



STATE PENSION REVIEW BOARD OF TEXAS

ACTUARIAL COMMITTEE MEETING

AGENDA

Wednesday, January 29, 2014 – 1:15 PM

**Location: William P. Clements State Office Building
Meeting Room 103
300 West 15th Street, Austin, Texas 78701**

1. Meeting called to order
2. Roll call of Committee members
3. Approval of the November 12, 2013 Committee meeting minutes
4. Discuss and consider the study of the financial health of public retirement systems in the state as required by Section 7 of House Bill 13 (83rd Texas Legislature)
5. Invitation for audience participation
6. Next steps / Future meeting schedule
7. Adjournment

NOTE: Persons with disabilities who plan to attend this meeting and who may need special assistance are requested to contact Anne Benites at (512) 463-1736 three to five (3-5) working days prior to the meeting so that appropriate arrangements can be made.

**State Pension Review Board
Actuarial Committee Meeting
Minutes
November 12, 2013**

1. Meeting called to order (00:00)

The first meeting of 2013 of the State Pension Review Board (PRB) Actuarial Committee was called to order by Chair Bob May on Tuesday, November 12, 2013, at 2:30 p.m., in the William P. Clements Building, Room 103, in Austin, Texas.

2. Roll call of Committee members (00:45)

Board Members Present:

Robert M. May
Andrew W. Cable
J. Robert Massengale

3. Discuss and consider preparation of the study of the financial health of public retirement systems in the state – Chris Hanson (01:30)

A. Actual Valuations Report

Mr. Hanson noted that Section 7 of HB 13 directs the Pension Review Board to conduct a study of the financial health of public retirement systems in Texas, including each system's ability to meet its long-term obligations. Mr. Hanson noted that the bill sets a date of September 1, 2014 for a draft report of the study to be made available to public retirement systems. He noted that the bill establishes a timeframe for the retirement systems to comment on the draft report and stated that the final version of the report is due to the legislature by December 31, 2014.

Mr. Hanson discussed the Summary of the Actuarial Soundness and Financial Health of Texas Public Retirement Systems and noted that the Teacher Retirement System of Texas (TRS) held a briefing earlier in the day, and stated that the numbers will change slightly in December, 2013.

Mr. May noted that TRS has moved in a positive direction in regards to the strengthening of their plan, and noted that the employee funding rate has been raised to a higher percentage. He noted that TRS will receive additional contributions from each school district not covered by social security which encompasses a majority of the school districts throughout the state of Texas. He stated that TRS has provided a benefit increase for elderly retirees which may add liabilities; however, they have been doing very well regardless.

Mr. Massengale noted that there are three positive effects on the contribution side, noting that the employee rate has grown, the state's rate will be going up, and the school districts will be putting in contributions.

B. Establish the standard for each system's ability to meet its long-term obligations (14:53)

Mr. Hanson noted that the *Guidelines for Actuarial Soundness* were reviewed by the Board at the September, 2011 board meeting and have been consistent since 1984 when they were first adopted. He noted that there were few modifications made to the language when they were last reviewed.

Mr. May discussed the GASB 30 year ARC and noted that one or more systems report a 30 year amortization period based on the ARC but are not contributing the ARC. He noted that when this occurs, the actual contribution rate should count in determining the financial condition of the system. Mr. May stated there is a difference between missing the ARC one year versus a pattern of not paying the ARC.

Mr. Hanson noted that pension systems in Texas are required to conduct actuarial valuations every three years. Depending on the size of the plan, the larger plans generally conduct valuations annually, while the mid-size plans generally do them every two years. The smaller plans generally conduct valuations every three years.

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Mr. Hanson suggested linking the study of the financial health of Texas public retirement systems to the *Guide to Public Retirement Systems in Texas* as both members and retirement systems find the current data informative and helpful.

Mr. Hanson suggested that PRB staff reach out to the retirement systems not meeting the guidelines for actuarial soundness and present any concerns to the attention of the committee and the board. This would place everyone on the same page.

C. Discuss the scope of the study (46:50)

Mr. May suggested that the PRB look at what might be considered by various local systems as things that could be done to strengthen their fund, such as a rainy day fund.

Mr. Hanson noted there are some systems that either have established reserved funds or are in the process of establishing a reserve, and noted that it would be a good idea to discuss with those systems their involvement in the process and gain an understanding of how the process was designed.

