



TEXAS PENSION REVIEW BOARD

JOINT MEETING OF THE
INVESTMENT/ACTUARIAL COMMITTEES
May 7, 2020

TEXAS PENSION REVIEW BOARD

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**TEXAS PENSION REVIEW BOARD
JOINT MEETING OF THE
INVESTMENT & ACTUARIAL COMMITTEES
AGENDA**

May 7, 2020 - 9:00 a.m.

By Teleconference

Public Participation Dial-in Number: (877) 853-5247 (Toll-free)

Meeting ID: 834 2839 9764

The May 7, 2020 joint meeting of the Investment and Actuarial Committees of the PRB will be held by teleconference call as authorized under Sections 551.125 and 551.127 of the Texas Government Code. THIS MEETING WILL BE CONDUCTED BY TELECONFERENCE IN ACCORDANCE WITH THE GOVERNOR'S AUTHORIZATION OF MARCH 16, 2020, CONCERNING SUSPENSION OF CERTAIN OPEN MEETING LAW REQUIREMENTS IN RESPONSE TO THE DECLARATION OF STATE DISASTER OF MARCH 13, 2020 CONCERNING THE COVID-19 (CORONAVIRUS) PANDEMIC. A quorum of members of each committee will participate in the meeting and will be audible to the public. Members of the public may provide public comment by registering first with the Office Manager by submitting an email to Lindsay.Seymour@prb.texas.gov identifying the name of the speaker and topic, no later than 8:00 am on May 7, 2020. The presiding officer will call roll of committee members, followed by calling roll of members of the public who have registered. The presiding officer will then ask if other attendees wish to provide comment, at which time each such attendees shall identify themselves by name and topic of the comment. Members of the public who have registered during roll call will be called by name at the appropriate time in the agenda. Attendees are requested to mute their connections when not addressing the committee members.

Access to the agenda materials of the meeting is provided at www.prb.texas.gov. A recording of the meeting will be available at www.prb.texas.gov.

The Committees may discuss or take action regarding any of the items on this agenda. A quorum of the board may be present during the joint meeting of the Actuarial and Investment committees, which will address the following agenda items.

1. Meeting called to order
2. Roll call of Committee members
3. Roll call of members of the public
4. Chairmen's remarks regarding the purpose of the meeting
5. Key issues for Texas systems to consider regarding COVID-19 crisis and its potential impacts:
 - a. Market disruptions, including volatility, asset price declines, and possible effects on average returns for various asset classes
 - b. Short and long-term actuarial impact, including cash flows and funding shortfalls
6. Possible delays in reporting by pension systems
7. Invitation for public comment
8. Adjournment

NOTE: The Committee may go into closed session concerning any item on this agenda if authorized under the Texas Open Meetings Act, Government Code, Code Ch. 551. Persons with disabilities who plan to attend this meeting and who may need special assistance are requested to contact Mr. Wes Allen at (800) 213-9425/ (512) 463-1736 three to five (3-5) working days prior to the meeting date so that appropriate arrangements can be made.

1. Meeting called to order

2. Roll call of Committee members

3. Roll call of members of the public

4. Chairmen's remarks regarding the purpose of the meeting

5. Key issues for Texas systems to consider regarding COVID-19 crisis and its potential impacts

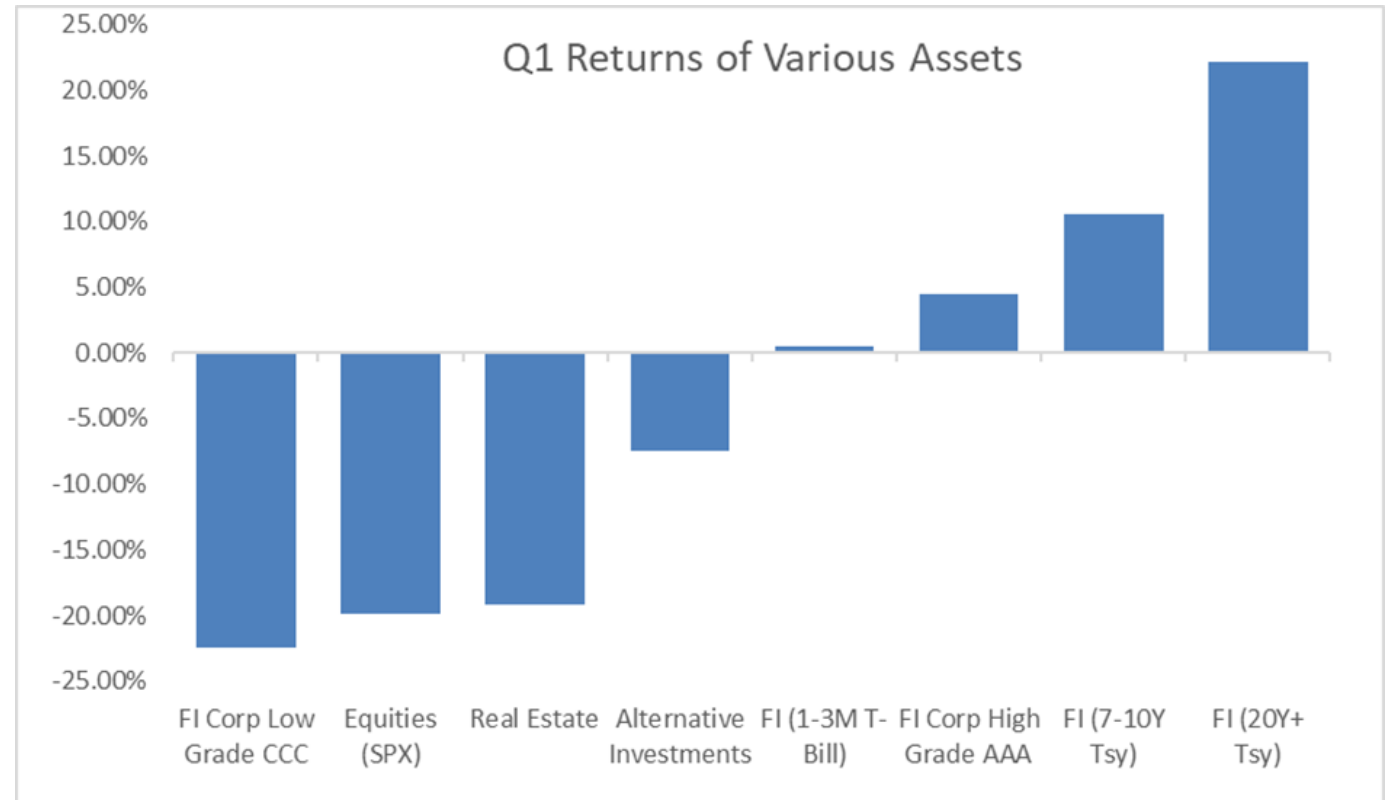
5a. Market disruptions, including volatility, asset price declines, and possible effects on average returns for various asset classes

