



CENTER *for* PUBLIC POLICY PRIORITIES

WORKING FOR A **BETTER** TEXAS™

TEXAS STATE PENSIONS

Employees Retirement System
& Teacher Retirement System



A DIFFERENT BREED
STRONGER, SMARTER, GOOD FOR TEXAS





The Center for Public Policy Priorities is a nonpartisan, nonprofit policy institute committed to making a better Texas.

[FACEBOOK.COM/BETTERTEXAS](https://www.facebook.com/bettertexas)

[TWITTER.COM/Cppp_TX](https://twitter.com/Cppp_Tx)

[YOUTUBE.COM/CpppVIDEO](https://www.youtube.com/CpppVideo)

Chandra Kring Villanueva, Policy Analyst

512.320.0222, ext. 107, villanueva@cphp.org

Chandra Kring Villanueva joined the center in 2010 as a fellow through the Center on Budget and Policies Priorities' State Fiscal Analysis Initiative. She focuses on state pensions and public education finance and policy. She also serves on the Customer Satisfaction Advisory Board for Capital Metro and is an Advisory Board Member for the Center on Children and Families at the Columbia University School of Nursing. Villanueva was the manager of Advocacy and Public Policy with the Women's Prison Association in New York City. Prior to graduate school, she served as a Bill Emerson National Hunger Fellow with the Congressional Hunger Center in Arizona and Washington, D.C. Villanueva earned a Master of Public Administration from the New York University Robert F. Wagner Graduate School of Public Service in 2007, and a Bachelor of Arts from The Evergreen State College in Olympia, Washington in 2003.

Table of Contents

Executive Summary	2
Quick Stats: ERS & TRS	3
Part 1: State Pensions are More Than Just Retirement Income	
Attract and Retain a High-Quality Public Workforce	4
Strengthen the Middle Class by Supporting Self-Sufficiency for Seniors	5
Provide Economic Benefits for all Texans	6
Part 2: Texas' State Pensions are a Different Breed	
Sharing the Costs: How Public Pensions are Funded in Texas	8
Pension Costs for the 2014 – 2015 Biennium	14
Managing the Risks: Defined-Benefit vs. Defined-Contribution Plans	14
Switching Plan Type Does Not Solve Funding Problems	18
Strong Plan Design: Providing Modest Benefits while Controlling Cost	18
Part 3: State Contributions for ERS and TRS Should be Increased	22
Technical Appendix	
Overview of State Pension Systems of Texas	25

Executive Summary

Texas' state pensions—the Employees Retirement System (ERS) and the Teacher Retirement System (TRS)—are a different breed from many other state pension systems. Strong constitutional and legal controls have helped ERS and TRS to weather economic storms better than their counterparts in other states. In fact, they are held up as national models because they are well-funded, strong, and sustainable. While some policymakers and interest groups have suggested fundamental changes in the systems, such as turning them into 401(k)-style plans, such an unwise move would end up costing taxpayers, retirees, and the Texas economy dearly.

In both systems, the costs are shared between the state and employees, with the employees contributing a share nearly equal to the state's. Risks are also shared between the state and its employees. Strong plan design and good management allows ERS and TRS to provide a modest benefit for retirees at a reasonable cost.

Texas' defined-benefit state pensions, which provide a life-long retirement benefit based on years of service and final average salary, are more than just retirement income. They also:

- are an effective tool for the recruitment and retention of a quality workforce;
- strengthen the middle class by supporting self-sufficiency among our seniors; and
- provide economic benefits for all of Texas.

Partly because of contribution reductions and benefit increases when the economy was humming, Texas does have a gap between the commitments it has made for future retiree benefits and the money it has set aside to pay them, a situation known as an unfunded liability. But it is manageable. Over time, our economy will recover from the recent recession; investment returns, which fuel the financial growth of Texas' pension funds, will recover as well. Modest increases in the state contribution rate can reduce the unfunded liabilities.

Recognizing the need for additional funding for the pension systems, ERS and TRS have requested an increase in the state contribution rate for the 2014-2015 biennium. ERS requested their state contribution rate be raised to 10 percent, the maximum allowed by law, at a modest additional cost of \$403 million for the biennium. If the increase is approved, without raising the member contribution rate, the ERS unfunded liability would be amortized within 55 years.¹

TRS requested a 0.50 percent point increase for 2014 and an additional 0.50 percent point increase for 2015 to bring the state contribution rate up to 7.4 percent by end of the biennium, with a modest cost of \$375 million above the baseline request.² If granted this increase, without raising the member contribution rate, the combined contribution rate would be only 1.22 percentage points short of the actuarially sound rate.

The Center for Public Policy Priorities supports these requests and sees them as a prudent step towards ensuring the pension systems' continued stability.

QUICK STATS ERS & TRS

Average Annual Salary at Retirement	\$42,104	\$51,118
Pension Benefit for Those Retiring at the Average Salary with 30 years of Service (2010)	\$29,052	\$35,270
Number of Years of Service Needed to Reach a 100% Salary Replacement	44 years	44 years
Last Cost-of-Living Adjustment (COLA) Approved	2001	2001

FY 2013 Contribution Rates

State Contribution Rate	6.50%	6.40%
Member Contribution Rate	6.50%	6.40%
Combined Contribution Rate	13.00%	12.80%
Combined Contribution needed to Cover the Normal Cost	12.31%	10.60%
Actuarially Sound Contribution Rate (Combined)	18.25%	15.02%

Assets & Liabilities (2012)

Market Valuation of Assets	\$24.27 Billion	\$111.45 Billion
Unfunded Actuarial Accrued Liabilities	\$5.7 Billion	\$26.1 Billion
Funded Ratio	81.00%	81.90%
2012-13 Biennium State Contribution	\$723,388,436	\$3,244,863,577
Percent of All Funds State Spending	0.42%	1.87%
Percent of General Revenue State Spending	0.89%	3.99%



State Pensions are More Than Retirement

State Pensions Attract and Retain a High-Quality Public Workforce

State employees and teachers are a vital asset to the state of Texas. They are responsible for keeping our communities safe, providing social and health services, and educating our children. To ensure that these duties are carried out efficiently and competently, the state must compete with private employers for skilled and well-educated employees.

Competitive salaries and benefits are essential to recruiting and retaining a quality public work force. For state workers, and those employed in our public schools, colleges, and universities, the compensation package includes direct compensation (pay) and indirect compensation or benefits, such as health insurance, paid sick and vacation leave, and a state-sponsored, defined-benefit pension plan (defined-benefit pension plans are sometimes referred to as deferred compensation).

When comparing apples-to-apples, state workers earn less pay than their private sector counterparts. A comprehensive study of wage comparability by the National Institute on Retirement Security found that when adjusted for education, experience, and type of position, Texas state workers earn 16.6 percent less on average. Nationally, the gap is 11.4 percent.³

These findings were echoed in the 2010 State Auditor's Office biennial report on the state's position classification plan, which found that 72.8 percent of Texas state employees were paid at least 10 to 20 percent below market value and 19.4 percent of the state workforce was paid more than 20 percent below the market.⁴

Pensions and other benefits reduce, but do not erase, the earnings gap between private and public workers. Benefits make up a larger share of the total compensation package for public workers than private-sector workers.⁵ Weakening the state pension systems would hurt the state's recruitment efforts.

Pensions also play a role in retaining state employees and teachers. Reducing turnover reduces the costs of hiring and training new employees. Weakening the state pension systems would increase turnover.

In states with the option of a defined-benefit plan or a 401(k)-type defined-contribution plan, where workers and sometimes their employers contribute to an individual account and the retirement benefit is based

on the account value at retirement, employees choose the defined-benefit plan 75 to 98 percent of the time.⁶ Overall, 79 percent of Americans believe defined-benefit pensions “offer more peace of mind,” because the benefit won’t run out during a retiree’s lifetime.⁷ Given their popularity, defined-benefit pensions are a highly effective tool for the state to attract and retain a quality workforce.

State Pensions Strengthen the Middle Class by Supporting Self-Sufficiency Among Seniors

Public employees are an important part of the Texas middle class, representing 15.3 percent of the state’s total workforce or 1.7 million Texans. There are 149,720 full-time state employees distributed among 116 state agencies. Public colleges and universities employ an additional 157,727 Texans,⁸ and there are over 639,000 teachers and staff in Texas’ public primary and secondary schools.⁹ In fact, one out of every 20 Texans is a TRS member.¹⁰

In 2010, the average salary for a Texas state employee at retirement was \$42,1041 and for Texas teachers it was \$49,345.¹² Considering the median household income for all Texans, \$49,646 in 2010,¹³ state workers and teachers are middle class; they pay taxes, buy houses, and support the local economy. Their pensions allow them to keep contributing to the economy as members of the middle class after they retire.

A vibrant middle class isn’t created by accident. It is the product of public policies designed to foster good jobs. Defined-benefit pension plans help make state jobs good jobs by ensuring a level of self-sufficiency that allows senior retirees to remain self-sufficient. Without these earned benefits, retirees will need additional services, often at much higher costs.

Nationally, defined-benefit pension plans helped keep 4.7 million elderly households out of poverty or near-poverty, and 1.22 million elderly households from needing public assistance in 2010. The National Institute on Retirement Security estimates that nationwide governments saved nearly \$8 billion on public assistance for the elderly because of defined-benefit pension payments.¹⁴

PENSIONS ARE ESSENTIAL FOR BUILDING A SECURE RETIREMENT

Retirement advisors often compare retirement savings to a three legged stool. A sturdy retirement income should be made up of 1) personal savings, 2) Social Security income, and 3) a pension.¹⁵

A salary replacement of 70 to 90 percent is considered adequate for retirement by most retirement experts,¹⁶ though due to costs increases in retirement, primarily for health care, some experts recommend a replacement closer to 125 percent of pre-retirement income.¹⁷ Ideally, all three legs of the stool fund salary replacement.

Those who leave the workforce without adequate retirement savings have a decreased quality of life, take on debt, and rely heavily on family or social services to meet their basic needs. Others find they cannot afford to retire at all and continue to work much later in life than previous generations. In 2010, 32 percent of people age 65 to 69 were working; nearly double the 1985 rate of 18 percent.¹⁸

Unfortunately, many people are reaching retirement age without adequate resources. A 2011 Harris Interactive Poll found that 26 percent of Americans between the ages of 46 and 64 have no personal savings; 25 percent have no retirement savings. Even more surprising, 22 percent of people age 65 and older have no retirement savings.¹⁹

Weakening the state pensions systems would hurt the self-sufficiency of retired state workers and teachers who were unable to build adequate personal savings. Teachers, the majority of whom are not eligible to participate in Social Security, would be hit especially hard.

