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March 6, 2013

Mr. Brian Guthrie Executive Director Teacher Retirement System of Texas 1000 Red River Street Austin, TX 78701-2698

# Re: Results of TRS Valuation Update as of February 28<sup>th</sup>, 2013

Dear Brian:

According to TRS statutes, the results of the most recent actuarial valuation are to be updated as of February 28<sup>th</sup> in odd-numbered years. Accordingly, attached you will find the impact of the February 28<sup>th</sup>, 2013 valuation update.

We remain steadfast with our recommendation that contribution rates must begin to increase from the current 6.40% employer/6.40% member levels and for there to be no unfunded benefit enhancements. To that end, we would be in favor of a stair step increase in the contribution rates towards a long term solution; with either an increase in the State's contribution rate or a combination increase of State and member contribution rates.

### Updated as of February 28<sup>th</sup>, 2013

Based on the asset data updated as of February 28, 2013, as supplied by TRS, the unfunded liability (UAAL) has increased from \$26.1 billion to \$27.4 billion and the funded ratio of TRS has decreased to 81.4% (from 81.9% as of August 31, 2012). The current contribution policy of 6.40% from the State and 6.40% from members continues to not be expected to increase the system towards 100% funding. In order for the TRS funding period to be the statutory benchmark of 30 years, the State's contribution rate would need to increase to 8.77% of pay if the members' rate is to remain 6.40% of pay. If the member rate and the State's rate are to increase so that the 30 year contribution requirements are shared, the State and member contribution rate would need to be increased to 7.69% each. These rates would be expected to increase again before the next biennium (in the absence of a recovery).

The increase in the UAAL for investment performance through February 28, 2013 is based on the asset smoothing method for determining the actuarial value of assets (AVA). The AVA methodology has the effect of spreading the impact of good or poor investment performance over five years. Thus, it takes five years for the UAAL to fully reflect a given year's performance results. As a point of reference, the market value of TRS assets as of August 31, 2012, was \$111.4 billion, while that market value as of February 28, 2013 was \$116.3 billion.

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The attached Table 1 summarizes the results of the February 28, 2013 actuarial update.

The increase in the UAAL and the 30-year contribution rate are attributable to the recognition of another 10% of the significant deferred investment losses from fiscal years 2008 and 2009 and the System not receiving an actuarially appropriate contribution rate. However, the System's asset performance exceeded expectations for the first six months of the current plan year. For the first six months of the current plan year the System's assets had a market return of 6.12% (equal to 12.24% annualized). This created an overall gain of approximately \$2.06 billion that is used to offset the current deferred losses.

As of February 28<sup>th</sup>, 2013 TRS has net deferred asset losses of just over \$4 billion. If all assumptions are met over the next few valuations, these net deferred asset losses will decrease the funded position of TRS and increase the contribution requirements. However, this is down from the \$7 billion in deferred losses as of August 31, 2012.

### Longer-term Impact

We want to point out that the rise in the financial markets through February has helped to increase the sustainability of the System. Based on cash-flow projections, if the contribution levels remain unchanged and the trust earns an average of 8.0% per annum from February 28<sup>th</sup>, 2013 forward, the trust would have enough assets to cover expected benefit payments through 2069. This is a 4 year increase from the same projections starting from the August 31, 2012 asset values. This should provide security to current retirees concerned about their current benefits.

In addition, the funded ratio measured based on the market value of assets increased from 77.2% to 78.7% and the corresponding 30-year contribution rate based on the market value of assets decreased from 9.79% of payroll to 9.44%. This is a material improvement. However, the current State contribution rate of 6.40% continues to not produce a funding period and therefore the current UAAL of \$27.4 billion is not expected to be amortized. Because of this, we still recommend that the contribution levels increase from their current levels over the long term to sustain the current plan's benefits indefinitely.

We were asked to provide information on two contribution scenarios: (1) based on a 6.90% State rate and a 6.40% member rate and (2) based on a 6.90% rate for both the State and the members. Neither scenario would have an impact on the current UAAL or funded ratio as these items are based on the assets and liabilities that already exist. In addition, neither scenario on its own would meet the statutory definition of actuarially sound (30 year funding period). However, both scenarios would create lower UAALs and higher funded ratios in the future and substantially increase the financial health of the System.

For example, in scenario (1), the projected UAAL 20 years from now (August 13, 2032) would be \$10.5 billion smaller than current projections, a funded ratio 3.5% higher and extend the exhaustion date another 8 years. Likewise, scenario (2) produces a projected UAAL that is \$19 B smaller, a funded ratio that is over 6% higher, and extends the currently expected lifetime of the System by 18 years to 2088. In addition, the increase in contribution rates provide a stronger starting point for a follow up decision to strengthen the financial health even more in future legislative session.

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#### Impact on Legislation

Given the magnitude of these events and the continued volatility in the investment markets, we recommend that no unfunded benefit enhancements be considered by the Legislature. Furthermore, to provide a funded benefit the contribution rates would first need to be increased to the level necessary to produce a 30-year funding period with the current benefits. With the constitutional constraints, this would require both the member and State rate to be increased to more than 7.69% of pay if the rates are set equal.

## Certification

Our analysis and our calculations are based on the member data of TRS as of August 31, 2012, the actuarial value of assets updated as of February 28, 2013, and the actuarial assumptions and methods in use as of August 31, 2012 for valuing the actuarial condition of TRS. Finally, this analysis is based on all other provisions of TRS in effect as of August 31, 2012.

If you should have any questions concerning the attached table or the above discussion, please contact us.

Sincerely,

Ewis Ward

Lewis Ward Consultant

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Joseph P. Newton, FSA Senior Consultant

Enclosures

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### TABLE 1

### **Teacher Retirement System of Texas**

### Actuarial Impact of Valuation Update as of February 28, 2013

Item	2012 Valuation	February 28 <sup>th</sup> Update	Change
(1)	(2)	(3)	(4)
1. Normal Cost %	10.60%	10.60%	0.00%
2. UAAL	\$26,101 million	\$27,437 million	\$1,336 million
3. Funding Period*	Infinite	Infinite	N/A
4. Contribution rate for 30 year funding**	8.62%	8.77%	0.15%
5. Funded ratio using actuarial value of assets	81.9%	81.4%	(0.5%)
6. Deferred Investment Losses	\$6,876 million	\$4,051 million	(\$2,825) million
7. Funded ratio using market value of assets	77.2%	78.7%	1.5%

\* Calculated based on 6.40% state contribution rate and 3.50% payroll growth

\*\* Assumes the current member rate of 6.40%