov/prac/interest/vls#How-these-rates-are-used>

⁶¹ Powers, Thurston, et al. *Unaccountable and Unaffordable*, 2018.

⁶² Seyfert, Kerri. "The Wisconsin Retirement System Is Fully Funded." Reason Foundation. Jan. 2020.

debt to keep making payments.⁶³ While the plan has been criticized for diminishing benefits during economic downturns, it has succeeded in providing retirement security with few significant changes to the plan since 1975.⁶⁴

In 2016, Maine pursued a series of reforms to implement variable contribution rates for their state pension system.⁶⁵ Due to these reforms, in the past two years, Maine's unfunded pension liabilities have decreased by almost \$10 billion (about 50%). Normally, employer contribution rates fluctuate to meet the ARC or other contribution standards, whereas employee contributions are a fixed rate set by contract. Under a "risk-sharing" plan, changes in the ARC result in changes in contributions for both employer and employee.

The models share a key aspect: both Maine and Wisconsin have automatic "triggers," either on contribution rates, benefit rates, or cost of living adjustments. These triggers serve as an objective management tool to ensure pensions are funded. Automatic adjustments based on actuarial science are difficult to argue against, particularly when the potential deviation will underfund the pension system.

Ultimately, the best way to prevent the growth of unfunded pension liabilities is to transition to a fully defined contribution system for all new hires. As Smith and Al-Bawwab (2019) note, Keynesian economics overturned the historic tradition of maintaining balanced budgets.⁶⁶ With the "loss of that old-time fiscal religion," policymakers have promised public

⁶³ Seyfert, Kerri. "The Wisconsin Retirement System Is Fully Funded."

⁶⁴ Stein, Jason. "Wisconsin's fully funded pension system is one of a kind." Milwaukee Journal Sentinel. Sept. 26 2016. Retrieved from: <https://projects.jsonline.com/news/2016/9/26/wisconsins-fully-funded-pension-system-is-one-of-a-kind.html>

⁶⁵ Braun, Martin Z. "Public Pensions Adopt Cost Sharing Mechanisms to Stem Volatility." Bloomberg. July 17, 2018. <https://www.bloomberg.com/news/articles/2018-07-17/public-pensions-adopt-cost-sharing-mechanisms-to-stem-volatility>

⁶⁶ Smith, Daniel J and Al-Bawwab, Rania. "Breaking Bad: Public Pensions and the Loss of that Old-Time Fiscal Religion," *The Independent Review*. Forthcoming 2020. Retrieved online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2743279

workers retirement benefits without adequately funding these obligations and have circumvented traditional balanced budget requirements, undermining taxpayer constraints on spending. Smith and Al-Bawwab note that transitioning public pensions to defined contribution retirement accounts would help restore taxpayer constraint.⁶⁷ In addition, while defined contribution retirement benefits are not as generous as defined benefit plan, they are more portable. The 401(k) portion of the TCRS Hybrid plans require no vesting period, and members can opt-out or alter benefits at any time they wish. The money the employee contributes can also be withdrawn if the member leaves the TCRS. While Tennessee has managed to stay fiscally responsible by properly funding pension benefits without putting an undue burden on taxpayers, fiscal discipline can be easily lost and very difficult to restore. Transitioning to defined contribution could help the TCRS provide flexible benefits to members without placing a large tax burden on taxpayers.

Conclusion

In short, the TCRS took many positive steps, such as consistently making the full ADC payment and transitioning new hires to a hybrid plan, to make it one of the most competitive pension systems in the country. There are continued steps the TCRS can take, such as lowering the discount rate, vary benefit and contribution rates, and transition new hires to a fully defined contribution plan that can help make the TCRS better prepared for the future.

⁶⁷ Smith and Al-Bawwab. “Breaking Bad.”

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