4. Discuss and consider preparation of comments received on Investment Returns and Assumptions Report (PRB-1000) survey – Chris Hanson (54:47)

Mr. Hanson noted that HB 13 included a new section of reporting which requires retirement systems to submit an investment returns and assumptions report. Mr. Hanson noted that the PRB received feedback from a few of the systems regarding the possibility of adopting a standardized form. He noted that the feedback was well received as it would allow a system to electronically complete a PDF and submit the form online to the PRB. PRB staff developed a standardized form and received feedback from members of the board. Staff incorporated the comments into a proposal, and released it to the retirement systems to obtain feedback. Based on the feedback, staff drafted two proposals. Mr. Hanson noted there is an accompanying rule which adopts the form by reference allowing the board to modify the form as needed.

Mr. Ballard provided an overview of the two proposals and noted that Proposal 1 allows retirement systems the flexibility to calculate the gross investment returns earned as either net of administrative expenses or not net of administrative expenses in each of the ten years for which the reporting system is presenting performance. Mr. Ballard noted that Proposal 2 includes a definition of gross investment return within the form which states that gross investment returns should be calculated as the actual rate of return earned by the reporting system, net of administrative expenses for each of the ten years for which the information is being presented.

It was decided by the Committee that Proposal 1 is preferable to Proposal 2 as it provides greater flexibility to reporting systems and would be less demanding for systems to generate historical gross investment return data.

A motion was made by Mr. Massengale, and seconded by Mr. Cable to recommend Proposal 1 to the full board.

MOTION CARRIED UNANIMOUSLY

5. Invitation for audience participation – Chair May (01:16:45)

Rhonda Smith, Executive Director of the Houston Municipal Employees Pension System noted her appreciation for the ability to allow for some flexibility moving forward as their system is larger.

6. Adjournment – Chair May (01:23:34)

Chair May thanked the Committee and the audience for their participation at the meeting, and the staff for their time and effort. With the business of the Committee completed, Chair May adjourned the meeting at 4:00pm.

**State Pension Review Board
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In Attendance:

Staff:

Chris Hanson
Daniel Moore
Nick Ballard
Michelle Kranes
Jamie Kings
Reece Freeman
Anne Benites

Guests:

Leslie Hardy, Texas Municipal Retirement System
Steve Waas, Houston Municipal Employees Pension System
Chris Jones, Combined Law Enforcement Associations of Texas
Eloise Raphael, Houston Firefighters' Relief and Retirement Fund
Yuniedth Steen, Locke Lord LLP
Rhonda Smith, Houston Municipal Employees Pension System

Chair Bob May

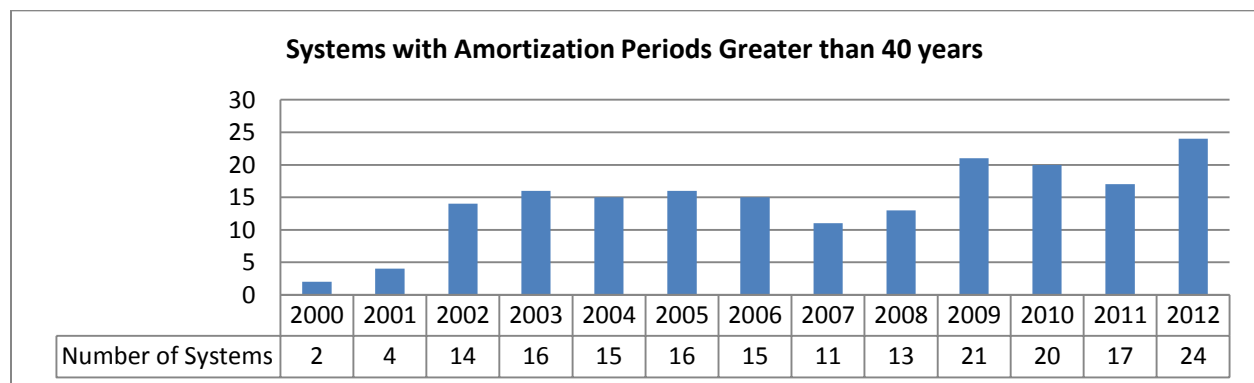
Study of the Financial Health of Public Retirement Systems

Section 7 of HB 13, as passed by the 83rd Texas Legislature, directs the Pension Review Board (PRB) to conduct a study of the financial health of public retirement systems in Texas, including each system’s ability to meet its long-term obligations. The PRB will prepare a written report containing the findings of the study, including recommendations regarding how a system may mitigate its risk of not meeting its long-term obligations, not later than September 1, 2014. Any system covered in the report shall be provided a reasonable opportunity to review those recommendations and submit a response to the PRB. A final report is due to the Legislature not later than December 31, 2014. The final report shall include a copy of any plan responses.