THE EMPLOYEES RETIREMENT SYSTEM AND TEACHER RETIREMENT SYSTEM OF TEXAS PROVIDE A MODEST RETIREMENT INCOME

Since state workers and teachers end their careers with a modest final average salary, that is used to calculate their benefits, their retirement earnings are also modest. A typical career public schools teacher earns a final average salary of \$45,000 (the final average salary for a TRS member is based on the highest three or five annual salaries depending

CHANGING TRS MAY TRIGGER \$1.5 BILLION ANNUAL SOCIAL SECURITY COST TO THE STATE

Originally, Social Security did not cover public workers or teachers. Beginning in 1951, states were able to voluntarily choose Social Security coverage for public employees not covered by a pension plan.²⁴ In 1955, public employees covered by public pension plans were allowed to opt-in to Social Security, if the majority of employees in the pension plan voted in favor of joining.²⁵ In Texas, most school districts and many public colleges and universities did not opt-in. Currently, 95 percent of public school employees and 80 percent of all TRS members are not covered by Social Security.²⁶

To stay outside Social Security, the retirement system offered by school districts must meet certain rules. Defined-benefit plans must provide a benefit that is at least 1.5 percent of the average salary during the last three years of employment, multiplied by the employee's years of service.²⁷ TRS currently uses a multiplier of 2.3 percent and the average of the five highest salaries to calculate retirement benefits (the three highest salaries is used for TRS members employed before September 1, 2007).

For a defined-contribution plan to qualify as an alternative to Social Security, contributions of at least 7.5 percent of compensation must be made into employee accounts. The 7.5 percent contribution can be paid by the state, the employee, or both. The employee accounts must also earn a reasonable interest rate or be held in a separate trust and credited with actual earnings.²⁸ IRS rules are ambiguous on what is considered a reasonable interest rate.

If changes are made to TRS that prevent the system from meeting the conditions for being an alternative to Social Security, it would cost the state roughly \$1.5 billion a year to bring all TRS members into Social Security.²⁹

on when the member started employment), would receive \$33,120 annually, or a salary replacement of 73.6 percent (both TRS and ERS provide a benefit in the amount of 2.3 percent of the final average salary for every year of service), when retiring at age 62 after 32 years of service.²⁰ In fact, 55.9 percent of TRS members receive \$24,000 or less a year and another 37.4 percent receive less than \$48,000.²¹ Sixty-six percent of ERS retirees receive \$24,000 a year or less and 20 percent receive between \$24,000 and \$36,000 a year.²²

The purchasing power of retirees erodes over time because ERS and TRS do not provide automatic cost-of-living adjustments (COLAs). TRS retirees are particularly reliant on their pensions because over 80 percent of TRS members are not eligible to

participate in Social Security and must rely solely on their pensions and personal savings for retirement income. The TRS retirement benefit is worth 36 percent less than those offered by similar teacher retirement systems in other states due to the lack of COLAs and Social Security income.²³

Public Pensions Provide Economic Benefits for All Texans

Unlike retirees in other states, Texas retirees largely stay in Texas, creating economic benefits for the entire state. Of the \$7.2 billion in TRS retirement benefits distributed in 2011, 95 percent stayed in Texas.³⁰ ERS distributes \$1.6 billion in pension benefits to the 96 percent of retirees who stay in Texas.³¹

State and local pension benefits spent in Texas spurs economic activity and supports jobs. For

QUICK STAT

STATE CONTRIBUTIONS TO ERS & TRS ARE A SMALL PART OF STATE FUNDING

State Pension System	Percent of State All Fund Spending	Percent of State General Revenue Spending
	FY 2012-13	FY 2012-13
Employees Retirement System	0.42 %	0.89 %
Teacher Retirement System	1.87 %	3.99 %
Total Percent of All Funds	2.29 %	4.88 %

every dollar paid to retirees the state sees \$1.98 in accumulated economic benefits. In 2009, the total economic impact of state and local pension benefits spent in Texas was \$20.2 billion. The direct impact to the state economy was \$7.5 billion from retirees spending their pension benefits. Approximately \$7 billion was generated through businesses purchasing additional goods and services and \$5.7 billion when employees hired as a result of the direct and indirect economic activity then spent their earnings. An estimated 128,204 jobs in Texas were supported by pension benefits in 2009, which represented 1.1 percent of the state's labor force.³²

ERS and TRS invest their trust fund dollars in Texas companies. Nearly 30 percent of ERS investments are in companies headquartered in Texas or that employ 200 or more Texans.³³ TRS invests in 73 percent of the Texas companies on the Fortune 500 list.³⁴

Contributions to the ERS and TRS trust funds account for a very small percentage of state spending, allowing Texas and its residents to enjoy the many benefits of the pension systems at relatively low cost. For the 2012-13 biennium, the Legislature appropriated \$723 million for ERS retirement benefits representing less than half of 1 percent (0.42 percent) of All Funds (Approximately 40 percent of the ERS appropriation comes from funding sources outside of General Revenue. The TRS appropriation is 100 percent General Revenue). The contribution for TRS is \$3.2 billion or 1.87 percent of All Funds and 3.99 percent of General Revenue (School districts and other reporting entities pay a portion of the state contribution to TRS. These reporting enti-

ties are funded through a combination of state and local tax revenue).³⁵ Combined, lawmakers appropriated nearly \$4 billion to the ERS and TRS trust funds, approximately \$154.56 per capita.

Defined-benefit pension plans attract the best and the brightest to public service, keep our elderly out of poverty, and provide economic benefits to the state as a whole. Investments in the state pension systems are an investment in Texas and our future prosperity.

An analysis by the Center on Budget and Policy Priorities found that state and local pension contributions in Texas make up 2.7 percent of state and local spending, below the national average of 3.8 percent.³⁶



Texas State Pensions are a Different Breed

Texas' state pensions are a different breed than the systems in many other states. Strong constitutional and legal controls have helped ERS and TRS to weather economic storms better than other states. In fact, the state pension systems of Texas are held up as national models because they are well funded, strong, and sustainable.

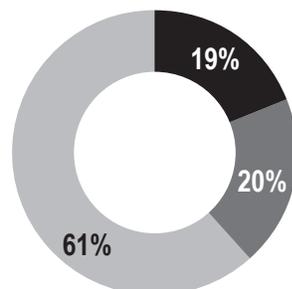
ERS and TRS have earned national recognition for their strong plan design and management. In both systems, the costs are shared between the state and employees, with the employees contributing a nearly equal share. Risks are also shared between the state and the employees. Strong plan design allows ERS and TRS to provide a modest benefit for retirees at a reasonable cost.

Sharing the Costs: How the State Pensions of Texas are Funded

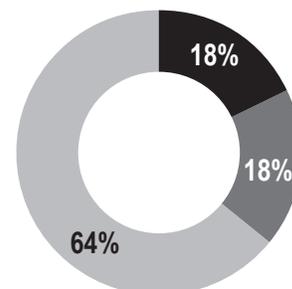
For a pension system to be sustainable, costs must be shared between the state and employees. ERS and TRS are pre-funded pension plans, meaning that contributions and investment earnings accumulate in trust funds in advance of paying benefits. The state and employees make contributions to the trust funds at a set percent of payroll. Historically, the Legislature has kept contribution rates for the state and employees nearly equal.

The systems' assets are held in trust for the benefit of the members and may not be diverted. Retirement benefits paid out of the trust funds are a combination of employee and state contributions and interest earned on investments. Investment earnings are the largest source of revenue for both the state pension systems—61 percent for TRS³⁷ and 64 percent for ERS.³⁸

TRS: Sources of Fund Revenue, 1938 - 2011

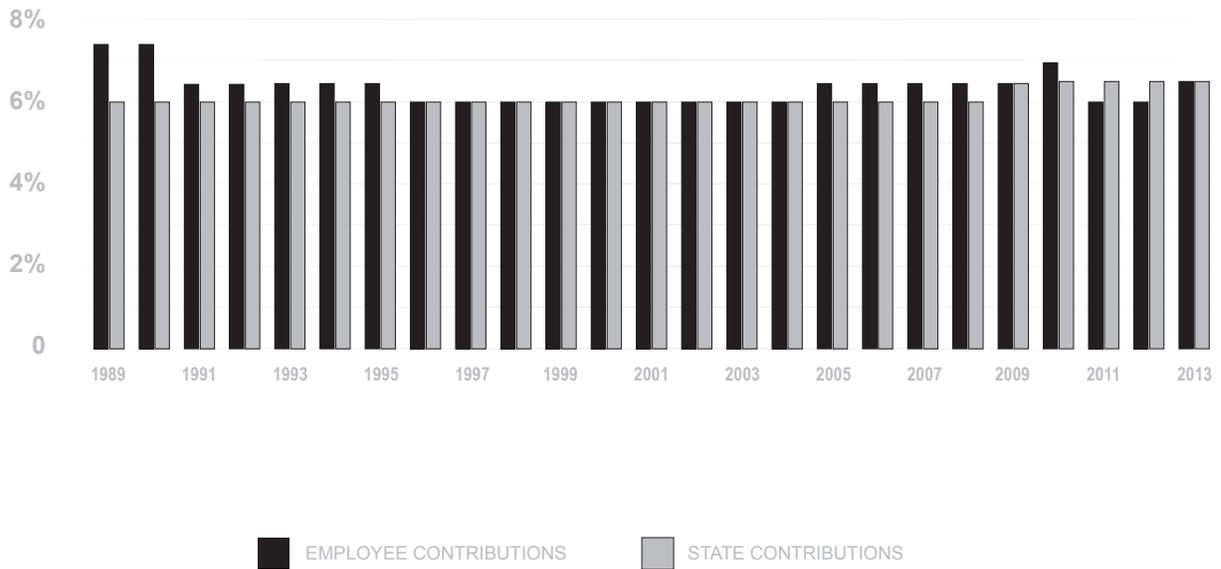


ERS: Sources of Fund Revenue, 1992 - 2011

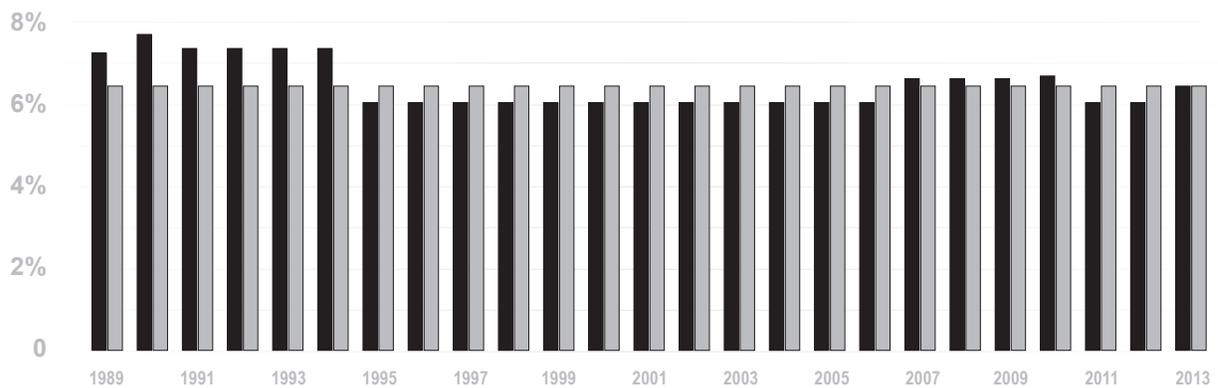


- Employee Contributions
- State Contributions
- Investment Earnings

ERS: State and Employees Make Near Equal Contributions



TRS: State and Employees Make Near Equal Contributions



There are two costs associated with defined-benefit pensions:

1. **Normal cost** – the present cost of providing the future pension benefit that current active employees accrue year-to-year while they are employed.

Pension systems make projections for what it will cost in the future to provide a retirement benefit to its members based on demographic and investment return assumptions. The pension systems then use those projections to determine what the present cost is to provide future benefits—that cost is known as the “normal cost.” ERS and TRS report the normal cost as the combined contribution rate needed today to cover future benefits.

