

**TRS' Major Study Findings Are:**

- 1. While the TRS pension fund can pay currently projected benefits through 2075, the State needs to begin addressing the unfunded liability. Delays will only increase costs.**
- 2. The value of the retirement benefit available to TRS members is 36% less than the average benefits available to members of peer systems.**
- 3. The defined benefit plan provides current benefits at a lower cost than alternative plans.**
- 4. The majority of TRS members will do significantly worse investing on their own in a plan with a defined-contribution component.**
- 5. Alternative plan structures carry differing levels of risk for the State and TRS members.**
- 6. Other systems changing structures have lowered benefits to realize savings.**
- 7. Moving new hires to an alternative plan will not eliminate existing liabilities.**
- 8. Approximately, 95% of public school TRS members do not participate in Social Security, leaving the TRS benefit as their only lifetime annuity.**

## Executive Summary

In 2011, the Texas Legislature directed the Teacher Retirement System of Texas (TRS) to conduct a study on the impacts of potential changes to its current defined benefit pension plan. TRS completed and submitted its study on September 1, 2012.

TRS was established in 1936 by a Texas Constitutional Amendment to provide benefits for persons employed in the public schools, colleges, and universities supported wholly or partly by the State. As of August 31, 2011, more than 1.3 million public school and higher education employees participated in the system. The major features of the TRS pension plan are as follows:

- ❖ While the State and members have always contributed to TRS and have not taken a “funding holiday,” the actuarially required contribution to the fund has not always been paid.
- ❖ Currently, both TRS members and the State pre-fund the retirement plan by contributing 6.4% of payroll to the pension plan (12.8% combined contribution).
- ❖ Over the past 25 years, the TRS trust fund has earned a return of approximately 8.6% despite a decade of highly volatile markets. The TRS assumed return rate is 8%, but actual returns in the near term could fluctuate lower or higher with economic cycles.
- ❖ The current formula used to determine a member’s standard annuity benefit is:

$$\begin{array}{rcccl} \text{Total} & & \text{Average} & & \\ \text{Years of} & \times & \text{Highest} & & \\ \text{Service} & & \text{Annual} & \times & \text{Standard} \\ & & \text{Salaries} & & \text{Annuity} \\ & & & \times & \text{Benefit} \\ & & & & \text{Multiplier} \\ & & & & = \end{array}$$

- ❖ The State reduced benefits under the plan design as recently as 2005 when, among other changes, normal-age retirement eligibility was increased for new hires and the average salary for annuity calculations increased from three to five years for existing members (some were grandfathered from this change).
- ❖ In 2011, TRS paid almost \$7.2 billion in retirement benefits. Nearly 95% of these benefit payments went directly to retirees who live and spend these dollars in Texas.

**1. While The TRS Pension Fund Can Pay Currently Projected Benefits Through 2075, The State Needs To Begin Addressing The Unfunded Liability. Delays Will Only Increase Costs.**

- ❖ The plan’s current funding policy of a 6.4% contribution from the State and a 6.4% contribution from active members is insufficient to sustain current benefits and amortize the \$24.1 billion unfunded actuarially accrued liability (UAAL), even if current assumptions are met.
- ❖ Revenue to address the unfunded liability can come from the State, members, or some combination of the two. Regularly funding the actuarially required contribution over time is more important than the amount of contributions in a single year. Options for increasing contributions are discussed in the Study. Changing benefits under the existing plan for new hires only does not have an impact on the current unfunded liability. The only way to affect the unfunded liability immediately is to adjust benefits for active members.

**The current funded ratio (ratio of assets to liabilities) exceeds 80% but will trend downward over time without a change in contribution rates, investment returns, or benefit levels.**

**Defined Benefit Representative Changes for All Current Active Members** Figure 1

Provision	Representative Change	Unfunded Liability	State Contribution Rate for Actuarial Soundness*
Current Provisions as of August 31, 2011		\$24.1B	8.13%
Retirement Eligibility For Current Members Not Yet Eligible to Retire	From Rule 80 & Minimum Age 60 to Rule of 80 & Minimum Age 62	\$14.7B	6.39%
Salary Averaging Period	From 5 Years to 7 Years	\$20.4B	7.20%
Accrual Multiplier	From 2.3% Per Year to 2.0% Per Year	\$21.9B	6.69%
Member Contribution Rate	From 6.4% Per Year to 7.4% Per Year	\$23.4B	7.31%

\* State contribution rate for actuarial soundness is based on smoothed assets and is the rate necessary to pay for new benefit accruals and amortize the unfunded liability of \$24.1 billion over a period that is less than 31 years.