The PRB has adopted *Guidelines for Actuarial Soundness* to provide guidance on sound actuarial principles and to establish a minimum and a recommended amortization standard for public retirement system’s to amortize their unfunded actuarial accrued liability (UAAL). The phrase “actuarial soundness,” or “actuarially sound,” relates to the ability of a public retirement system to provide for its established benefits, thus to meet the system’s long-term obligations. Currently, the minimum standard is an amortization period of not more than 40 years and a recommended amortization period of 15 to 25 years. The table below summarizes Texas public retirement system amortization periods for their current actuarial valuation and their prior actuarial valuation.

Amortization Period	Number of Systems	Percent of Total
Greater than 40	25	27%
Between 25 and 40	39	42%
Less than or equal to 25	29	31%

As of January 2014, the amortization period of 25 public retirement systems as reported in their most current actuarial valuation is insufficient to meet the minimum standards established by the PRB *Guidelines for Actuarial Soundness*. Of the 25 retirement systems currently with amortization periods greater than 40 years, only two of those systems had amortization periods greater than 40 years in 2000. Over the years from 2000 to 2012, the number of systems with amortization periods in excess of 40 years has increased as shown in the following chart.



Issues to Examine:

- What underlying factors impacted those other systems such that they no longer meet the PRB *Guidelines for Actuarial Soundness*?
- What key indicators exist that would point to a deterioration of a system's funding arrangement and financial health?
- For the system's that maintained adequate funding, what steps did those systems take, or best practices did those systems implement?

Draft Outline of the Study of the Financial Health of Public Retirement Systems

I. Executive Summary

II. Introduction

III. Summary of Retirement Systems' Financial Health (Current Actuarial Status)

This section will use the current system actuarial valuation to identify system's meeting the PRB Guidelines for Actuarial Soundness and those systems that do not meet those standards.

IV. Investment Experience

This section will examine system investment experience between the years of 2000-2013, including assumed investment rates versus actual rates of return. Plan asset allocation, risk, and fees will be examined.

V. Examination of Other Factors Contributing to System Financial Health

This section will examine other factors impacting the financial health of public retirement systems.

A. Policy

1. Plan Design/Benefits

- a. Impact on funded status of increases and reductions in plan benefits
- b. Impact on funded status of other plan benefit provisions, including:
 - i. Early Retirement Provisions
 - ii. DROPs
 - iii. COLAs

2. Contribution rates

- a. ARC funding and employer contributions (member contribution rates)
- b. Statutory control and impact on funded status
 - i. Fixed Rate Contributions
 - ii. Constitutional Floors and Ceilings (ERS/TRS)

3. Actuarial Methods and Assumptions
 - a. Ongoing Actuarial Assumptions
 - b. Actuarial Experience Studies
 - c. Actuarial Audits
 - d. Use Of Actuarial Analysis in Plan Design decisions
 - e. Other Actuarial Issues impacting plan funding
 4. Material Regulatory and Policy Changes
- B. Key Indicators of Financial Health**
1. Financial
 - a. Cash Flow
 - b. Solvency
 - c. Future Cash Flows
 2. Actuarial
 - a. Funded Ratio
 - b. Payroll Growth
 - c. UAAL/Payroll
 - d. AAL/Payroll
 - e. PVFB
 3. Demographics
 - a. Active/Retired
 - b. Retirement Age/Rates
 - c. Mortality Rates

VI. Best Practices

This section will examine public pension best practices and make recommendations regarding how a system may mitigate its risk of not meeting its long-term obligations.