2. **Unfunded liability** – the amount by which promised benefits would exceed currently held assets if a pension system had to pay out, in one day, all of the future benefits accrued by members. However, under no realistic scenario would this actually occur. An unfunded liability is not money owed today, but money owed over time. In other words, Texas has time to address its unfunded liabilities.

Unfunded liabilities are often expressed as a funding ratio. If a plan is 100 percent funded, assets and future liabilities are equal; if a plan is 80 percent funded its current assets can cover 80 percent of its future liabilities.

NORMAL COST

It is important for a pension system to receive enough contributions to cover the normal cost each year in order to maintain actuarial soundness. Texas considers its systems actuarially sound if the contribution rate covers the plan’s normal cost as well as the amortization cost (the cost of paying down a liability by means of periodic payments as opposed to paying it off with a lump sum) of its unfunded liabilities within a maximum of 31 years.³⁹ A pension plan can be considered actuarially sound without having a funding ratio of 100 percent if the unfunded liability can be amortized within 31 years.

The combined contribution rate needed to fund the ERS normal cost for FY 2013 is 12.31 percent of payroll. ERS contributions exceed the normal cost with a combined contribution rate of 13.0 percent (6.5 percent for the state/6.5 percent employees).⁴⁰ For TRS the normal cost is 10.6 percent of payroll; the combined contribution rate for FY 2013 is 12.8 percent (6.4 percent for the state/6.4 percent for employees).⁴¹

UNFUNDED LIABILITY

There are three primary reasons unfunded liabilities accumulate:

1. annual contributions are not made or are insufficient to cover normal cost;
2. pension benefits are expanded without paying for them;
3. the pension system does not meet its assumptions, such as the assumed rate of return on investments.

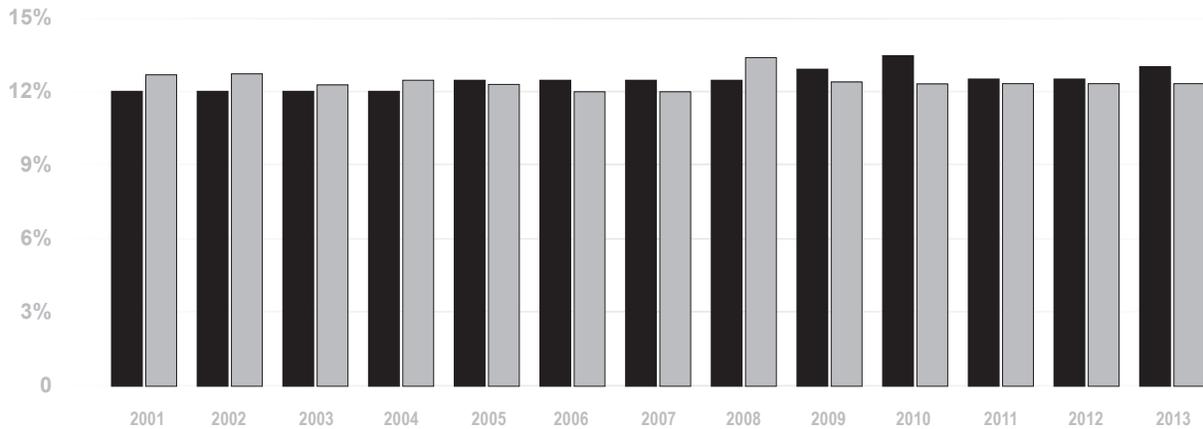
QUICK STAT

ERS & TRS 2013 CONTRIBUTIONS EXCEED THE NORMAL COST

FY 2013	Employee Retirement System	Teacher Retirement System
Normal Cost	12.31 %	10.60 %
Combined Contribution Rate	13.00 %	12.80 %
Difference*	0.69 %	2.20 %

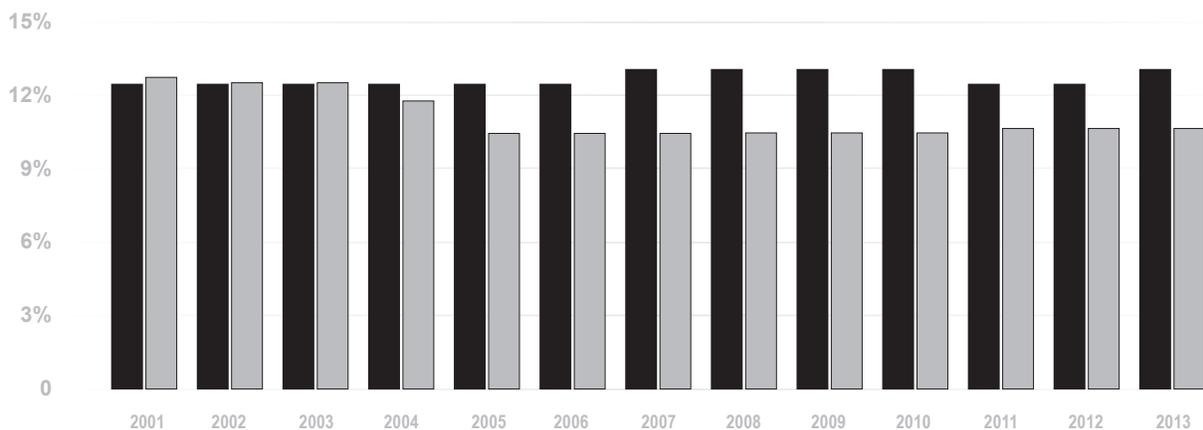
*The difference goes towards paying down the unfunded liability

ERS Contributions Routinely Meet or Exceed the Normal Cost



COMBINED CONTRIBUTION RATE
 NORMAL COST

TRS Contributions Routinely Meet or Exceed the Normal Cost



MEETING THE NORMAL COSTS

Due to strong constitutional and legal controls, Texas is required to make yearly contributions to the retirement trust funds. The Texas Constitution requires that the state's contribution rate to ERS and TRS be no lower than 6.0 percent or higher than 10.0 percent of payroll.⁴²

Though the Texas Constitution requires yearly contributions from the state and employees be made to the trust funds, it does not require that the contributions be enough to cover the normal cost. When contributions fail to meet the normal cost, the system needs to make up the underfunding and the lost investment earnings. If the underfunding is not made up through benefit reductions, contribution rate increases, or assumption adjustments, an unfunded liability will result.

After failing to meet the normal cost for several consecutive years, ERS made benefit changes, for new employees starting in September 2009, in an effort to reduce the costs of the plan. These changes included increasing the number of months used to determine a worker's final average salary; increasing employee contributions; and increasing the retirement age.

TRS made similar benefit adjustments, starting in 2005, which greatly reduced the plan's costs.

BENEFITS ENHANCEMENTS

Under current law, expanding pension benefits, such as providing a Cost-of-Living adjustment (COLA), can only occur if the fund is actuarially sound and able to amortize the expanded benefits over 31 years.⁴³

Throughout the 1990s both plans were actuarially sound; ERS was funded above 100 percent and TRS was funded above 90 percent. During these up years, instead of saving for down years, the Legislature enhanced benefits. Annuity increases were provided for ERS members in 1990, 1992, 1996, 1997, 1998, 1999, and most recently in 2001.⁴⁴ TRS members received cost-of-living adjustments for retirees based on Consumer Price Index inflation in 1993, 1995, 1997, 1999, and 2001.⁴⁵

Both plans increased their multipliers to 2.3 percent in 2001⁴⁶ (a multiplier refers to the percentage of salary replaced, during retirement, for each year of service, for both plans a retiree receives 2.3 percent of their final average salary for every

year of service). Raising the multiplier increases the amount of salary replaced in retirement and increases the costs of providing the benefit.

During this period, the Legislature also decreased the state's contribution to the pension systems. In 1995, when ERS was funded at 104.30 percent, the Legislature decreased the state contribution rate to 6.0 percent—the lowest level constitutionally allowed—from 6.45 percent. The state contribution rate stayed at that low level for the next nine years. TRS reduced its state contribution to 6.0 percent from 7.3 percent in 1995 when the system was 97.9 percent funded. The TRS state contribution rate stayed at that low level until 2006. State contribution rates for both systems were reduced again for fiscal years 2011 and 2012, because of anticipated state revenue shortfalls. These steps contributed to the unfunded liabilities projected today.

MEETING ASSUMPTIONS

Pension systems use assumptions such as rate of return on investments, inflation predictions, retirement rates, worker/retiree mortality, and other demographic data to determine the costs of providing pension benefits. When actual experience differs from the assumptions then the cost estimates will be inaccurate. ERS and TRS revisit their plan assumptions every five years and make adjustments when needed.

The spike in the normal cost for ERS in 2008 (see ERS chart on page ##) was the result of the ERS Board adopting new demographic assumptions following a study that showed people were retiring sooner than expected and with more years of service than anticipated. In this case, adjusting the assumptions increased the normal cost because the systems would need to provide benefits for a longer time and at a higher rate than previously assumed.

NEW STANDARDS

GASB recently adopted new standards that revise the way pension liabilities must be calculated and presented for financial reporting purposes. These changes will go into effect for state fiscal year 2015. Under the new standards, the ERS and TRS funding ratios may decline because of a change in the interest rate used to discount projected future benefit payments to their present value. If a plan is fully funded, the long-term expected rate of return on investments will continue to serve as the

basis for discounting. If a plan has reached what GASB calls a “crossover point,” meaning the plan is not fully funded, then projected future benefit payments must be discounted using a high-quality municipal bond interest rate. GASB selected this rate because the state will have to pay the unfunded liability as it would any other state debt, making the bond interest rate a more appropriate discount rate in GASB’s judgment. Currently rates of return on bonds are less than long-term rates of return on a general investment portfolio. Assuming this lower rate of return will probably increase the size of the unfunded pension liability. These new standards apply only to a state’s financial reports, not the calculations used to determine annual contributions.⁴⁷

ADDRESSING THE UNFUNDED LIABILITY

The unfunded liabilities projected today developed within the last ten years—starting in 2002 for TRS and 2003 for ERS. These unfunded liabilities are due to a combination of benefit increases that raised the plan costs, underfunding of the systems in good times, and investment losses experienced during the 2001 and 2008 recessions. Retirement incentives for state employees, enacted as a cost savings measure by the Legislature, also caused people to retire sooner than assumed, adding additional stress to ERS.⁵¹

At the end of fiscal year 2012, ERS was 81.0 percent funded, with net assets of nearly \$22 billion and an unfunded liability of \$5.7 billion. TRS held \$111.4 billion in net assets with an unfunded liability of \$26.1 billion and was 81.9 percent funded.⁵²

Though undesirable, having unfunded liabilities does not mean the Texas public pension systems are in crisis. Most pension experts consider a system with a funding ratio of 80 percent or better to be well funded.

ASSUMED RATE OF RETURN

The most important assumption for ERS and TRS is the assumed rate of return on investments, because the majority of their revenue comes from investment earnings. ERS and TRS use the actuarial method recommended by the General Accounting Standards Board (GASB) to calculate their actuarial rate of return. With the actuarial method, differences between the actual annual return and the assumed annual rate of return are recognized, or smoothed, over a period of time to average out above and below average returns. This method lessens the impact of market volatility on plans’ year-to-year funding needs. ERS and TRS both use an assumed rate of return of 8.0 to discount the cost of future benefits.