Texas Pension Review Board Investment Report

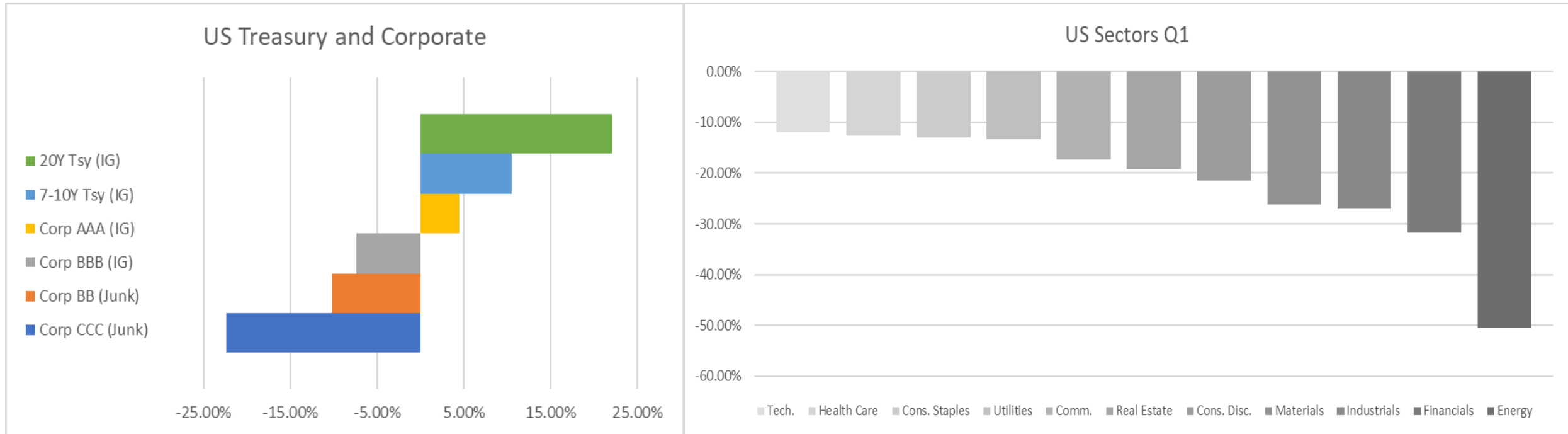
Potential COVID-19 Market Impacts

Market Overview

- The first quarter of 2020 was a period of record highs and the fastest decline into a bear market in history
- The extreme volatility in the market has given pension assets a real-life stress test

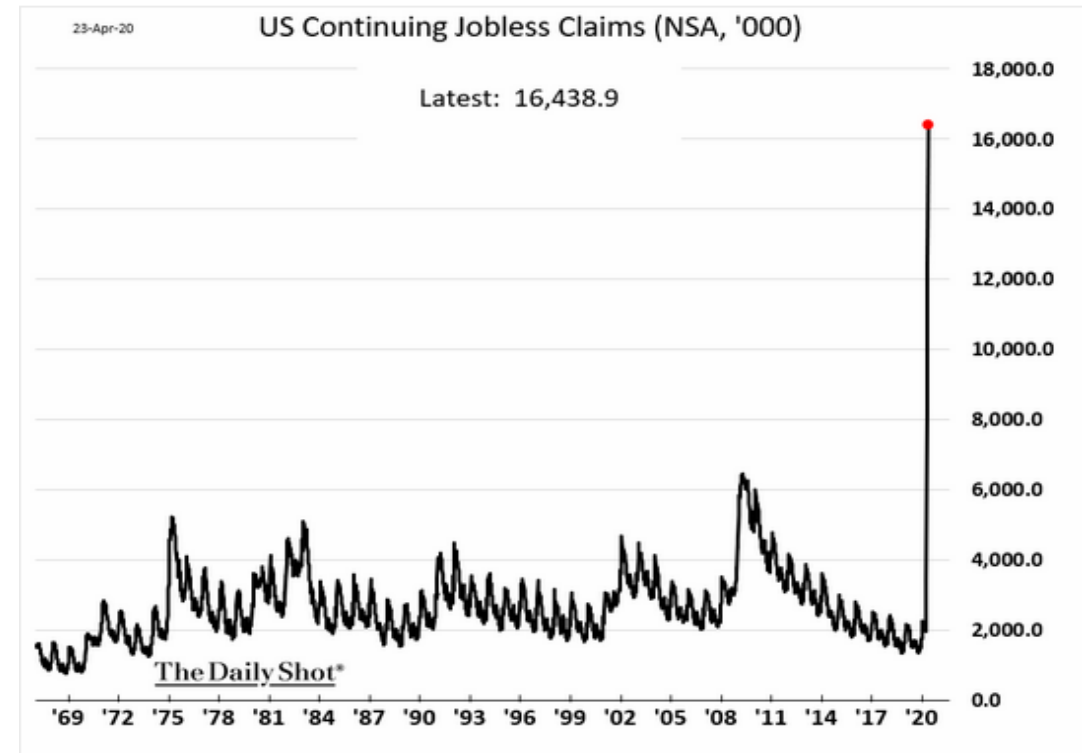
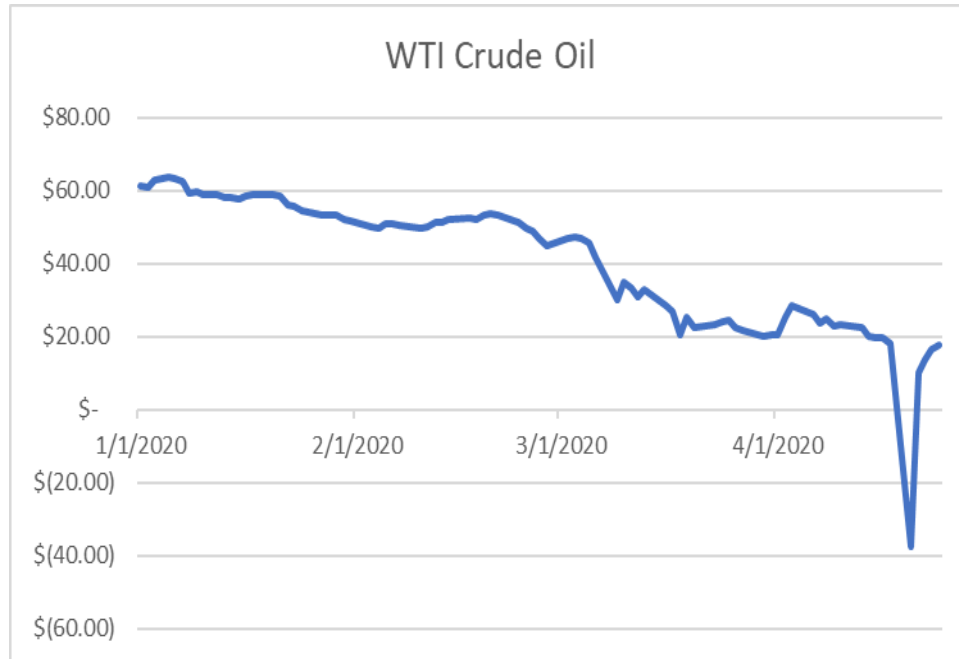