1. Reserve Funds and Surplus Management
2. Experience Studies/Actuarial Audits
3. Policy Decisions (ARC and Benefits)
4. Investment Management and Due Diligence
5. Retirement Age Indexing/Replacement Ratio

Other Issues to Consider Including:

Litigation

1. Actuaries
2. Investment Consultants and Managers
3. Attorneys

Actuarial Valuations Report
January 2014

Plan Name	Active members	Overfunded (unfunded) Liability	Liability/Active Member	Old Amort period	as of	New Amort period	as of	Actuarial Value of Assets	Funded Ratio
Employees Retirement System of Texas	133,669	\$ (7,218,387,271.00)	\$ (54,001.95)	Infinite	8/31/2012	Infinite	8/31/2013	\$ 24,667,639,104.00	77.36%
Law Enforcement and Custodial Officer Sup. Ret. Fund	37,415	\$ (354,147,039.00)	\$ (9,465.38)	Infinite	8/31/2012	Infinite	8/31/2013	\$ 843,016,798.00	70.42%
El Paso Police Pension Fund	1,044	\$ (174,514,074.00)	\$ (167,159.07)	71	1/1/2010	Infinite	1/1/2012	\$ 626,346,104.00	78.21%
Judicial Retirement System of Texas Plan Two	545	\$ (41,032,977.00)	\$ (75,289.87)	Infinite	8/31/2012	Infinite	8/31/2013	\$ 318,025,658.00	88.57%
Irving Firemen's Relief and Retirement Fund	311	\$ (65,253,147.00)	\$ (209,817.19)	65.9	12/31/2009	Infinite	1/1/2012	\$ 134,886,668.00	67.40%
Texas Emergency Services Retirement System	4,446	\$ (33,868,555.00)	\$ (7,617.76)	Infinite	8/31/2010	Infinite	8/31/2012	\$ 67,987,487.00	66.75%
Galveston Employees' Retirement Fund	430	\$ (11,702,736.00)	\$ (27,215.67)	Infinite	1/1/2012	Infinite	1/1/2013	\$ 40,313,875.00	77.50%
Longview Firemen's Relief and Retirement Fund	164	\$ (36,507,494.00)	\$ (222,606.67)	88.6	12/31/2009	Infinite	12/31/2011	\$ 39,578,091.00	52.02%
Harlingen Firemen's Relief and Retirement Fund	106	\$ (11,953,301.00)	\$ (112,766.99)	Infinite	12/31/2009	Infinite	12/31/2011	\$ 22,270,694.00	65.07%
Greenville Firemen's Relief and Retirement Fund	57	\$ (13,516,305.00)	\$ (237,128.16)	45.7	12/31/2010	Infinite	12/31/2012	\$ 12,201,104.00	47.44%
Sweetwater Firemen's Relief and Retirement Fund	24	\$ (3,163,694.00)	\$ (131,820.58)	39.4	12/31/2010	Infinite	12/31/2012	\$ 7,217,289.00	69.52%
Atlanta Firemen's Relief and Retirement Fund	32	\$ (1,104,539.00)	\$ (34,516.84)	30	12/31/2009	Infinite	12/31/2012	\$ 2,988,348.00	73.01%
Amarillo Firemen's Relief and Retirement Fund	243	\$ (33,581,721.00)	\$ (138,196.38)	35.9	1/1/2010	102.1	1/1/2012	\$ 120,396,531.00	78.19%
Lufkin Firemen's Relief and Retirement Fund	75	\$ (17,762,521.00)	\$ (236,833.61)	53.7	12/31/2010	89.6	12/31/2012	\$ 11,265,138.00	38.81%
Midland Firemen's Relief and Retirement Fund	190	\$ (28,091,967.00)	\$ (147,852.46)	41.2	1/1/2010	86.3	1/1/2012	\$ 73,066,776.00	72.23%
Orange Firemen's Relief and Retirement Fund	37	\$ (6,544,945.00)	\$ (176,890.41)	34.3	12/31/2010	82.3	12/31/2012	\$ 8,766,374.00	57.25%
University Park Firemen's Relief and Retirement Fund	34	\$ (10,776,761.00)	\$ (316,963.56)	40.6	12/31/2010	81.3	12/31/2012	\$ 8,556,364.00	44.26%
El Paso Firemen's Pension Fund	794	\$ (108,582,531.00)	\$ (136,753.82)	49	1/1/2010	76	1/1/2012	\$ 431,209,946.00	79.88%
Odessa Firemen's Relief & Retirement Fund	166	\$ (16,888,865.00)	\$ (169,812.44)	Infinite	1/1/2009	71	1/1/2011	\$ 46,170,391.00	62.09%