The volatility in investment returns at ERS illustrate why it is important to use smoothing when assessing the long-term performance of a fund. ERS investment returns have ranged from a high of 13.9 percent to a low of -6.6 percent over the last five years. When smoothed for that five-year period, the returns are closer to 4.0 percent—a rate that is low due to the recent recession.⁴⁸ However, when annualized over 30 years, the rate of return is 8.6 percent—above the assumed rate of 8.0 percent.⁴⁹ TRS has experienced similar volatility in its investment returns and has a rate of return of 8.6 percent when smoothed over the past 25 years.⁵⁰

Some argue that an 8.0 percent rate of return is unrealistic and advocate using the so-called “risk-free” rate of return as the assumption. This is the minimum return an investor would expect from an absolutely risk-free investment over a set period of time. But since there is no such thing as a risk-free investment, the yield of a three month Treasury bill—generally considered a safe investment—is used as a proxy. Adopting the risk-free rate of return would dramatically increase the unfunded liabilities, a move that makes little sense considering ERS and TRS consistently meet their investment benchmarks.

QUICK STAT

ERS & TRS MAINTAIN FUNDING RATIOS ABOVE 80 PERCENT

FY 2012	Employees Retirement System	Teacher Retirement System
Net Assets	\$21.8 billion	\$111.4 billion
Unfunded Liability	\$5.7 billion	\$26.1 billion
Funded Ratio	81.0 %	81.9 %

Contributions above the normal cost go towards paying down the unfunded liability. At the end of FY 2012, the normal cost for ERS was 12.31 percent and the combined contribution rate is 13.0 percent beginning September 1, 2012. The additional 0.69 percent of the contribution rate above the normal cost (or \$39 million) is directed toward paying down the unfunded liability. The combined contribution rate for TRS is 2.2 percent above the normal cost at the end of FY 2012, which directed \$638 million towards paying down the unfunded liability.

At the current contribution rate, the amortization period for both plans is infinite, meaning that they will never reach full funding if changes are not made.⁵³ For ERS to be actuarially sound and able to amortize its unfunded liability within 31 years, the combined contribution rate would need to be set at 18.25 percent for FY 2013. That is 5.25 percentage points higher than the combined contribution rate set for 2013 by the Legislature. TRS would need a combined contribution rate of 15.02 percent to be actuarially sound; only 2.22 percent points higher than the current combined contribution for 2013.⁵⁴

Pension Costs for the 2014 – 2015 Biennium

Recognizing the need for additional funding for the pension systems, ERS and TRS have requested an increase in the state contribution rate for the 2014-2015 biennium. ERS requested their state contribution rate be raised to 10 percent, the maximum allowed by law, at a modest additional cost of \$403 million for the biennium. If the increase is approved, without raising the member contribution rate, the ERS unfunded liability would be amortized within 55 years.⁵⁵

TRS requested a 0.50 percent point increase for 2014 and an additional 0.50 percent point increase for 2015 to bring the state contribution rate up to 7.4 percent by end of the biennium, with a modest cost of \$375 million above the baseline request.⁵⁶ If granted this increase, without raising the member contribution rate, the combined contribution rate would be only 1.22 percentage points short of the actuarially sound rate.

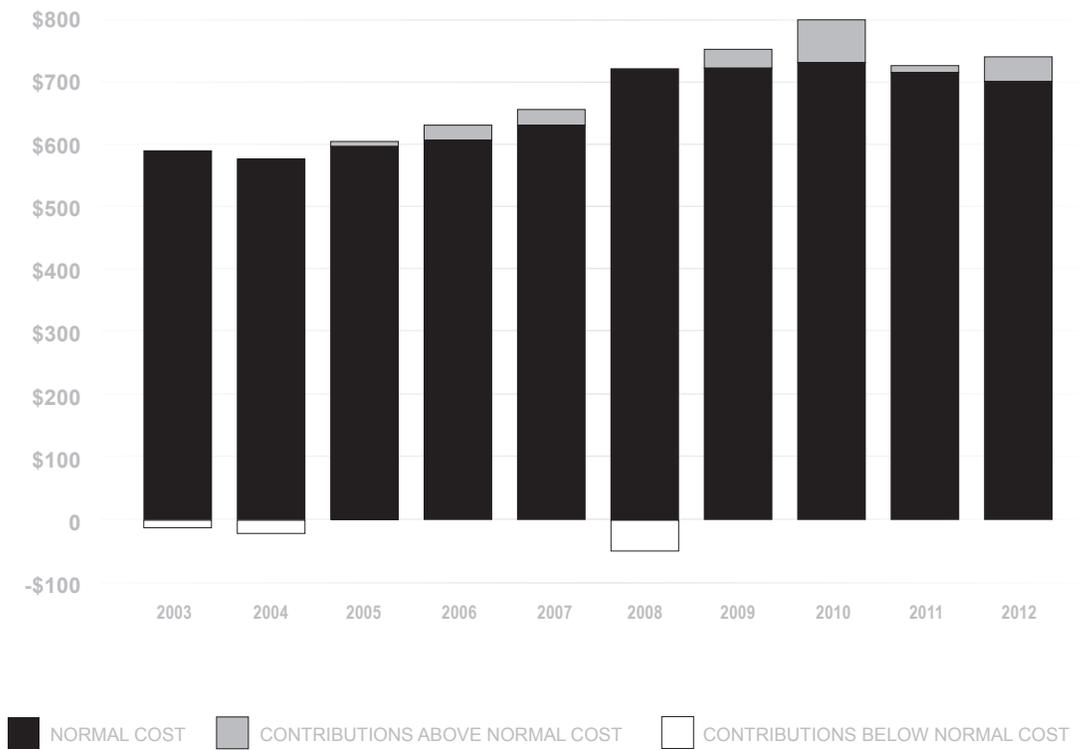
Managing the Risks: Defined-Benefit vs. Defined-Contribution Plans

There are two primary types of pension plans: defined-benefit and defined-contribution. Defined-benefit plans provide a predictable monthly payment for life based on years of service and average final salary. Typically, it is the employer who assumes most of the risks in defined-benefit plans. ERS and TRS are defined-benefit plans.

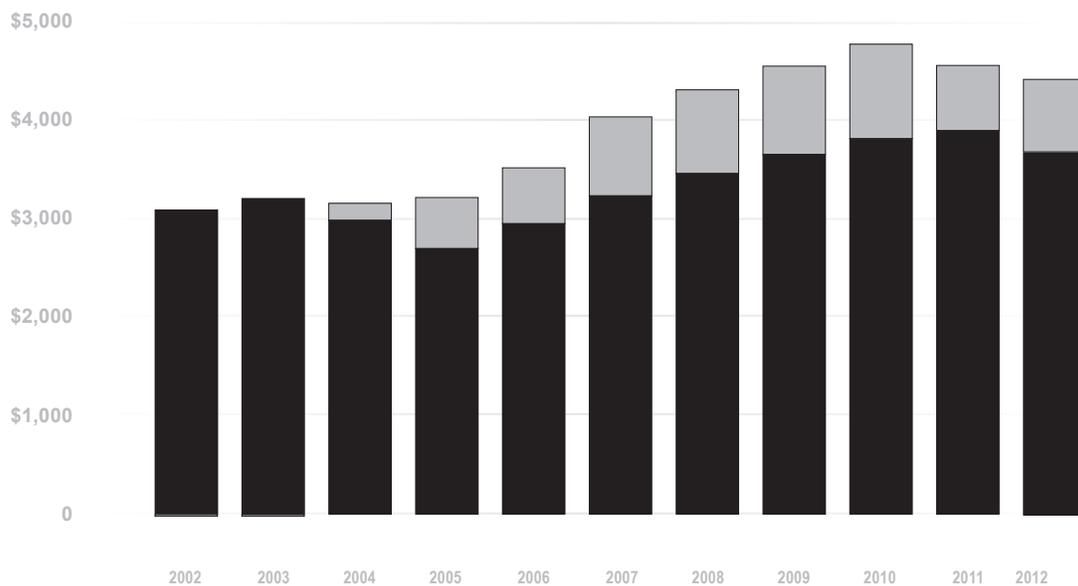
Defined-contribution plans, on the other hand, are separate accounts for each employee where the employee, employer, or both make contributions. These types of plans are self-directed by the account holder, meaning that each individual is responsible for deciding how much to save and how to invest the account assets. As a result, it is the employee who assumes most of the risks and all of the responsibility for managing investments. A 401(k) is an example of a defined-contribution plan.

How risks are managed plays a large role in the overall costs of a pension system. Defined-benefit plans cost 46 percent less to deliver the same level of retirement income than a defined-contribution plan, according to a study by the National Insti-

ERS: Chipping Away at the Unfunded Liability



TRS: Chipping Away at the Unfunded Liability



QUICK STAT

ERS & TRS CONTRIBUTIONS ARE BELOW THE ACTUARIALLY SOUND RATE

FY 2013	Employees Retirement System	Teacher Retirement System
Combined Contribution Rate	13.00	12.80
Actuarially Sound Contribution Rate	18.25	15.01
Difference	5.25	2.22

tute on Retirement Security.⁵⁷ These findings were echoed by a TRS analysis that found that it would cost the state 138 percent more to switch to a self-directed defined-contribution plan that would generate the same level of benefits.⁵⁸ Plan type changes that appear to save money only do so by cutting benefits and in fact are more costly than defined-benefit plans.

Sustainable state pension systems manage the risks of the plan between the state and the employee in a fair and cost-effective manner. The risks associated with pension systems include the funding, investment returns, longevity in retirement, inflation, and portability when changing jobs. Plan type primarily determines how the risks are shared.

FUNDING AND INVESTMENT RISK

With defined-benefit plans, the state is responsible for ensuring the system is adequately funded and for making all the investment decisions. However, these risks can be shared with the members through increased contributions or reduced benefits. For defined-contribution plans, the risk and responsibility of having adequate funds at retirement are left entirely to the individual account holders.

Defined-benefit plans' ability to pool investments, and have those investments diversified and professionally managed, result in better investment returns and cost efficiencies compared to defined-contribution plans. Returns from defined-benefit plans outperformed defined-contribution plans by approximately 2.7 percent in 2008.⁵⁹ Administrative costs for pension plans are largely driven by their size: management fees for large, pooled defined-benefit plans are just 0.25 percent of assets, compared to 0.60 to 1.70 percent for defined-contribution plans.⁶⁰

Five percent of the cost savings seen in defined-benefits plans is the result of balanced and diversified investments and 26 percent comes from the superior investment returns.⁶¹ TRS estimates that if its members were asked to invest as individuals, their returns would be 5.3 percent over 25 years, compared to the 8.6 percent projected for the existing trust fund.⁶²

LONGEVITY RISK

For defined-contribution plans, the member assumes the full longevity risk, because they must determine how much to save for retirement and how much to spend after retirement—without knowing how the market will perform during their careers or how long they will live after retirement. Defined-benefit system assets, on the other hand, can be placed in long-term investments that can take generations to mature.