Market Overview



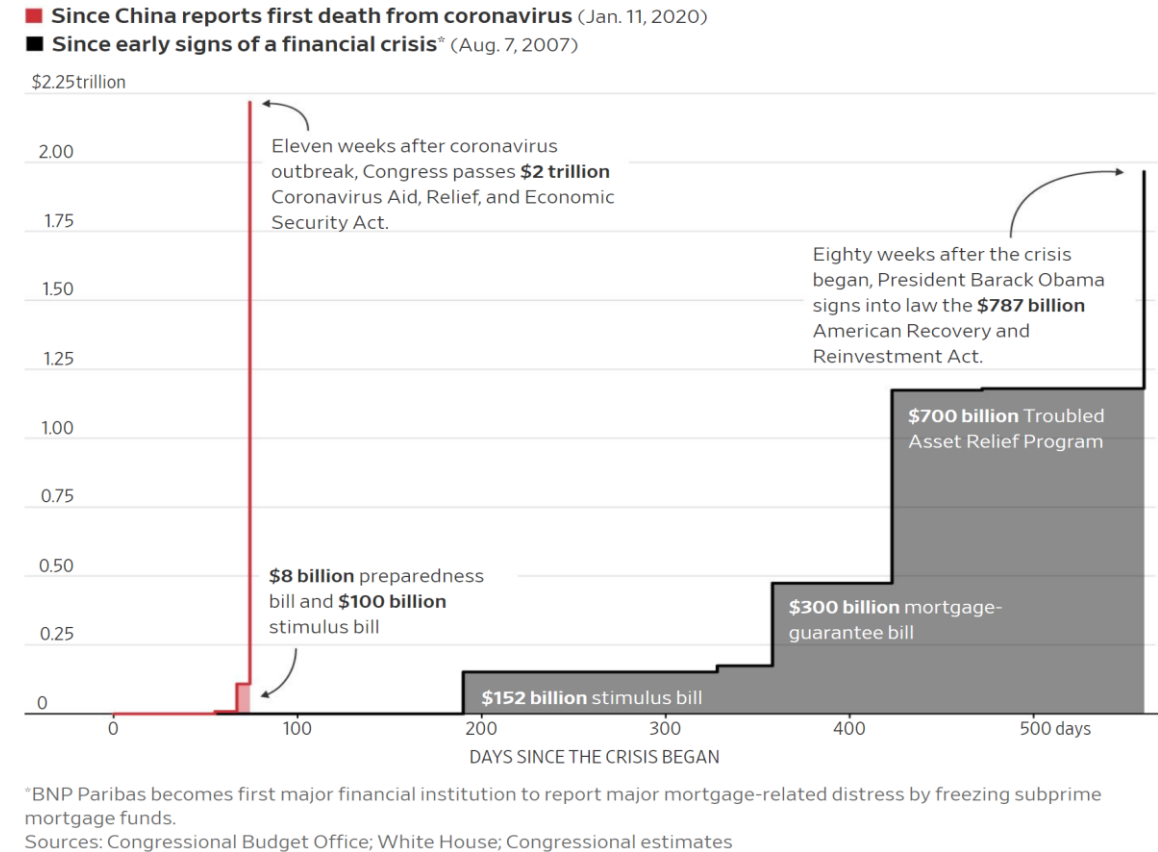
- Markets have seen a flight to quality
- The energy sector was the most impacted as oil prices have fallen drastically from previous years

Market Overview



- Never before seen negative oil prices
- Initial jobless claims over the past 6 weeks total over 26 million and continuing claims exceeding 16 million

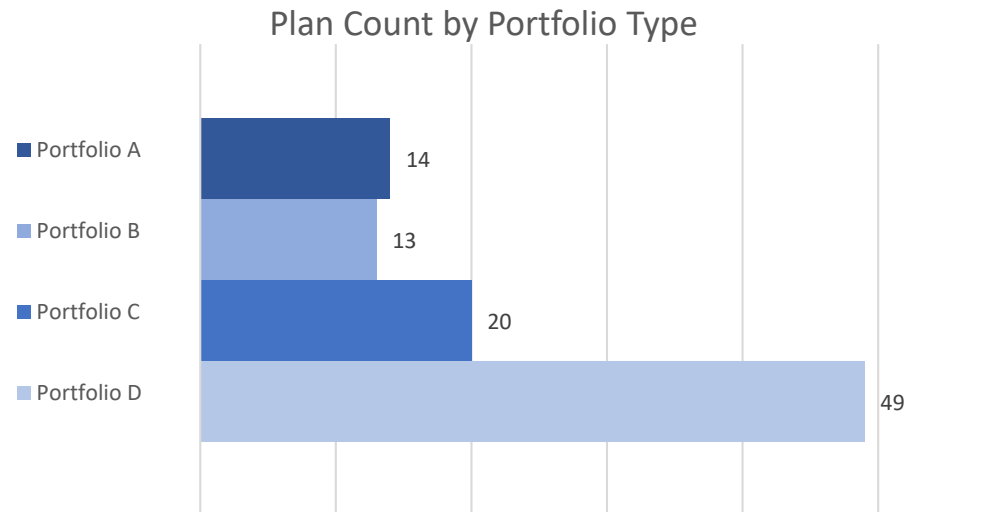
Government and Federal Reserve Intervention



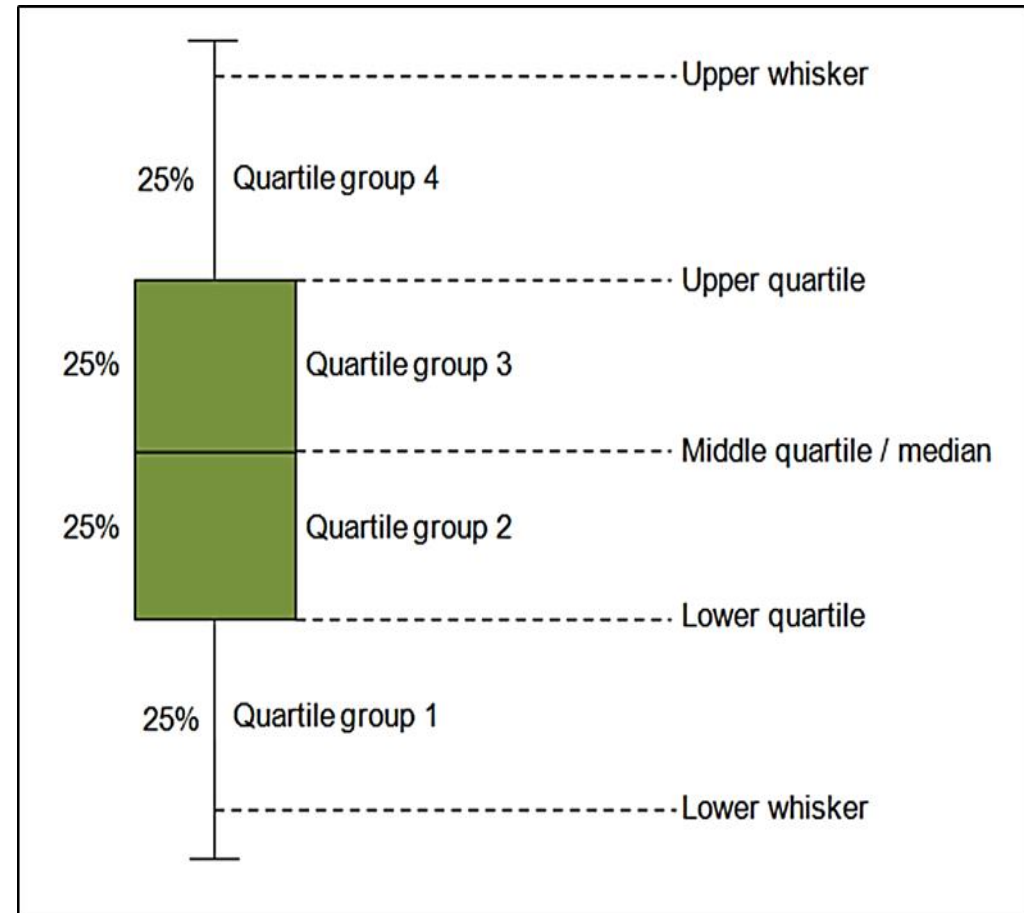
- US government providing over \$2 trillion in aid
- Federal Reserve providing market support through quantitative easing, interest rate cuts