Galveston Firefighter's Relief & Retirement Fund	113	\$ (16,858,357.00)	\$ (149,189.00)	36.5	1/1/2010	64.6	1/1/2012	\$ 37,288,602.00	68.87%
Wichita Falls Firemen's Relief and Retirement Fund	148	\$ (24,641,489.00)	\$ (166,496.55)	38.9	12/31/2010	63.2	12/31/2012	\$ 41,964,674.00	63.00%
Galveston Employees Pension Plan for Police	127	\$ (25,694,496.00)	\$ (202,318.87)	30.4	1/1/2010	53.8	1/1/2012	\$ 22,695,097.00	46.90%
Beaumont Firemen's Relief and Retirement Fund	231	\$ (36,926,504.00)	\$ (159,855.00)	34.9	12/31/2008	53.6	12/31/2010	\$ 91,469,680.00	71.24%
San Angelo Firemen's Relief and Retirement Fund	175	\$ (26,994,448.00)	\$ (154,253.99)	32.4	12/31/2009	49	12/31/2011	\$ 49,895,449.00	64.89%
McAllen Firemen's Relief and Retirement Fund	162	\$ (19,375,417.00)	\$ (119,601.34)	39.6	9/30/2010	43.9	9/30/2012	\$ 37,841,858.00	66.14%
Marshall Firemen's Relief and Retirement Fund	46	\$ (8,832,086.00)	\$ (192,001.87)	23.5	12/31/2010	38.6	12/31/2012	\$ 6,990,904.00	44.18%
Conroe Fire Fighters' Retirement Fund	78	\$ (10,016,819.00)	\$ (128,420.76)	33.5	12/31/2009	38.2	12/31/2011	\$ 15,392,762.00	60.58%
Killeen Firemen's Relief and Retirement Fund	204	\$ (13,613,668.00)	\$ (66,733.67)	27	9/30/2010	36.1	9/30/2012	\$ 27,528,834.00	66.91%
Plainview Firemen's Relief and Retirement Fund	36	\$ (7,729,513.00)	\$ (214,708.69)	123.2	12/31/2009	35.2	12/31/2011	\$ 4,969,795.00	39.13%
Cleburne Firemen's Relief and Retirement Fund	53	\$ (12,110,818.00)	\$ (228,506.00)	21.9	12/31/2010	34.1	12/31/2012	\$ 16,293,411.00	57.36%
Tyler Firemen's Relief and Retirement Fund	154	\$ (21,250,910.00)	\$ (137,992.92)	26.4	12/31/2009	34	12/31/2011	\$ 49,221,368.00	69.85%
Texas City Firemen's Relief and Retirement Fund	68	\$ (13,203,613.00)	\$ (194,170.78)	53.3	12/31/2008	33.6	12/31/2012	\$ 14,859,762.00	52.95%
Abilene Firemen's Relief and Retirement Fund	182	\$ (38,982,852.00)	\$ (214,191.49)	29	9/30/2009	32.9	9/30/2011	\$ 49,429,210.00	55.91%
Brownwood Firemen's Relief and Retirement Fund	31	\$ (4,289,003.00)	\$ (138,354.94)	27.2	12/31/2009	31.8	12/31/2011	\$ 2,848,174.00	39.91%
Denton Firemen's Relief and Retirement Fund	161	\$ (21,059,268.00)	\$ (130,802.91)	26.5	12/31/2009	31.7	12/31/2011	\$ 54,169,459.00	72.01%
Weslaco Firemen's Relief and Retirement Fund	75	\$ (4,308,720.00)	\$ (57,449.60)	17	9/30/2006	31	9/30/2009	\$ 4,977,251.00	53.60%
Temple Firemen's Relief and Retirement Fund	114	\$ (10,747,775.00)	\$ (94,278.73)	27.4	9/30/2010	30.8	9/30/2012	\$ 34,400,736.00	76.19%
Big Spring Firemen's Relief and Retirement Fund	52	\$ (7,544,372.00)	\$ (145,084.08)	27	1/1/2012	30.8	1/1/2013	\$ 9,889,540.00	56.73%
Texas Municipal Retirement System	101,827	\$ (2,898,918,130.00)	\$ (28,469.05)	30	12/31/2011	30	12/31/2012	\$ 19,784,156,818.00	87.22%
Houston Police Officers Pension System (1)	5,364	\$ (939,010,000.00)	\$ (175,057.79)	30	7/1/2012	30	7/1/2013	\$ 4,070,951,000.00	81.26%
Houston Firefighter's Relief and Retirement Fund	3,788	\$ (489,642,000.00)	\$ (129,261.35)	30	7/1/2011	30	7/1/2012	\$ 3,263,265,000.00	86.95%
Houston Municipal Employees Pension System (2)	11,670	\$ (1,622,736,000.00)	\$ (139,051.93)	30	7/1/2011	30	7/1/2012	\$ 2,344,128,000.00	59.09%