Unlike defined-contribution plans, where the employee has a finite career and lifespan, defined-benefit plans do not need to move their assets to less-risky investments as their member's age. With a guaranteed retirement income, members in defined-benefit plans know exactly how much to expect each month and don't have to worry about outliving their benefits. The longevity risk pooling in defined-benefit plans translates to a 15 percent savings over defined-contribution plans that offer the same level of benefits.⁶³

INFLATION RISK

Inflation erodes the value of retirement benefits over time. Some defined-benefit plans offer regular or automatic cost-of-living adjustments (COLAs) to

retirees. In these cases it is the employer who assumes the risk and is responsible for paying for the increase in benefits. ERS and TRS do not provide automatic COLAs and have not provided a COLA in over 11 years, leaving the employees to bear the total inflation risk.

PORTABILITY RISK

Defined-benefit plans are sometimes criticized for not being as easy to transfer as a defined-contribution plan if a member takes another job outside of the organization that sponsors the plan. In Texas, though, ERS and TRS members who leave their jobs before retirement are able to withdraw their individual contributions, plus 5.0 percent interest, at any time.⁶⁴ Members who are vested in the system and leave public employment may choose to withdraw their funds or wait until they are eligible to draw down retirement payments. When members withdraw their funds before retirement, regardless if they are vested or not, they forfeit all the contributions made by the state.

Defined-contribution plans have some advantages when it comes to switching employers, primarily that assets from one plan can be rolled over into another plan or IRA. However, of the 70 percent of 401k participants who left an employer in 2010 and did not leave their assets in their former employer's plan, 45 percent cashed out their funds instead of rolling them over into another qualified plan.⁶⁵ In addition to tax penalties, cashing out retirement savings early greatly undermines one's ability to have a secure retirement. Additionally, 71 percent of defined-contribution plans in the private sector require some type of vesting in order to be able to keep employer contributions after leaving employment.⁶⁶

HYBRID PENSION PLANS

Several states have recently started to experiment with hybrid plans that combine elements of defined-benefit and defined-contribution plans as an option for providing pension benefits to public employees. There currently are two main types of alternative plans: cash balance plans and two-part hybrids.

CASH BALANCE PLANS

Cash balance plans are similar to defined-benefit plans, but with individual accounts similar to a defined-contribution plan. Contributions by the state and employee, called pay credits, are based on a percentage of the employee's salary. Interest credits, which can be a fixed rate or tied to an index, are also contributed to the account. If the fund fails to earn a return on investments at or above the level of the interest credit the system will develop an unfunded liability. At retirement, employees receive a benefit similar to that in a defined-benefit plan and can elect to receive regular payments or a lump sum payment, depending on plan features.⁶⁷

Texas has two large cash balance public pension plans: the Texas Municipal Retirement System (TMRS) and the Texas County and District Retirement System (TCDRS). The average employer contribution to TMRS is 14.2 percent of payroll, and the plan was funded at 82.9 percent at the end of 2010. For TCDRS, the average employer contribution is 10.55 percent, and the plan was funded at 89.4 percent at the end of 2010. The state provides no financial support and has no financial liability for either of these plans.⁶⁸

ATRS analysis of switching to a cash balance plan found that it would cost the state 12 percent more than the current defined-benefit plan to provide the same level of benefits. This is because state funds deposited in the accounts would follow the employees who leave state jobs, and others would work past the assumed retirement age and be entitled to a greater retirement income than assumed.⁶⁹

TWO-PART HYBRID PLANS

Two-part hybrid plans have a defined-benefit account and a defined-contribution account. These types of plans are a relatively new and currently used in only seven states.⁷⁰

Under typical plan design, the state makes a set contribution, usually a percent of payroll determined by the Legislature, to the defined-benefit part of the plan and the employee makes a contribution to the defined-contribution side of the plan. During retirement the defined-benefit portion of the plan will provide a lifetime benefit. The defined-contribution portion, depending on plan options, is paid out as a lifetime benefit or as a lump sum of the account balance.⁷¹

Several states that offer hybrid plans let employees choose which retirement plan is best for them. In Ohio, 95 percent of public employees and 89 percent of teachers chose a traditional defined-benefit plan, compared to the one percent of public employees and two percent of teachers who chose the hybrid plan.⁷²

ATRS analysis found it would cost the state 50 percent more to offer the same level of benefits under a two-part hybrid plan.⁷³

Switching Plan Type Does Not Solve Funding Problems

In the aftermath of the Great Recession, states have seen their unfunded liabilities increase and their investment returns decrease. This has led several to explore abandoning their defined-benefit plans for defined-contribution plans. However, that shift can increase costs and make it harder for public workers to retire securely and at an appropriate time.

When a state closes a defined-benefit plan to new employees, it still must pay out retirement benefits for those under the old plan. It could take several decades for the defined-benefit plan to fully phase out—all the while the state is responsible for the administrative costs associated with operating two plans, but without ongoing contributions from new employees.

During the 2011 legislative session a bill was introduced to close ERS and TRS to all new employees and instead provide them with a defined-contribution plan. A five-year fiscal analysis conducted by the Legislative Budget Board estimated the cost at \$1.5 billion a year.⁷⁴ This is nearly twice the cost of simply increasing the state contribution of the existing plans to the actuarially sound rate and start paying down the unfunded liabilities of ERS and TRS.

West Virginia switched from a defined-benefit plan to a defined-contribution plan, only to have buyer's remorse. The state closed its defined-benefit plan for new teachers in 1991, and all new employees were placed in a defined-contribution plan. After realizing that members in the defined-contribution plan were earning much lower investment returns than they would have under the old plan, officials

reopened the defined-benefit plan to new employees in 2005. Three years later, the state allowed teachers in the defined-contribution plan to switch to the defined-benefit plan; 78 percent of teachers chose the defined-benefit plan.

Strong Plan Design: Providing Modest Benefits at a Reasonable Cost

Plan design, not plan type, is the most crucial cost driver of pension systems. Many states were in crisis with their pension systems before the recession due to poor fiscal management and plan design. Strong constitutional and legal controls have allowed Texas to provide a modest retirement income for our state employees and teachers at a reasonable cost.

There are five common undesirable pension practices that generally Texas has avoided: skipping state contributions, commonly called “funding holidays”; lack of employee contributions; artificially inflated salaries, known as “salary spiking;” automatic COLAs with no regard to fiscal condition of the plan or ones that are not tied to actual inflation, and unfunded benefit increases.

FUNDING HOLIDAYS

Failure to make contributions shifts costs into the future and causes the unfunded liability to grow quickly. Due to strong state constitutional controls, Texas has never skipped a pension contribution. However, the Legislature routinely sets the contribution rate below the actuarially sound rate needed to cover normal costs and pay down projected unfunded liabilities which goes against the constitutional requirement that the financing of benefits must be based on sound actuarial principles.⁷⁷

Also of note, the Legislature has not set the ERS state contribution rate to 7.4 percent of payroll as required by Texas law⁷⁸ since 1990.⁷⁹ This rate is not tied to the actuarially sound rate and there is no penalty to the state for failing to meet this threshold. The contribution rates for TRS set by law mirrors the constitutionally set range of 6.0 percent to 10.0 percent of payroll—the Legislature has never set the state contribution rate below 6.0 percent.

THE REAL REASON FOR THE DECLINE OF DEFINED-BENEFITS IN THE PRIVATE SECTOR—RULE CHANGES, NOT COSTS

The number of private-sector workers covered by defined-benefit plans is declining, but not because of cost. In 1975, eighty-eight percent of private sector workers were covered by a work-sponsored defined-benefit plan; by 2005 that number declined to just 33 percent.⁷⁵

Most of the decline in private-sector pensions can be tied to regulations that don't apply to public pension systems. Legislative and regulatory changes since the 1970s have made private-sector pensions more complex and burdensome to operate. The Pension Protection Act of 2006 increased plan funding ratio targets to 100 percent from 90 percent, accelerated the amortization of unfunded liabilities to seven years from 30 years, and required unrealistically conservative funding assumptions.

These changes caused pension funding to be more volatile and employer contributions to be less predictable. By 2008, the most common reasons for a company to freeze its defined-benefit plan were the impact of contributions on the firm's cash flow and the unpredictability of plan funding. The overall costs of providing a defined-benefit plan were not cited as a reason for freezing plans.⁷⁶

EMPLOYEE CONTRIBUTIONS

Contributions from employees are just as important as the state contribution. Though some states have not required employee contributions or have set the rates extremely low. Texas law sets the ERS member contribution at 6.5 percent, but ties it to the state contribution rate if that is less than 6.5 percent.⁸⁰ (The Legislature waived the coupling requirement for fiscal year 2011, allowing the state contribution rate to be lower than that of members for that fiscal year only.⁸¹) TRS member contributions are set by law at 6.4 percent of payroll.⁸²

SALARY SPIKING

Salary spiking is the act of substantially increasing the final average salary above what is expected from normal salary increases in order to generate a larger retirement income. There are two main methods used to "spike" salaries: work an unusual amount of overtime or cash in unused vacation and other paid leave. Some employees do both.

Spiking hurts the financial health of a pension system because funding is based on assumptions of salary growth.⁸³ This is not a problem for ERS or TRS, since overtime is excluded in calculating final aver-

age salary and unused sick and annual leave time cannot be used to advance a member's retirement eligibility or to bump up final average salary (Tier 1 ERS members are able to apply unused sick and annual leave time to advance retirement eligibility—see Technical Appendix for further explanation).⁸⁴

AUTOMATIC COLAS AND BENEFIT INCREASES

Cost-of-living adjustments (COLAs) and unfunded benefit increases are related since any additional payments or enhancements made by the pension system that were not covered in previous assumptions will increase the unfunded liabilities. ERS and TRS do not provide automatic COLAs for retirees. Texas law requires the pension systems to be actuarially sound and able to fund any increases in benefits, including COLAs, within a 31 year time-frame.⁸⁵

Because of these provisions, retired Texas state workers and teachers have not received a COLA in over 11 years. Though COLAs should be granted responsibly, a complete lack of adjustments leads to the erosion of retirees' buying power. Texas teachers are hit particularly hard because most are unable to participate in Social Security.

Recent Reforms

The Texas Legislature has already taken steps to ensure the continued solvency of the state pension systems. As a result, Texas' public pension systems are held up as a national model for being well-funded and successfully weathering the recent economic storm.⁸⁶

Substantial changes were made to the plans in 2005 (TRS) and in 2009 (ERS), while some statutory clean-up changes were made in 2011. In 2005, the Legislature established four different membership tiers, based on whether employment began before or after September 1, 2007, and if the employee was grandfathered into previous plan provisions. In 2009, a second tier of ERS membership was created for employees hired on or after September 1, 2009 (see the Technical Appendix for details).

Creating tiers allowed ERS and TRS to protect employees who are near retirement from changes in plan design. Both systems were able to decrease their costs by increasing the retirement age; changing how benefits are calculated; changing rules around rehiring retired employees. ERS also increased employee contribution rates.

RETIREMENT AGE

The Legislature increased the retirement age to 65 from 60 for ERS members hired on or after September 1, 2009 and increased the vesting period to 10 years from five years. For TRS members who joined on or after September 1, 2007, member become eligible for retirement when they meet the Rule of 80 (where the sum of age and years of service exceed the number 80) with a minimum age of 60.

CALCULATING BENEFITS

The number of month used to calculate the final average salary was increased to the highest 48 months for Tier 2 ERS members from the highest 36 months. In 2007, TRS began using the five highest annual salaries to calculate final average salary for Tier 2 and 3 members, up from the three highest salaries. Increasing the number of months or years of salary to calculate the final average salary decreases the amount the benefit is based on because years of lower pay are brought into the calculation.