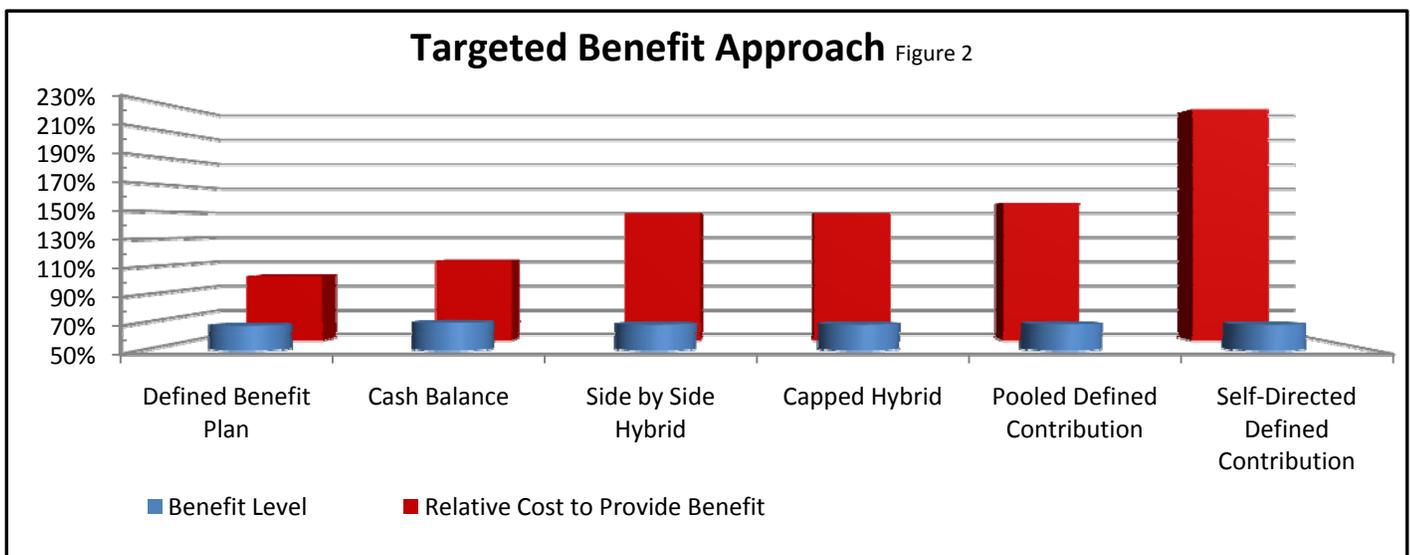
**2. The Value Of The Retirement Benefit Available To TRS Members Is 36% Less Than The Average Benefits Available To Members of Peer Systems.**

- ❖ TRS examined the value of its members’ benefits relative to the benefits provided by a variety of peer systems, including local plans and other statewide public employee and teacher systems. A prototypical TRS career employee (one who retires at age 62 with 32 years of service credit) receives a lifetime benefit that equates to 52% of pre-retirement income while the average benefit available to the same prototypical employee of the peer plans examined was 82% of pre-retirement income.

- ❖ The modesty of TRS’ benefit is due, primarily, to the lack of an automatic cost-of-living increase. The 52% benefit value reflects the loss of purchasing power over time. Members of the peer plans examined received some type of purchasing power protection either through automatic cost-of-living increases or because the members participated in both a retirement plan and Social Security.

### 3. The Defined Benefit Plan Provides Current Benefits At A Lower Cost Than Alternative Plans.

- ❖ In conducting the Study, TRS modeled the alternative plans using two different approaches: the “Targeted Benefit Approach” and “Targeted Contribution Approach.” The TRS benefit, as currently designed, replaces roughly 68% of a career employee’s pre-retirement income before a loss of purchasing power. Therefore, TRS modeled the plans in the “Targeted Benefit Approach,” to provide the same level of benefit as the current plan regardless of cost. As shown in Figure 2, TRS determined that the alternative plans would be 12% to 138% more expensive than the current plan (not including the cost to pay off any unfunded liability) to provide the same level of benefit.
- ❖ Conversely, under the “Targeted Contribution Approach,” TRS modeled the alternative plans to cost the same as the current plan regardless of the benefit level provided. Under this approach, TRS determined that the alternative plans would replace 27.7% to 59.7% of pre-retirement income for a career employee retiring at age 62.