Actuarial Valuations Report
January 2014

Plan Name	Active members	Overfunded (unfunded) Liability	Liability/Active Member	Old Amort period	as of	New Amort period	as of	Actuarial Value of Assets	Funded Ratio
Dallas Employees' Retirement Fund (3)	6,864	\$ (672,232,000.00)	\$ (97,935.90)	30	12/31/2011	30	12/31/2012	\$ 2,846,124,000.00	80.89%
Dallas Co. Hospital Dist. Retirement Income Plan	9,029	\$ (147,818,134.00)	\$ (16,371.48)	30	1/1/2012	30	1/1/2013	\$ 590,113,209.00	79.97%
Houston MTA Workers Union Pension Plan	2,504	\$ (81,715,182.00)	\$ (32,633.86)	30	1/1/2010	30	1/1/2012	\$ 173,837,727.00	68.02%
University Health System Pension Plan	4,181	\$ (74,903,587.00)	\$ (17,915.23)	30	1/1/2011	30	1/1/2012	\$ 183,349,789.00	71.00%
DART Employees' Defined Benefit Retirement Plan	426	\$ (72,727.69)	\$ (72,727.69)	30	10/1/2009	30	10/1/2010	\$ 145,605,173.00	82.46%
Houston MTA Non-Union Pension Plan	902	\$ (31,775,580.00)	\$ (35,227.92)	30	1/1/2010	30	1/1/2012	\$ 110,278,187.00	77.63%
Galveston Wharves Pension Plan	68	\$ (3,939,421.00)	\$ (57,932.66)	30	1/1/2011	30	1/1/2013	\$ 9,807,649.00	71.34%
Colorado River Municipal Water Dist. Pension Trust	68	\$ (1,247,863.00)	\$ (18,350.93)	30	1/1/2011	30	1/1/2012	\$ 8,273,581.00	86.89%
Cypress-Fairbanks ISD Pension Plan	1,672	\$ (2,108,152.00)	\$ (1,260.86)	30	1/1/2008	30	1/1/2010	\$ 5,109,884.00	70.79%
Judicial Retirement System of Texas Plan One (4)	13	\$ (252,943,056.00)	\$ (19,457,158.15)	30	8/31/2012	30	8/31/2013	\$ 0.00	0.00%
Laredo Firefighters Retirement System	377	\$ (80,817,630.00)	\$ (214,370.37)	23.5	3/31/2010	29.8	9/30/2012	\$ 95,140,202.00	54.07%
Austin Police Officers' Retirement Fund	1,709	\$ (298,101,183.00)	\$ (174,430.18)	25.2	12/31/2011	29.4	12/31/2012	\$ 558,475,643.00	65.20%
San Antonio Metro. Transit Retirement Plan (VIA)	1,547	\$ (141,319,615.00)	\$ (91,350.75)	30	10/1/2011	29	10/1/2012	\$ 180,666,604.00	56.11%
Corsicana Firemen's Relief and Retirement Fund	58	\$ (7,567,902.00)	\$ (130,481.07)	29	12/31/2010	28.6	12/31/2012	\$ 6,956,513.00	47.90%
Fort Worth Employees Retirement Fund	6,281	\$ (748,205,870.00)	\$ (119,122.09)	19.5	1/1/2011	28.4	1/1/2012	\$ 1,869,656,263.00	71.42%
Teacher Retirement System of Texas	831,302	\$ (28,936,275,228.00)	\$ (34,808.38)	Infinite	8/31/2012	28.0	8/31/2013	\$ 121,729,818,906.00	80.79%
Paris Firefighters' Relief and Retirement Fund	49	\$ (6,227,642.00)	\$ (127,094.73)	34.2	1/1/2009	27.9	1/1/2011	\$ 6,736,683.00	51.96%
Nacogdoches County Hosp. District Retirement Plan	690	\$ (23,368,461.00)	\$ (33,867.33)	20	7/1/2009	27.8	7/1/2011	\$ 28,293,893.00	54.77%
Austin Employees' Retirement Fund	8,387	\$ (1,070,656,825.00)	\$ (127,656.71)	27.1	12/31/2011	27	12/31/2012	\$ 1,897,722,867.00	63.93%
Corpus Christi Fire Fighters' Retirement System	408	\$ (86,516,036.00)	\$ (212,049.11)	22.3	12/31/2010	26.7	12/31/2012	\$ 105,753,324.00	55.00%