Asset Allocations of Texas Pension Plans

	Equity	Fixed Income	Real Estate	Alternative Investments	Cash
Portfolio A	X	X			X
Portfolio B	X	X	X		X
Portfolio C	X	X		X	X
Portfolio D	X	X	X	X	X

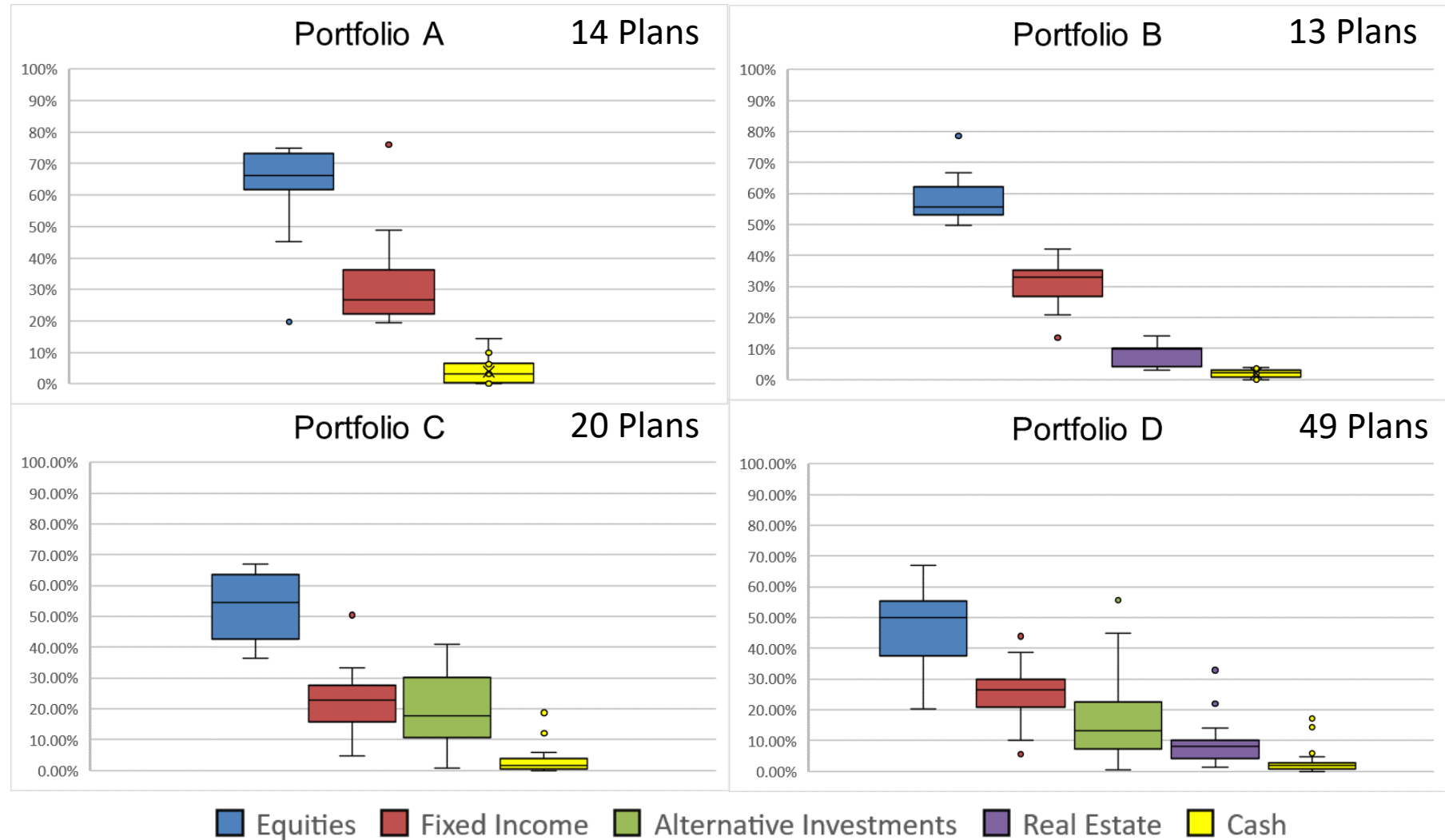


- 4 primary portfolio types using the PRB broad asset class categorizations
- Box and Whiskers graph will be used to show allocation variance within portfolio types