Cash Balance Plan	Member receives pay and investment credits into a “virtual account.” Contributions invested through TRS trust fund. At retirement account balance can be annuitized.
Side by Side Hybrid	Members and State contribute to both a small defined benefit plan and a small defined contribution plan with the idea that both plans, together, provide the targeted level of benefits. Defined benefit contributions are invested through TRS trust fund. The defined benefit is annuitized. Defined contribution investments are self-directed and are taken as lump sum at retirement.
Capped Hybrid	Similar to Side by Side Hybrid, but the State contribution is capped. All contributions from the members and the State go first towards paying the actuarially required contribution (ARC). Any remaining contributions after ARC is paid go toward defined contribution plan. Members are responsible for paying any portion of the ARC above the State’s capped contribution.
Pooled Defined Contribution	Like a traditional defined contribution plan but contributions are pooled and invested by TRS. Lump sum distribution is taken at retirement.
Traditional Defined Contribution	Investments are self-directed and member must manage account for duration of retirement.

#### **4. The Majority Of TRS Members Will Do Significantly Worse Investing On Their Own In A Plan With A Defined-Contribution Component.**

- ❖ In any plan with a self-directed defined-contribution component, TRS members would make their own investment decisions. The resulting difference between individual returns would likely be very wide. TRS modeling has shown that under a defined contribution plan, 92% of retirees will ultimately receive less than the current defined benefit. Two-thirds would receive no more than 60% of the current benefit. Only a handful (about 8%) would receive more than the current benefit.
- ❖ The estimated underperformance is attributable to lower investment returns from a shorter investment period, access to fewer asset classes, less disciplined investment approaches, and potentially higher fees.

#### **5. Alternative Plan Structures Carry Differing Levels Of Risk For The State And TRS Members.**

- ❖ While alternative plan structures are more expensive than the current plan for a comparable level of benefit, they can shift risk away from the State. A defined contribution plan, such as a 401(k) plan, transfers most of the risk to the members because they become responsible for managing their own investments for the remainder of their lives.
- ❖ Changing structures from a defined benefit plan to an alternative plan can present other risk factors, including how to manage the unfunded liability of the legacy defined benefit plan and the risk that diminished retirement income could increase retiree use of social services post-retirement due to a lack of retirement self-sufficiency.

#### **6. Other Systems Changing Structures Have Lowered Benefits To Realize Savings.**

- ❖ Research shows that other systems moving away from defined benefit plans reduced benefits along with changing plan design. This supports the finding that a change in plan structure alone will not achieve savings. TRS identified six systems that have moved to an alternative plan design and for which data regarding plan structure and benefit level were available. TRS measured the benefit level provided by those systems both before and after the change and determined that the benefits provided were reduced by an average of 30% as part of moving to an alternative plan.
- ❖ TRS also examined the most common benefit reductions made by other public plans in 2010 and 2011 and determined that the State has already incorporated into the TRS plan many of the cost-saving measures other systems are adopting.

**The State limits behavior that damages trust funding, including restricting return-to-work after retirement and prohibiting salary spiking.**

## 7. **Moving New Hires To An Alternative Plan Will Not Eliminate Existing Liabilities.**

- ❖ TRS' unfunded liability represents benefits already earned by current participants, and as such the State cannot eliminate it by closing the plan to new hires. Regardless of plan structure, the unfunded liability will have to be addressed eventually either through amortization (paying it off) or a reduction of benefits.
- ❖ If the State were to close the current plan to new hires, then the trust's liquidity needs will increase as the plan matures. This could cause the liability to grow by an estimated \$11.7 billion (to \$35.7 billion) due to lower investment returns as TRS transitions the trust over five to 10 years to a more liquid asset allocation.

## 8. **Approximately 95% of Public School TRS Members Do Not Participate In Social Security, Leaving The TRS Benefit As Their Only Lifetime Annuity.**

- ❖ 80% of TRS members, a figure that includes 95% of public school TRS members, do not participate in Social Security. For many TRS members, the only source of lifetime income in retirement is TRS. A lifetime benefit, such as TRS or Social Security, mitigates the risk of a retiree who—due to longevity, market volatility or failure to invest adequately—outlives his or her savings.
- ❖ Not participating in Social Security saves Texas public school employers an estimated \$1.5 billion annually. The level of retirement benefit governs mandatory Social Security participation. Therefore, if benefits were reduced enough, the school districts and members may be required to each contribute 6.2% to Social Security on top of the State and member contributions to a pension plan, as required by the Texas Constitution.

**If left with only a defined contribution plan, the majority of Texas public school educators would face retirement without the dependability of a lifetime benefit.**

### **Other Issues**

Finally, there are additional legal, policy, and transitional issues to consider as the State weighs making changes to the current plan, including:

- ❖ Operational and funding requirements of the Texas Constitution, Article XVI, Section 67;
- ❖ The implications of new accounting standards from the Governmental Accounting Standards Board (GASB) that will impact how the State reports TRS' unfunded liability; and
- ❖ Process and transition considerations, including implementation time frames, potential grandfathering, and system modifications associated with any adopted change.