Capital Metro Retirement Plan for Bargaining Units	403	\$ (32,864,573.00)	\$ (81,549.81)	29	1/1/2010	26	1/1/2013	\$ 28,705,007.00	46.62%
Irving Supplemental Benefit Plan	1,337	\$ (11,850,892.00)	\$ (8,863.79)	Infinite	1/1/2011	25.3	1/1/2012	\$ 43,157,892.00	78.46%
Lubbock Fire Pension Fund	362	\$ (55,358,443.00)	\$ (152,923.88)	22.8	12/31/2010	24.3	1/1/2013	\$ 161,745,303.00	74.50%
Lower Colorado River Auth. Retirement Plan and Trust	1,613	\$ (153,909,945.00)	\$ (95,418.44)	25	4/1/2012	24	4/1/2013	\$ 354,803,739.00	69.75%
Denison Firemen's Relief and Retirement Fund	56	\$ (5,552,667.00)	\$ (99,154.77)	9.9	1/1/2010	23.9	1/1/2012	\$ 13,680,826.00	71.13%
Dallas Police and Fire Pension System-Combined Plan	5,400	\$ (1,063,181,047.00)	\$ (196,885.38)	30	1/1/2012	23	1/1/2013	\$ 3,795,024,584.00	78.12%
Dallas/Ft. Worth Airport Board Retirement Plan	1,237	\$ (120,322,817.00)	\$ (97,269.86)	24	1/1/2011	23	1/1/2012	\$ 305,799,228.00	71.76%
Dallas/Ft. Worth Airport Board DPS Retirement Plan	350	\$ (51,601,188.00)	\$ (147,431.97)	24	1/1/2011	23	1/1/2012	\$ 104,620,612.00	66.97%
Plano Retirement Security Plan	1,957	\$ (2,478,252.00)	\$ (1,266.35)	25	12/31/2009	23	12/31/2011	\$ 84,500,525.00	97.15%
Port Arthur Firemen's Relief and Retirement Fund	104	\$ (13,522,937.00)	\$ (130,028.24)	22.5	1/1/2010	22.5	1/1/2012	\$ 36,116,894.00	72.76%
El Paso City Employees' Pension Fund	4,134	\$ (206,479,340.00)	\$ (49,946.62)	23	9/1/2011	21	9/1/2012	\$ 581,725,101.00	73.80%
Austin Fire Fighters Relief and Retirement Fund	955	\$ (94,585,998.00)	\$ (99,042.93)	20.5	12/31/2009	20.91	12/31/2011	\$ 651,557,181.00	87.32%
City Public Service of San Antonio Pension Plan	3458	\$ (198,336,500.00)	\$ (57,355.84)	20	1/1/2011	20	1/1/2012	\$ 1,185,076,518.00	85.66%
Harris County Hospital District Pension Plan	3,507	\$ (182,378,903.00)	\$ (52,004.25)	20	1/1/2012	20	1/1/2013	\$ 456,765,053.00	71.47%
Brazos River Authority Retirement Plan	166	\$ (7,455,355.00)	\$ (44,911.78)	30	3/1/2011	20	3/1/2012	\$ 19,775,845.00	72.62%
Capital Metro Retirement Plan for Admin Employees	229	\$ (5,029,327.00)	\$ (21,962.13)	17.9	1/1/2012	20	1/1/2013	\$ 14,888,802.00	74.75%
Waxahachie Firemen's Relief and Retirement Fund	48	\$ (5,763,840.00)	\$ (120,080.00)	13.8	10/1/2010	19.8	10/1/2012	\$ 10,462,784.00	64.48%
Physicians Referral Service Retirement Benefit Plan	1,298	\$ (136,175,930.00)	\$ (104,912.12)	14.5	9/1/2009	15	9/1/2011	\$ 374,274,704.00	73.32%
Texas County & District Retirement System	121,963	\$ (2,702,726,874.00)	\$ (22,160.22)	15.3	12/31/2011	14.8	12/31/2012	\$ 20,250,275,202.00	88.22%
San Benito Firemen's Pension Fund	26	\$ (1,719,561.00)	\$ (66,136.96)	18.7	12/31/2008	14.8	12/31/2011	\$ 2,523,198.00	59.47%
Texarkana Firemen's Relief and Retirement Fund	79	\$ (5,524,986.00)	\$ (69,936.53)	10.3	12/31/2009	14.6	12/31/2011	\$ 26,721,817.00	82.87%
Refugio Co. Memorial Hosp. Dist. Retirement Plan (5)	97	\$ (36,413.00)	\$ (375.39)	13.3	11/1/2010	13.6	11/1/2012	\$ 1,889,626.00	98.11%