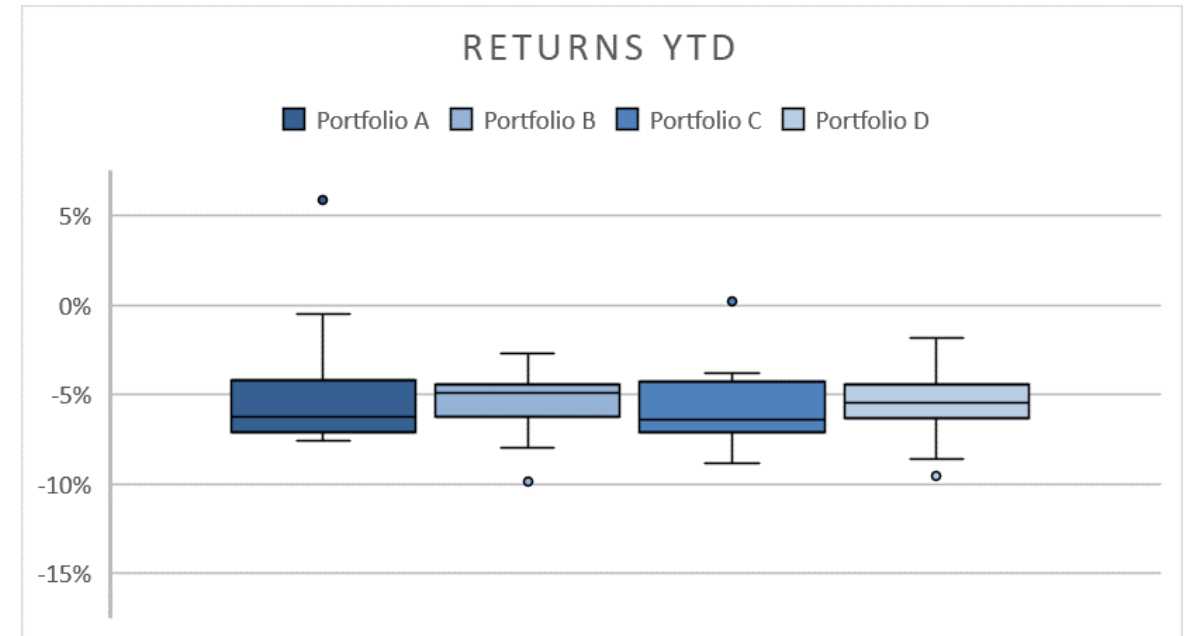
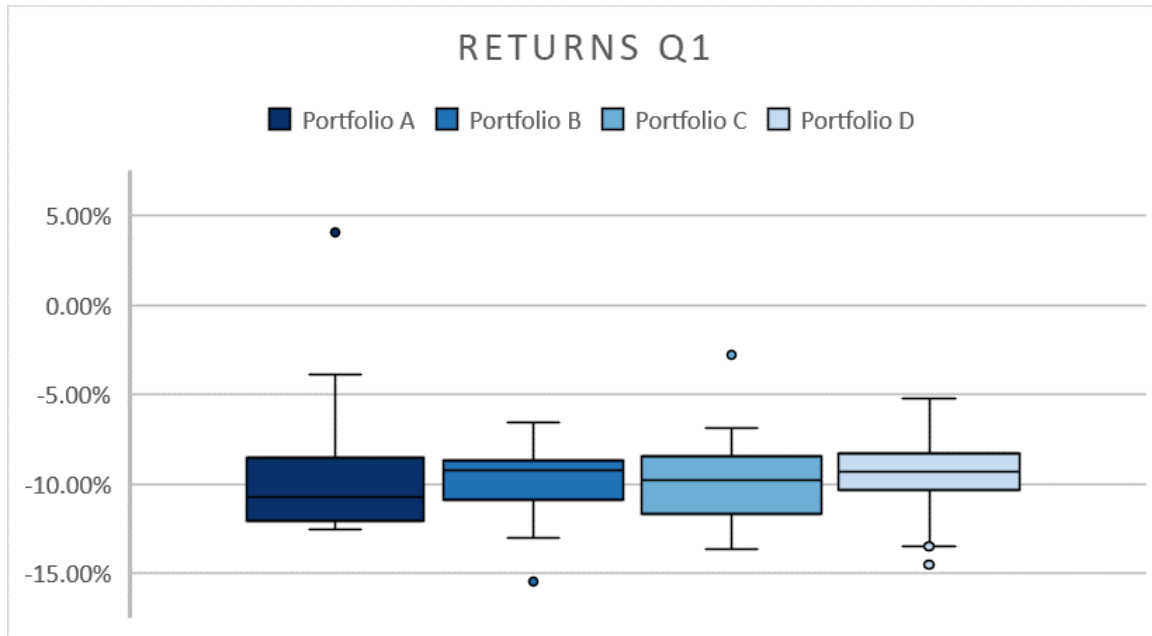


Asset Allocations of Texas Pension Plans

- Fixed income allocations are generally close to a 20-30% allocation
- If plans are invested in Real Estate, allocations typically range from 5-10%
- Plans appear to pull from Equity allocations as they add to Real Estate or Alternative Investments



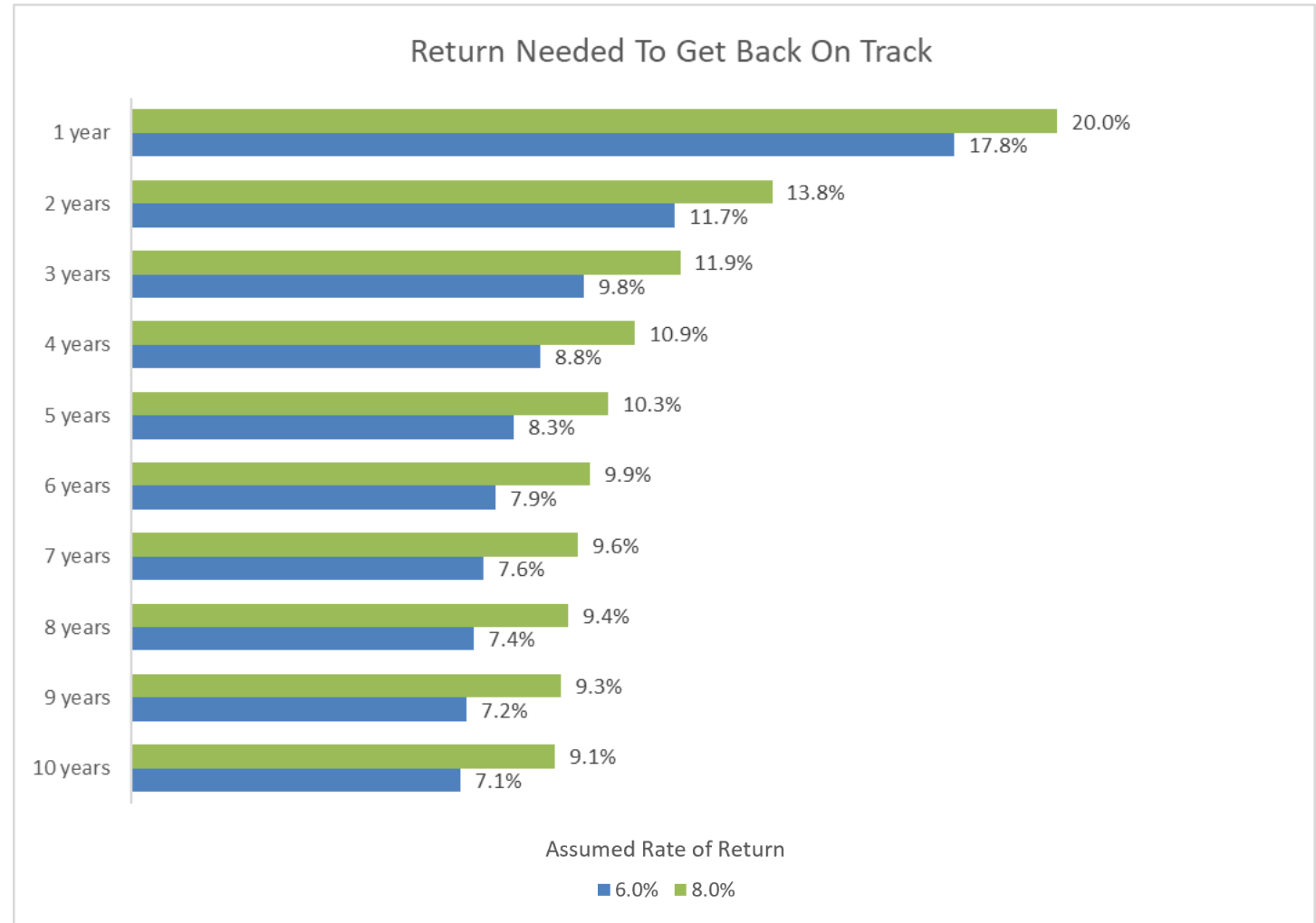
Return Estimates Q1 and YTD



- PRB estimates put the majority of plans close to a -10% drawdown for Q1 2020
- Ex. Q1 TRS reported ~-8.3% v PRB estimate ~-8.7%