The following Charts A, B, and C provide an overview of the pension benefit design options TRS modeled.

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## Chart A

### Modeled Changes to Current Defined Benefit Plan for New Hires

Provision	Current Provisions	Illustrated Provisions	Cost of New Benefit Accruals	Unfunded Liability	Funding Period*	State Contribution Rate for Actuarial Soundness**	Percent of Pre-retirement Income Replaced
Current Provisions as of August 31, 2011			10.6%	\$24.1B	Never	8.13%	67.8%
Retirement Eligibility	Rule 80 & Minimum Age 60	Rule 80 & Minimum Age 62	10.39%	\$24.1B	Never	8.02%	67.8%
Salary Averaging Period	5 years	7 years	10.27%	\$24.1B	Never	7.97%	65.2%
Accrual Multiplier	2.3% Per Year	2.0% Per Year	9.51%	\$24.1B	Never	7.6%	59.0%
Member Contribution Rate	6.4% Per Year	7.4% Per Year	10.9%	\$24.1B	Never	7.79%	67.8%

\*Funding period is based on a 6.40% member and state contribution rate (12.8% combined).

\*\* The State Contribution Rate for Actuarial Soundness is based on smoothed assets.

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## Chart B

# Modeled Changes to Current Defined Benefit Plan for All Current Actives

Provision	Current Provisions	Illustrated Provisions	Cost of New Benefit Accruals	Unfunded Liability	Funding Period**	State Contribution Rate for Actuarial Soundness***	Percent of Pre-retirement Income Replaced
Current Provisions as of August 31, 2011			10.6%	\$24.1B	Never	8.13%	67.8%
Retirement Eligibility *	Rule 80 & Minimum Age 60	Rule 80 & Minimum Age 62	10.39%	\$14.7B	30 Years	6.39%	67.8%
Salary Averaging Period	5 Years	7 Years	10.27%	\$20.4B	70 Years	7.2%	65.2%
Accrual Multiplier	2.3% Per Year	2.0% Per Year	9.51%	\$21.9B	36 Years	6.69%	59.0%
Member Contribution Rate	6.4% Per Year	7.4% Per Year	10.9%	\$23.4B	69 Years	7.31%	67.8%

\*Changes to retirement eligibility above would not apply to active members eligible to retire as of September 1, 2012.

\*\* The funding period is based on a 6.40% member and state contribution rate (12.8% combined).

\*\*\*The State Contribution Rate for Actuarial Soundness is based on smoothed assets.

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# Chart C

## Alternative Plan Models

Structure	Features	Modeled to Provide Same Level of Benefits as Current Plan		Modeled to Cost the Same as the Current Plan			Unfunded Liability***	Risk
		Contributions		Contributions*		Percent of Pre-retirement Income Replaced		
		State	Member	State	Member			
Current Defined Benefit Plan	Maintain current benefit & funding	4.2%	6.4%	4.2%	6.4%	67.8%	\$24.1B	State
Side by Side Defined Benefit - Defined Contribution Hybrid Plan	Defined benefit fully funded by State; Member funds defined contribution	9.4%	6.4%	4.2%	6.4%	55.1%	\$24.1B	Shared Between member and state
Capped Defined Benefit - Defined Contribution Hybrid Plan	Defined benefit fully funded first; Remainder goes to defined contribution	5.42%	6.4%	4.2%	6.4%	59.7%	\$24.1B	Shared Between member and state
Cash Balance Plan	Interest Credited on 5 yr average investment earnings	9.4%	6.4%	4.2%	6.4%	55.1%	\$24.1B	Shared between member and state
Pooled Defined Contribution Plan	TRS invests contributions	10.9%	6.4%	4.2%	6.4%	40.9%	\$35.8B	Member
Self-Directed Defined Contribution Plan	Member invests contributions	18.89%	6.4%	4.2%	6.4%	27.7%	\$35.8B	Member

\*Contributions under this model target a 10.6% contribution rate as opposed to the 12.8% current contribution received because the cost to provide the accrual of benefits under the current plan is 10.6% with the remaining 2.2% going toward paying down the unfunded liability.

\*\*Assumes member hired at age 30, retires at age 62 with 32 years of service and 5 year cliff vesting across all plans.

\*\*\*Assumes that only new TRS members will be placed into the alternative plan and active members will stay in current defined benefit plan.