RETIRE/ REHIRE

Many state agencies and public schools that have a hard time recruiting qualified employees rely on rehiring employees who had retired. Critics see the practice as a way to give raises to already highly compensated employees, since those rehired are able to keep their full retirement income and receive a salary. However, most (70 percent) are not highly compensated and makes under \$50,000 a year.⁸⁷

ERS established a 90-day waiting period for members who retired on or after May 31, 2009, and who want to seek re-employment by the state without a loss to their retirement income. The hiring agency is subject to a pension surcharge equal to the state contribution for the returning retired workers, though the retiree no longer makes contributions and does not earn additional service credits.

TRS allows members who retired after January 1, 2011 to return to work after a year, without a loss of their retirement income. All restrictions on returning to work for TRS members who retired before January 1, 2011, were lifted by the Legislature in 2011. When districts rehire retirees, the returned worker does not make a contribution to TRS and does not earn additional service credits.

MEMBER CONTRIBUTION RATE INCREASE

ERS raised the employee contribution rate to 6.45 percent in 2009 from its historic level of 6.0 percent. This rate was raised again in 2010 to 6.5 percent where it has remained since. TRS has made no changes to the employee contribution rate.



State Contributions for ERS and TRS Should be Increased

Texas does have an unfunded liability, but it is manageable. Over time, our economy will recover from the recent recession and investment returns will recover as well.

When the pension systems were fully funded, the Legislature made a short-sighted decision to reduce the state contribution rate. Facing a large revenue shortfall due to the recession, the Legislature again reduced the contributions rates in fiscal year 2011 for both plans.

This pattern of underfunding is a significant cause of the unfunded liabilities projected today. To maintain the strength and stability ERS and TRS have enjoyed since their creation, without cutting the already modest retirement benefits provided, contributions to the systems must increase.

Increasing Contributions will Improve Actuarial Soundness

In past years, Texas invested more in public pensions, but cut contribution rates at times when the systems were performing strongly. The Legislature has not set the ERS state contribution at the legally required rate of 7.4 percent of payroll since 1990. At that time ERS was 102.1 percent funded. If the state had stayed at this rate for the past 20 years, an additional \$1.12 billion dollars would have been deposited into the ERS trust fund.⁸⁸

TRS has experienced similar declines in its state contribution rate since reaching a peak of 8.5 percent from 1980 to 1983.⁸⁹ The Legislature set the TRS state contribution at 6.0 percent, the lowest rate constitutionally allowed, in 1995 and maintained this rate until 2006. During this time the fund fluctuated from being 95.7 percent funded to 87.3 percent funded.⁹⁰

Texas does not have to eliminate the unfunded liabilities overnight. A long-term commitment to increase funding of the systems is more

Potential TRS State Contribution Rates

	2012-2013 Total State Contribution	As % of All Funds	As % of General Revenue
6.50 %	\$ 3,401,748,629	1.96 %	4.18 %
7.00 %	\$ 3,663,421,601	2.11 %	4.51 %
7.50 %	\$ 3,925,094,572	2.26 %	4.83 %
8.13 %	\$ 4,254,802,516	2.45 %	5.23 %

Potential ERS State Contribution Rates

	2012-2013 Total State Contribution	As % of All Funds	As % of General Revenue
6.50 %	\$ 752,430,769	0.43 %	0.93 %
7.00 %	\$ 810,310,059	0.47 %	1.00 %
7.50 %	\$ 868,189,349	0.50 %	1.07 %
8.00 %	\$ 926,068,639	0.53 %	1.14 %
8.50 %	\$ 983,947,929	0.57 %	1.21 %
9.00 %	\$ 1,041,827,219	0.60 %	1.28 %
9.50 %	\$ 1,099,706,509	0.63 %	1.35 %
10.00 %	\$ 1,157,585,799	0.67 %	1.42 %

important than the amount of contributions made in one year. Modest increases in the state contribution rate over time will reduce the unfunded liabilities, while also giving the stock market time to recover.

TRS needs a contribution to boost of 1.5 to 2.0 percent of payroll to reverse its funding ratio decline and an increase of 3 percent to bring the system back to actuarial soundness.⁹¹ ERS estimates that for every 1 percent increase in the contribution rate an additional \$58 million is generated for the trust fund annually.⁹²

The above table illustrates what the impact on the state budget would have been during 2012 – 2013 biennium at different state contribution rates.

ERS and TRS are national models—something Texas should be proud of. The state pension systems provide us with a competent and dedicated workforce, give peace of mind to the seniors who dedicated their careers to public service, and generate economic benefits for all Texans. For the future prosperity of Texas we must bolster our investment in these state pension systems.

Technical Appendix

Overview of the State Pension Systems of Texas

At the end of fiscal year 2011, TRS had over 1.3 million participants, representing one out of every 20 Texans⁹³ and a trust fund valued at over \$111 billion.⁹⁴ ERS covers over 200,000 current and former state workers and elected officials, and has assets valued at almost \$24 billion. ERS also oversees the Law Enforcement and Custodial Officers Supplemental Retirement Fund (LECOSRF), and the Judicial Retirement Systems (JRS 1 & 2).⁹⁵

ERS and TRS are both pre-funded pension systems; each biennium the Legislature determines what percentage of payroll is to be contributed by the state and by the employee. The Texas Constitution states that employee contributions cannot be lower than 6.0 percent of payroll and the state's contribution cannot be lower than 6.0 percent or higher than 10.0 percent of payroll.⁹⁶

EMPLOYEE RETIREMENT SYSTEM OF TEXAS

The voters of Texas approved the creation of the Employee Retirement System of Texas (ERS), as a constitutional amendment, in 1945.⁹⁷ Since then, ERS has provided a stable source of retirement income for state workers, law enforcement and correctional officers, elected officials, and judges. At the end of fiscal year 2011 the ERS trust fund held assets of over \$23.9 billion and had 220,723 active members and annuitants.⁹⁸

ERS acts as the administrative and investment body for the Law Enforcement and Custodial Officers Supplemental Retirement Fund (LECOSRF) and the Judicial Retirement Systems Plans 1 & 2 (JRS 1 & 2).⁹⁹ For all the ERS administered pension plans, retirement benefits are determined through a formula that considers years of service, salary, and age at retirement.

There are two distinct classes of membership in ERS, the Employee Class and the Elected Class.

EMPLOYEE CLASS

The Employee Class includes state employees and appointed officers from every department, commission, board, agency or institution of the state.¹⁰⁰ ERS Employee Class membership is mandatory for full- and part-time employees after a 90-day waiting period.¹⁰¹ Contribution rates for Employee Class members are 6.0 percent in 2012 and 6.5 percent in 2013.

There are two tiers of employees in the Employee Class; Tier 1 are members hired prior to September 1, 2009, and Tier 2 are those hired on or after September 1, 2009.

To be eligible for retirement benefits Tier 1 members must:

- be age 60 with at least five years of service credit, or
- meet the "Rule of 80," where the sum of age and years of service exceed the number 80 with at least five years of service credit

The retirement annuity is equal to 2.3 percent of the average of the highest 36 months of salary multiplied by the number of years of service credit.

$$\text{Tier 1 Annuity} = 2.3\% \times \text{Avg. of Highest 36 mos. of Salary} \times \text{Years of Service}$$

Compensation for determining retirement benefits includes base salary, longevity, and hazardous duty pay; overtime is excluded.¹⁰² Credit for unused sick and annual leave time can be used only by Tier 1 members to determine retirement eligibility.¹⁰³

The maximum annuity is 100 percent of the average monthly compensation.¹⁰⁴ It would take 44 years of state employment before a retiree would earn benefits equal to 100 percent of their final average salary.

For Tier 2 members, those hired on or after September 1, 2009, the minimum retirement age was

QUICK STAT ERS: TIER COMPARISON

	Tier 1	Tier 2
Final Average Salary	Highest 36 Months	Highest 48 Months
Retirement Age	Age 60 with 5 years of service	Age 65 with 10 years of service

raised to age 65 from age 60 and vesting was increased to 10 years from 5 years. The final average salary was also expanded to include the highest 48 months of salary, up from the highest 36 months used in Tier 1. Tier 2 members are also subject to an early retirement penalty: a 5 percent benefit reduction for each year a member retires before the age of 60, with a reduction cap of 25 percent.

A career state employee retiring, under Tier 2 provisions, at age 65 with 30 years of service credit and a final average salary of \$3,500 a month (\$42,000 a year¹⁰⁵) would receive a monthly annuity of \$2,415 (\$28,980 a year) or a salary replacement rate of 69 percent.

Tier 2 Annuity =
2.3% x Avg. of Highest 48 mos. of Salary x Years of Service

Example: \$2,415 = 2.3% x \$3,500 x 30 Years of Service

If this retiree lives to age 80, she would collect a lifetime annuity of \$434,700 or \$14,490 for each year of service to the state, assuming no cost-of-living adjustment are granted.

ELECTED CLASS

Membership in the Elected Class is voluntary and covers state legislators, those who hold a state office normally filled by statewide election, and district and criminal district attorneys.¹⁰⁶

To be eligible for retirement benefits members must be:

- age 60 with eight years of service credit, or
- age 50 with 12 years of service credit.

Retirement annuities for the Elected Class are tied to the salaries of district court judges. The annual

retirement annuity is equal to 2.3 percent of the current salary of a district judge, multiplied by the number of years in service.

Annuity =
2.3% x Current District Judge Salary x Years of Service

The maximum amount a retiree can collect is 100 percent of the salary being paid to a district judge,¹⁰⁷ which was \$125,000 in FY 2012. An elected official would need to serve for 44 years to earn the maximum annuity.

A state-wide elected official or district attorney who retired at age 60 with eight years of service would be eligible for an annual annuity of \$23,000. If that retiree lives to age 80, she would have collected a total lifetime annuity of \$460,000 or \$57,500 for each year of service.¹⁰⁸

Legislators earn \$600 a month, or \$7,200 per year, but their member contributions are calculated on compensation of \$9,600 per year.¹⁰⁹ The Elected Class member contribution rate for legislators is 8.0 percent and the contribution rate for non-legislators is 6.0 percent.¹¹⁰ The state contribution rate for the Elected Class is the same as for the employee class, 6.0 percent in 2012 and 6.5 percent in 2013.

For both classes of membership, members who leave the system before retirement are able to take a refund of their contributions plus five percent interest. Members may also choose to leave their funds in the system. If former members, leave their funds in the plan, and returns to state employment their membership will reactivate and build on past service credit. Former members who withdrew their funds would have to restart their ERS membership if they return to state employment.

Members with at least five years of service credit who terminates state employment before retirement age, but leaves their funds in the system, are eligible to receive a retirement annuity once they reach the age of 60 (65 for those hired on or after September 1, 2009).

ERS members can purchase service credits (additional years of service to be used when calculating the annuity) under several different scenarios.

Generally the cost for these credits are member contributions due plus a 10 percent interest penalty, however post-August 2003 waiting period service credits cost the actuarial present value of the benefit created by the additional service credit.