From Q1 Forward

- Assumes -10% drawdown for plans in Q1 2020
- Plans will need to consistently exceed their return assumptions in order to not be impacted by recent events



5b. Short and long-term actuarial impact, including cash flows and funding shortfalls

Texas Pension Review Board Actuarial Report

Potential COVID-19 Actuarial Impacts

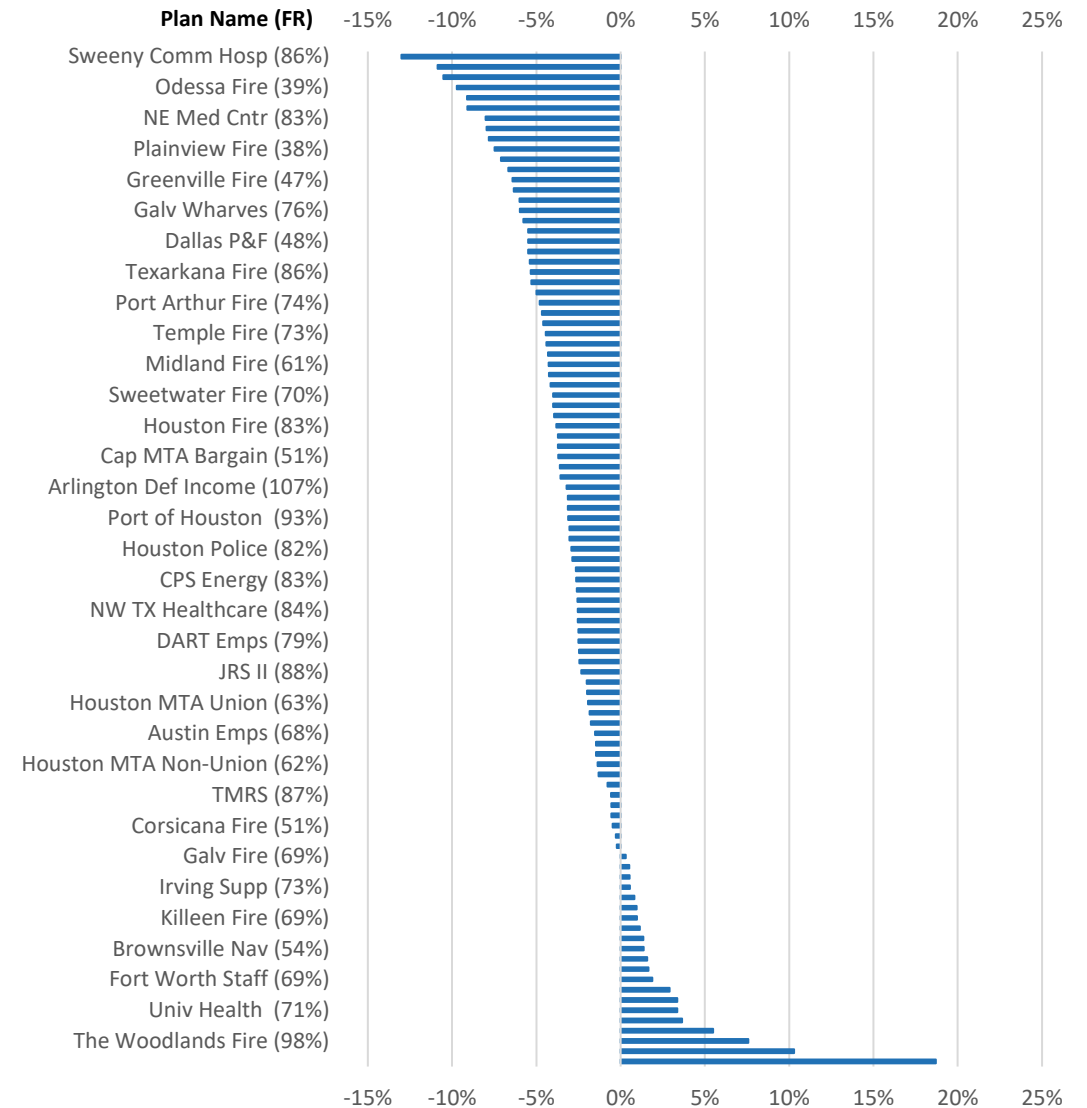
Potential Short and Long-term Actuarial Impacts

- Short-term considerations
 - Near term cash-flow and liquidity issues
 - Metrics to identify plans most at-risk
- Longer-term considerations
 - Metrics to assess and compare UAAL and contribution volatility
 - Legislative requirements
 - Plan sponsor considerations