Actuarial Valuations Report
January 2014

Plan Name	Active members	Overfunded (unfunded) Liability	Liability/Active Member	Old Amort period	as of	New Amort period	as of	Actuarial Value of Assets	Funded Ratio
Guadalupe-Blanco River Authority	119	\$ (5,118,163.00)	\$ (43,009.77)	12.9	1/1/2012	11.3	1/1/2013	\$ 19,706,816.00	79.38%
Corpus Christi Regional Transportation Authority	205	\$ (2,377,297.00)	\$ (11,596.57)	12	1/1/2012	11	1/1/2013	\$ 25,566,845.00	91.49%
Dallas Police and Fire Pension System-Supp	39	\$ (15,702,369.00)	\$ (402,624.85)	10	1/1/2012	10	1/1/2012	\$ 21,562,556.00	57.86%
Northeast Medical Center Hospital Retirement Plan	0	\$ (2,685,897.00)	-	10	7/1/2011	10	7/1/2012	\$ 8,635,458.00	76.28%
Northwest Texas Healthcare System Retirement Plan	193	\$ (12,194,877.00)	\$ (63,185.89)	10.5	10/1/2011	9.2	10/1/2012	\$ 17,190,249.00	58.50%
San Antonio Fire and Police Pension Fund	3,925	\$ (214,676,634.00)	\$ (54,694.68)	9.12	10/1/2011	7.12	10/1/2012	\$ 2,447,587,725.00	91.94%
Travis Cty ESD #6 Firemen's Relief & Retirement Fund	59	\$ (2,465,415.00)	\$ (41,786.69)	9.1	1/1/2010	2.9	1/1/2012	\$ 3,877,699.00	61.13%
Port of Houston Authority Retirement Plan	535	\$ (9,736,899.00)	\$ (18,199.81)	3	8/1/2011	2	8/1/2012	\$ 129,522,543.00	93.01%
Arlington Employees Deferred Income Plan	690	\$ 363,388.00	\$ 526.65	0	7/1/2012	0	7/1/2013	\$ 2,448,438.00	117.43%
Totals	1,335,720	\$ (52,493,338,016.00)	\$ (29,405,894.40)					\$219,248,438,991.00	
Total Liabilities		\$271,741,777,007.00							
Source: Pension Review Board, January 2014									

Plans with amortization periods > 40 years	25
Plans with amortization periods > 25 years < 40 years	39
Total number of plans on the list	93

- Notes:
- (1) Houston Police requires the city to match the ARC to ensure they maintain a 30-year rolling amortization period; the city has not matched the ARC since 2000.
 - (2) Houston Municipal Employees requires the city to match the ARC to ensure they maintain a closed 30-year amortization period; the city has not matched the ARC since 2000.
 - (3) Dallas Employees' requires the city to match the ARC to ensure they maintain a 30-year rolling amortization period; the city is not currently contributing the ARC.
 - (4) JRS I is a pay-as-you go system with no assets devoted to the plan
 - (5) Refugio County Memorial Hospital District uses the individual aggregate method. The plan's present value of future normal cost is shown as its unfunded liability, and the amortization period is derived from the payroll, the present value of future payroll, and the plan's assumed interest rate of 6.5%.

PRB Guidelines for Actuarial Soundness
(Adopted September 28, 2011)

1. The funding of a pension plan should reflect all plan obligations and assets.
2. The allocation of the normal cost portion of the contributions should be level or declining as a percent of payroll over all generations of taxpayers, and should be calculated under applicable actuarial standards.
3. Funding of the unfunded actuarial accrued liability should be level or declining as a percent of payroll over the amortization period.
4. Funding should be adequate to amortize the unfunded actuarial accrued liability over a period not to exceed 40 years, with 15 - 25 years being a more preferable target. Benefit increases should not be adopted if all plan changes being considered cause a material increase in the amortization period and if the resulting amortization period exceeds 25 years.
5. The choice of assumptions should be reasonable, and should comply with applicable actuarial standards.