Members with at least 120 months of service credit may be eligible to purchase up to three years of additional service credit at a cost of the actuarial present value of the benefit created by the additional service credit. Service credit that was cancelled with a refund can be repaid with 10 percent interest penalty.¹¹¹

Members of ERS also participate in Social Security; receiving Social Security benefits does not affect ERS retirement benefits in any way.¹¹²

Law Enforcement and Custodial Officers Supplemental Retirement Fund (LECOSRFRF)

The LECOSRF Retirement Fund was created in 1979 and is a supplemental plan to ERS for law enforcement officers with the Department of Public Safety, Texas Alcoholic Beverage Commission, Parks and Wildlife, the Office of Inspector General at the Texas Youth Commission, or custodial officers with the Texas Department of Corrections and Parole Officers.¹¹³

LECOSRFRF also has two tiers of members, based on whether the member was hired before or after September 1, 2009. Retirement eligibility is slightly different for LECOSRF members than for regular members of the Employee Class. Tier 1 LECOSRF members are eligible to retire at age 50 with 20 years of service credit. The retirement age was increased to 55 with 20 years of service for Tier 2 members. Like the regular Employee Class members, Tier 1 final average salary is determined using the highest 36 months of salary and Tier 2 uses the highest 48 months. Both tiers are subject to annuity reductions for early retirement.¹¹⁴

The monthly retirement annuity is equal to 2.8 percent of the average monthly salary multiplied

by the number of years of service credit. The maximum annuity is 100 percent of the average monthly salary.¹¹⁵ LECOSRF member contribute an additional 0.5 percent of their salary to the plan and receive 20 percent of their annuity from the LECOSRF fund and the remaining 80 percent from the main ERS fund.¹¹⁶

JRS 1 & 2

JRS 1 was established for state judges and justices in 1949 as a pay-as-you-go pension plan, meaning that the plan does not have a trust fund and all benefits are paid by appropriation when they come due. This plan was closed to new entrants in 1985, but it could take several more decades for the plan to completely phase out. At the end of FY 2011, there were 22 judges with active memberships in JRS 1 and 445 collected retirement benefits from the plan.¹¹⁷ JRS 1 retirees automatically receive an increase in their annuity when the salary of a sitting judge is increased; this is the only plan with an annuity that automatically increases.¹¹⁸

JRS 2, as a pre-funded, defined-benefit plan, replaced JRS 1. The JRS 2 trust fund is separate from the ERS and LECOSRF trust funds.¹¹⁹

To be eligible for retirement benefits members must:¹²⁰

- be age 65 with at least 10 years of service credit and currently holding a judicial office, or
- age 65 with at least 12 years of service credit, regardless of whether the member currently holds a judicial office, or
- have 20 years of service at any age and regardless of whether the member currently holds a judicial office, or
- meet the "Rule of 70," where the sum of age and years of service equals or exceeds the number 70 and the member served at least 12 years on an appellate court.

For JRS 1 & 2, the monthly annuity is equal to 50 percent of the salary for the position from which the member retired. An additional 10 percent is added when a member retires within one year of leaving office. If a member continues to make contributions after 20 years of service, the monthly annuity would be based on 50 percent of the salary plus 2 percent for each subsequent year. The total annuity, including the additional 10 percent if applicable, cannot exceed 90 percent of final salary.¹²¹

TEXA\$AVER

Texa\$aver is a tax deferred defined-contribution plan offering supplemental retirement savings to state and higher education employees. Texa\$aver is available as an IRS Section 401(k) or 457 plan. Participants in a 457, unlike those in a 401(k), are able to access funds before the age of 59 ½ without an IRS penalty (though the funds will be taxed). The state does not contribute to the plan and has no liability for it.

Beginning in 2007, new state employees are automatically enrolled in Texa\$aver with a contribution of 1 percent taken from their salary. Employees can then opt out of the program or increase their contributions. Nearly 75 percent of new employees continued to be enrolled at the end of fiscal year 2010, though only 5 percent have increased their contribution.¹²²

Members who leave state employment before being eligible for retirement have the option of rolling over the funds from their ERS account into their Texa\$aver account without paying income taxes or an IRS penalty.¹²³

Teacher Retirement System of Texas

The Teacher Retirement System of Texas (TRS) was established by the Legislature in 1937 after approval by the voters. TRS retirement benefits are provided to employees at public schools, colleges and universities who works at least 20 hours per week and for at least 4-and-a-half months during the school year. For positions with no full-time equivalent, a minimum of 15 hours of work a week is need to qualify for TRS membership. Enrollment is automatic and mandatory for all eligible employees.¹²⁴

Changes made to the retirement plan in 2005 resulted in four distinct tiers of membership. The tiers are based on when an individual joined the system and whether they have “grandfathered” status.¹²⁵

To be considered “grandfathered” an individual must meet at least one of the following criteria as a member of TRS before September 1, 2005:

- at least 50 years of age,
- age and years of service totaled at least 70, or
- at least 25 years of service credit.

Members who meet the criteria to be “grandfathered” and began their current TRS membership before September 1, 2007 are classified as Tier 1.

To be eligible for retirement benefits Tier 1 members must:

- be age 65 with at least five years of service credit, or
- meet the Rule of 80, where age and years of service credit total at least 80, and have at least five years of service credit.

The annual annuity for all members is based on the standard annuity calculation in effect at the time of retirement. For the current formula, a salary replacement rate is calculated by multiplying 2.3 percent by the number of years of service credit. The salary replacement rate for Tier 1 members is then multiplied by the average of the three highest annual salaries to determine the annual annuity.

Salary Replacement Rate = 2.3% x Years of Service Credit

Annual Annuity = Salary Replacement Rate x Avg. of Three Highest Salaries

Members who do not meet the criteria to be “grandfathered” and began their current TRS membership before September 1, 2007 are classified as Tier 2.

Tier 2 members have the same age and service years required for retirement eligibility as Tier 1; however, the number of years used to calculate the final average salary is increased to five years from three.

Members who do not meet the criteria to be “grandfathered” and began their current TRS membership after September 1, 2007 are classified as Tier 3.

For members of Tier 3 a minimum age of at least 60 is required to be eligible for retirement under the Rule of 80 (where age and years of service credit total at least 80). The annual annuity for a Tier 3 member, like Tier 2, is determined using the standard annuity calculation and the average of the five highest annual salaries. Members who meet the rule of 80, but are under the age of 60, may still retire with a five percent annuity reduction for each year below age 60.

Members who meet the criteria to be “grandfathered” and began their current TRS membership after September 1, 2007 are classified as Tier 4.

Tier 4 members are eligible to retire under the Rule of 80 at age 55 if they have at least 20 years of service credit. The annual annuity for a Tier 4 member, like Tier 1, is determined using the standard annuity calculation and the average of the three highest annual salaries.

A teacher who retires at age 65 with 30 years of service credit and an average annual salary of \$49,000 (highest average of three or five years depending on the tier) would be entitled to a salary replacement of 69 percent or an annual annuity of \$33,810.

$$69\% = 2.3\% \times 30 \text{ years of service}$$

$$\$33,810 = 69\% \times \$49,000$$

If this retiree lives to age 80 she would receive a lifetime annuity of \$507,150 or \$16,905 for each year she served as a teacher. Nearly 95 percent of public classroom teachers and 80 percent of overall TRS members are not eligible to participate in Social Security¹²⁷ and retirees do not receive an automatic cost-of-living adjustment.

TRS members, of all tiers, have the option of selecting a Partial Lump Sum Option at the time of retirement if they are eligible. Members may choose to receive an amount equal to 12, 24, or 36 months of their standard annuity; monthly annuities are actuarially reduced to reflect the lump sum payout.

Tier 1 & 4 members are eligible to select a Partial Lump Sum Option if they are also eligible for normal-age service retirement, are not participating in the Deferred Retirement Option Plan, and are not retiring under the proportionate retirement law. Tier 2 & 3 eligibility for the Partial Lump Sum Option are similar to Tier 1 & 4, except Tier 2 & 3 members must also have their age and years of service credit total at least 90.

To be eligible for early-age retirement, a Tier 1 & 2 member must be at least age 55 with five or more years of service credit or have 30 or more years of service credit. Tier 3 members follow the same early retirement eligibility criteria as Tiers 1 & 2, with the addition of being eligible if they meet the Rule of 80. For Tier 4 a member must also be at least age 55 when using the Rule of 80. Those who retire early, regardless of tier, are subject to a reduction in their annuity.

QUICK STAT TRS: TIER COMPARISON

	Tier 1	Tier 2	Tier 3	Tier 4
Final Average Salary	3 Highest Annual Salaries	5 Highest Annual Salaries	5 Highest Annual Salaries	3 Highest Annual Salaries
Retirement Age	65 with at least 5 years of service	65 with at least 5 years of service	Minimum age of 60 to retire under the “Rule of 80”	Age 55 with 20 years of service under the “Rule of 80”

Endnotes

- 1 Employees Retirement System of Texas: Legislative Appropriations Request for Fiscal Years 2014 and 2015; August 2012.
- 2 Teacher Retirement System of Texas: Legislative Appropriations Request for Fiscal Years 2014 and 2015; August 2012.
- 3 Bender, Keith A. John S. Heywood. Out of Balance? Comparing Public and Private Sector Compensation over 20 Years. National Institute on Retirement Security; April 2010.
- 4 A Biennial Report on The State's Position Classification Plan – Report No. 10-708. State Auditor's Office; August 2010.
- 5 Bender, Keith A. John S. Heywood. Out of Balance? Comparing Public and Private Sector Compensation over 20 Years. National Institute on Retirement Security; April 2010.
- 6 Olleman, Mark. Ilana Boivie. Decisions, Decisions: Retirement Plan Choices for Public Employees and Employers. National Institute on Retirement Security; September 2011.
- 7 Boivie, Ilana. Issue Brief: Who Killed the Private Sector DB Plan?. National Institute on Retirement Security; March 2011.
- 8 The Future of Benefits: Texas Employees Group Benefits Program Workforce Summary. Employees Retirement System of Texas; November 2011.
- 9 Texas Education Agency: 2011-2012 Staff Salaries and FTE Counts – Excluding ESC Staff. <http://ritter.tea.state.tx.us/adhocrpt/adpeb.html>.
- 10 A Great Value for All Texans. Teacher Retirement System of Texas; July 2012.
- 11 Fiscal Year 2010 Annual Report. Employees Retirement System of Texas.
- 12 2011 Comprehensive Annual Financial Report. Teacher Retirement System of Texas.
- 13 Census Quick Facts <http://quickfacts.census.gov/qfd/states/48000.html>.
- 14 Porell, Ph.D. Frank. Diane Oakley. The Pension Factor 2012: The Role of Defined Benefit Pensions in Reducing Elder Economic Hardships. National Institute on Retirement Security; July 2012.
- 15 Almeida, Beth. William B. Forna. A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans. National Institute on Retirement Security; August 2008.
- 16 Pension Benefit Design Study. Presentation by TRS at TRS Board Meeting; April 2012.
- 17 Almeida, Beth. William B. Forna. A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans. National Institute on Retirement Security; August 2008.
- 18 Fleck, Carole. Boomers Report No Savings at All. AARP; February 2011. http://www.aarp.org/work/retirement-planning/info-02-2011/many_boomers_report_no_savings_at_all.3.html.
- 19 Fleck, Carole. Boomers Report No Savings at All. AARP; February 2011. http://www.aarp.org/work/retirement-planning/info-02-2011/many_boomers_report_no_savings_at_all.1.html.
- 20 Close to the median TRS members. Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
- 21 A Great Value for All Texans. Teacher Retirement System of Texas; July 2012.
- 22 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
- 23 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
- 24 Federal-State Reference Guide – Publication 963. Internal Revenue Service; November, 2011.
- 25 Nuschler, Dawn. Alison M. Shelton, et al. Social Security: Mandatory Coverage of New State and Local Government Employees. Congressional Research Service; July 2011.
- 26 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
- 27 Federal-State Reference Guide – Publication 963. Internal Revenue Service; November, 2011.
- 28 Federal-State Reference Guide – Publication 963. Internal Revenue Service; November, 2011.
- 29 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
- 30 A Great Value for All Texans. Teacher Retirement System of Texas; July 2012.
- 31 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
- 32 Biovie, Ilana. Pensionomics 2012: Measuring the Economic Impact of DB Pension Expenditures. National Institute on Retirement Security; March 2012.
- 33 Fiscal Year 2010 Annual Report. Employees Retirement System of Texas; 2011
- 34 A Great Value for All Texans. Teacher Retirement System of Texas; July 2012.
- 35 General Appropriations Act. 82nd Legislature, Regular Session. House Bill No. 1; 2012 – 2013 Biennium.