Liquidity Metrics

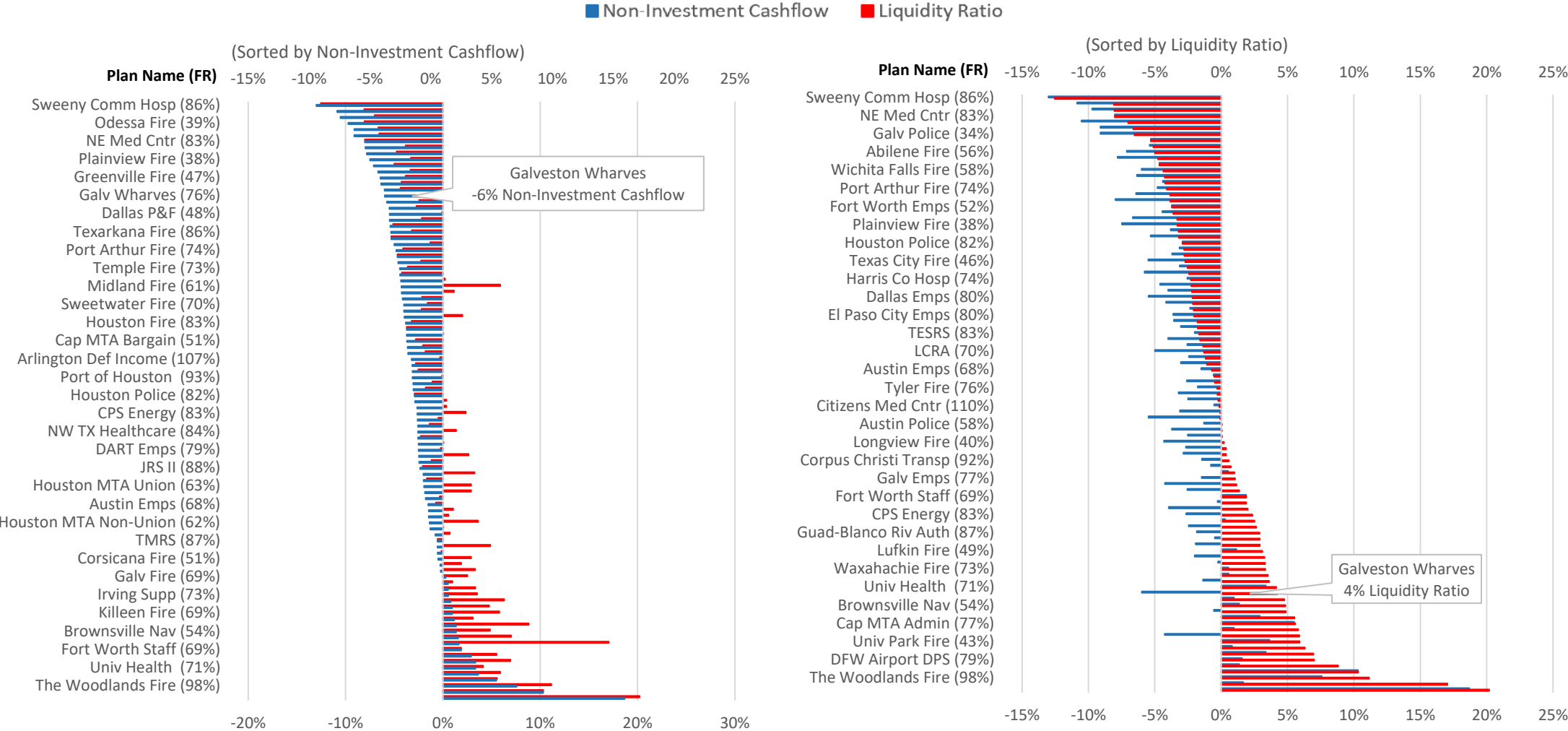
- **Non-investment cashflow** is the ratio of all non-investment inflows and outflows during the year expressed as a % of net assets as of the end of the year. In other words, the difference between contributions and benefits payments during the year.
- A negative value indicates the plan must rely on investment income and/or must sell assets to pay benefits in any given year.
- The **liquidity ratio** considers not only non-investment cash flows during the year but also includes cash-on-hand at the end of the year.

Non-Investment Cashflow All Texas Plans



Liquidity Metrics

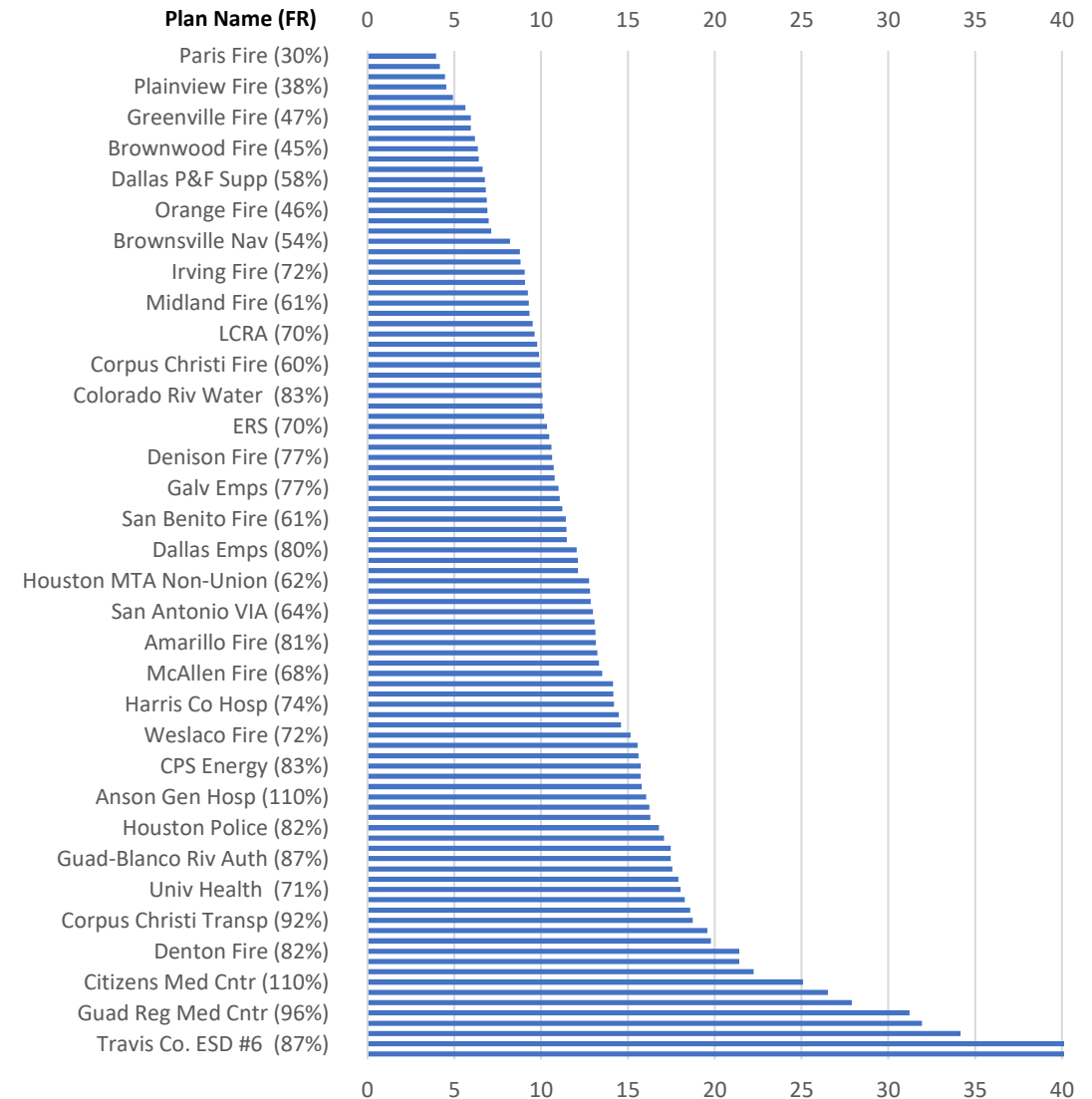
Non-Investment Cashflow vs Liquidity Ratio All Texas Plans