- 36 McNichol, Elizabeth. Iris J. Law. A Common-Sense Strategy for Fixing State Pension Problems in Tough Economic Times. Center on Budget and Policy Priorities; May 2011.
- 37 A Great Value for All Texans. Teacher Retirement System of Texas; July 2012.
- 38 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
- 39 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
- 40 2012 Comprehensive Annual Financial Report. Employees Retirement System of Texas.
- 41 2012 Comprehensive Annual Financial Report. Teacher Retirement System of Texas.
- 42 Texas State Constitution Art. XVI, Sec. 67.
- 43 Government Code Sec. 811.006.
- 44 ERS provided history of benefit adjustments, 1980 – Present; 2012.
- 45 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
- 46 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012, and ERS provided history of benefit adjustments, 1980 – Present; 2012.
- 47 <http://www.gasb.org/cs/ContentServer?site=GASB&c=Page&pagename=GASB%2FPage%2FGASBSectionPage&cId=1176158721844>. Nothing about changing the assumed rate of return, however, changes the underlining fundamentals of plan design or cost. ERS and TRS will remain strongly funded and Texas will still have the capacity to fully fund the plans over time.
- 48 2011 Comprehensive Annual Financial Report. Employees Retirement System of Texas.
- 49 At a Glance – Fiscal Year 2011. Employees Retirement System of Texas.
- 50 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
- 51 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
- 52 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2012 and Plan Year Beginning September 1, 2012. Buck Consultants; December 2012. & Teacher Retirement System of Texas: Actuarial Valuation Report for the Year Ending August 31, 2012. Gabriel Roeder Smith & Company; December 2012.
- 53 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2012 and Plan Year Beginning September 1, 2012. Buck Consultants; December 2012. & Teacher Retirement System of Texas: Actuarial Valuation Report for the Year Ending August 31, 2012. Gabriel Roeder Smith & Company; December 2012.
- 54 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2012 and Plan Year Beginning September 1, 2012. Buck Consultants; December 2012. & Teacher Retirement System of Texas: Actuarial Valuation Report for the Year Ending August 31, 2012. Gabriel Roeder Smith & Company; December 2012.
- 55 Employees Retirement System of Texas: Legislative Appropriations Request for Fiscal Years 2014 and 2015; August 2012.
- 56 Teacher Retirement System of Texas: Legislative Appropriations Request for Fiscal Years 2014 and 2015; August 2012.
- 57 Alemeida, Beth. William B. Forna. A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans. National Institute on Retirement Security; August 2008.
- 58 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
- 59 Alemeida, Beth. William B. Forna. A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans. National Institute on Retirement Security; August 2008.
- 60 Alemeida, Beth. William B. Forna. A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans. National Institute on Retirement Security; August 2008.
- 61 Alemeida, Beth. William B. Forna. A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans. National Institute on Retirement Security; August 2008.
- 62 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
- 63 Alemeida, Beth. William B. Forna. A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans. National Institute on Retirement Security; August 2008.
- 64 Overview of the Teacher Retirement System of Texas. Teacher Retirement System of Texas; March 2012. & Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
- 65 Munnell, Alicia H. 401(k) Plans in 2010: An Update from SCF. Center for Retirement Research at Boston College; July 2012.
- 66 Bureau of Labor Statistics: National Compensation Survey Table 30 <http://www.bls.gov/ncs/ebs/detailedprovisions/2009/ownership/private/table60a.pdf>.
- 67 Jones, Jennifer. Maintain the Pension Solvency of the Employees Retirement System: Research Highlights from the 2011 Government Effectiveness & Efficiency Report (GEER). Legislative Budget Board presentation for ERS Pension Forum; November 2011.
- 68 Jones, Jennifer. Maintain the Pension Solvency of the Employees Retirement System: Research Highlights from the 2011 Government Effectiveness & Efficiency Report (GEER). Legislative Budget Board presentation for ERS Pension Forum; November 2011.
- 69 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.

-
- 70 Jones, Jennifer. Maintain the Pension Solvency of the Employees Retirement System: Research Highlights from the 2011 Government Effectiveness & Efficiency Report (GEER). Legislative Budget Board presentation for ERS Pension Forum; November 2011.
 - 71 Brainard, Keith. NASRA Issue Brief: State Hybrid Retirement Plans. National Association of State Retirement Administrators; November 2011.
 - 72 Olleman, Mark. Ilana Boivie. Decisions, Decisions: Retirement Plan Choices for Public Employees and Employers. National Institute on Retirement Security; September 2011.
 - 73 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
 - 74 Fiscal Note HB2506 82nd Legislature. Legislative Budget Board; April 26, 2011.
 - 75 Boivie, Ilana. Issue Brief: Who Killed the Private Sector DB Plan?. National Institute on Retirement Security; March 2011.
 - 76 Boivie, Ilana. Issue Brief: Who Killed the Private Sector DB Plan?. National Institute on Retirement Security; March 2011.
 - 77 Texas State Constitution Section 67 (a)(1).
 - 78 Government Code 815.403 (a)(1).
 - 79 ERS data request.
 - 80 Government Code 815.402 (a)(1).
 - 81 Government Code 815.402 (a-1) and 82(R) SB 1664.
 - 82 Government Code 825.402 (a)(5).
 - 83 Peng, Jun. Ilana Boivie. Lessons from Well-Funded Public Pensions: An Analysis of Six Plans that Weathered the Financial Storm. National Institute on Retirement Security; June 2011.
 - 84 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
 - 85 Government Code 811.006.
 - 86 Peng, Jun. Ilana Boivie. Lessons from Well-Funded Public Pensions: An Analysis of Six Plans that Weathered the Financial Storm. National Institute on Retirement Security; June 2011./ Pew Center on the States – one of 11 solid performing states in managing pension obligations.
 - 87 Ramshaw, Emily. State Employees Retire, Come Back to Work. The Texas Tribune; November 23, 2009. <http://www.texastribune.org/texas-state-agencies/employee-retirement-system/state-employees-retire-come-back-to-work/>.
 - 88 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
 - 89 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
 - 90 TRS historical CAFRS.
 - 91 Pension Benefit Design Study. Teacher Retirement System of Texas; September 2012.
 - 92 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
 - 93 A Great Value for All Texans. Teacher Retirement System of Texas; July 2012.
 - 94 Teacher Retirement System of Texas: Actuarial Valuation Report for the Year Ending August 31, 2011. Gabriel Roeder Smith & Company; November 2011.
 - 95 Fiscal Year 2010 Annual Report. Employees Retirement System of Texas; 2011.
 - 96 Texas State Constitution Art. 16, Sec 67.
 - 97 Primer on Benefits for State Employees and Public and Higher Education Employees. Legislative Budget Board; April 2009.
 - 98 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
 - 99 Guide to Public Retirement Systems in Texas: A Comparison of Statutory Public Retirement Systems in Texas. Texas Pension Review Board; January 2011.
 - 100 Primer on Benefits for State Employees and Public and Higher Education Employees. Legislative Budget Board; April 2009.
 - 101 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
 - 102 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
 - 103 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
 - 104 Primer on Benefits for State Employees and Public and Higher Education Employees. Legislative Budget Board; April 2009.
 - 105 Fiscal Year 2010 Annual Report. Employees Retirement System of Texas; 2011.
 - 106 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
 - 107 Primer on Benefits for State Employees and Public and Higher Education Employees. Legislative Budget Board; April 2009.

-
- 108 While in office, state legislators earn \$600 per month. State Constitution Art.3 Sec.24(a).
 - 109 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
 - 110 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
 - 111 Employee Retire System of Texas Actuarial Valuation for the Fiscal Year Ending August 31, 2011 and Plan Year Beginning September 1, 2011. Buck Consultants; November 2011.
 - 112 Plan Your Retirement. Employees Retirement System of Texas; March 2012.
 - 113 Guide to Public Retirement Systems in Texas: A Comparison of Statutory Public Retirement Systems in Texas. Texas Pension Review Board; January 2011.
 - 114 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
 - 115 Primer on Benefits for State Employees and Public and Higher Education Employees. Legislative Budget Board; April 2009.
 - 116 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
 - 117 2011 Comprehensive Annual Financial Report. Employees Retirement System of Texas.
 - 118 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
 - 119 Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.
 - 120 Primer on Benefits for State Employees and Public and Higher Education Employees. Legislative Budget Board; April 2009.
 - 121 Primer on Benefits for State Employees and Public and Higher Education Employees. Legislative Budget Board; April 2009.
 - 122 Fiscal Year 2010 Annual Report. Employees Retirement System of Texas.
 - 123 Fiscal Year 2010 Annual Report. Employees Retirement System of Texas.
 - 124 Primer on Benefits for State Employees and Public and Higher Education Employees. Legislative Budget Board; April 2009.
 - 125 This section heavily sources: TRS Benefits Handbook. Teacher Retirement System of Texas; December 2011.
 - 126 2011 Comprehensive Annual Financial Report. Teacher Retirement System of Texas.
 - 127 A Great Value for All Texans. Teacher Retirement System of Texas; July 2012. & Report to the 82nd Texas Legislature on the State of Texas Retirement Program. Employees Retirement System of Texas; September 2012.

BETTER TEXAS

We believe in Texas. We believe in the people of Texas—our friends and neighbors, our sons and daughters. All Texans. We stand for community. People from all walks of life. United. We stand for justice. Working to improve public policy. Advocating at the Capitol and on the Hill. We stand for telling the truth—respectfully but with courage. And we mean the whole truth based on hard facts and rigorous analysis. When 1 in 5 of us lives in poverty. 1 in 4 doesn't have health care. And 1 in 5 children in this state is at risk of going hungry. Things have to change. And that's why we're here. Together we can make our state a better place for all of us. A place of opportunity and prosperity. Because we all do better when we all do better. We never shy away from the tough conversations. About affordable health care, strong schools and colleges, good jobs, and child well-being. We stand for economic and social opportunity for all Texans. Because Texans believe in opportunity. For over a quarter of a century, we've strived to do our best. Finding meaning in our work. Fighting for what's right. Because we believe in a better Texas.

CENTER *for* PUBLIC POLICY PRIORITIES

7020 Easy Wind Drive, Suite 200 • Austin, TX 78752 • T 512.320.0222 • F 512.320.0227 • CPPP.org