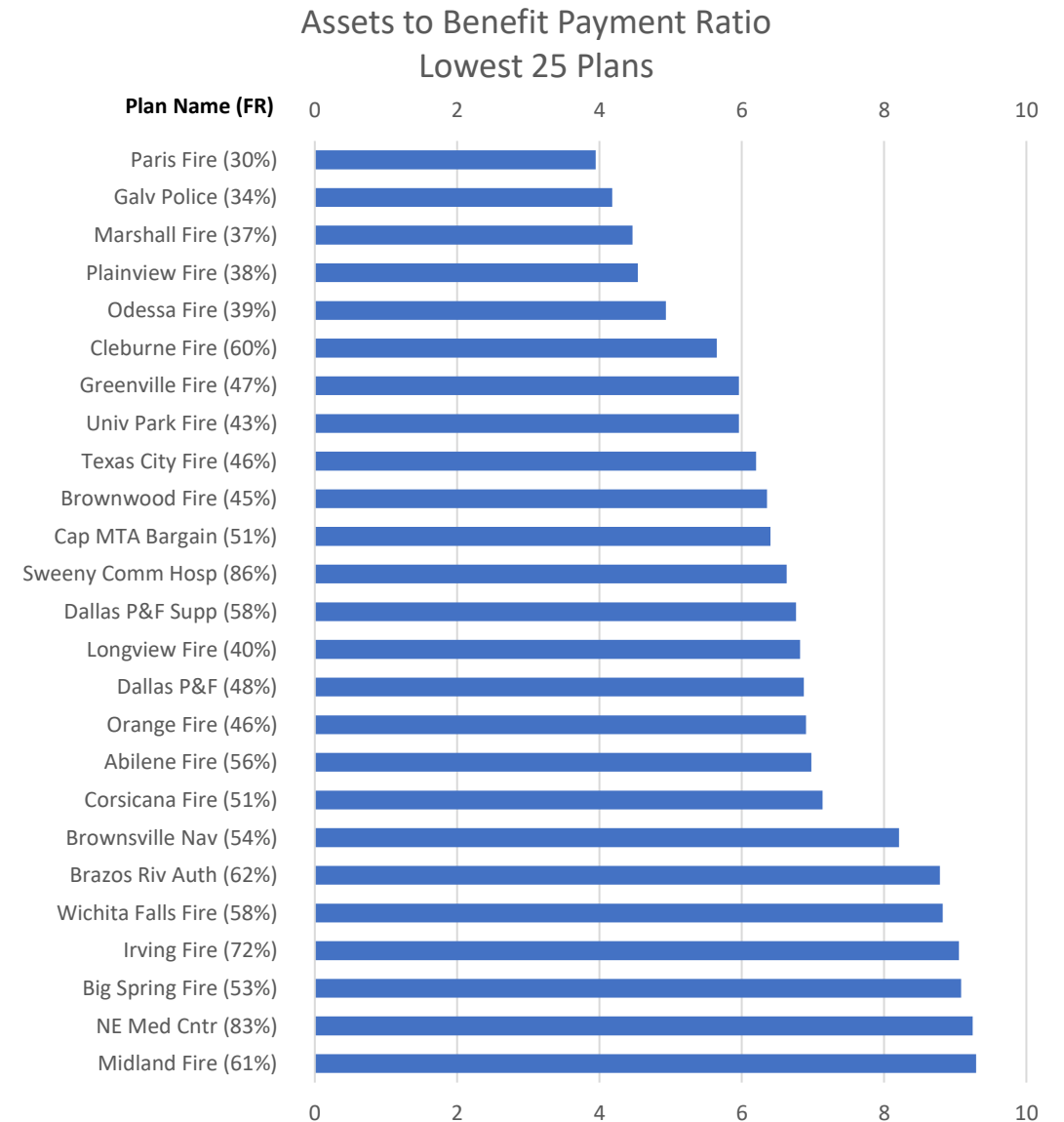
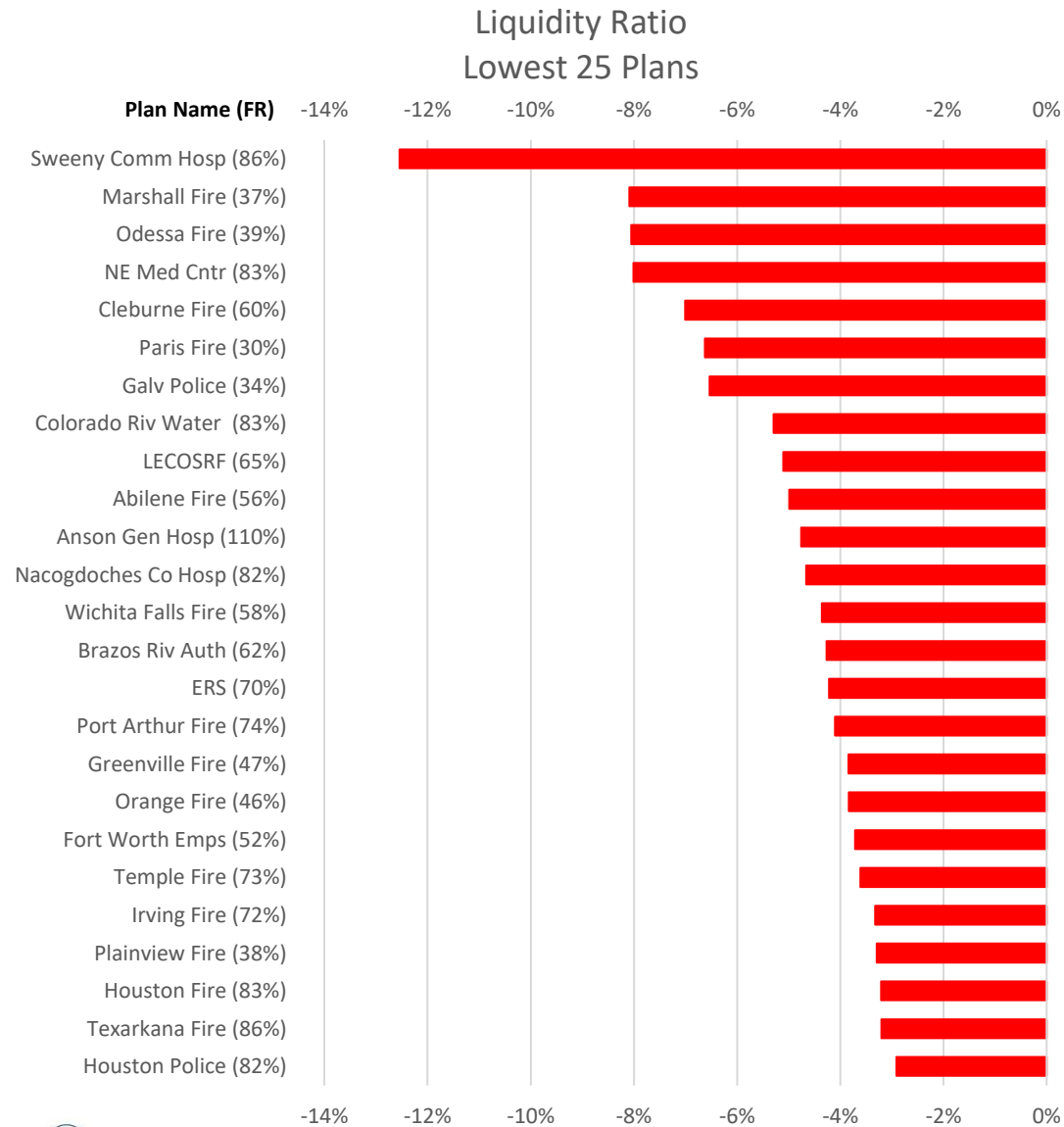
Liquidity Metrics

- The **ratio of assets to benefit payments** compares the current value of a plan's assets to the annual benefit payments.
- In other words, it measures how many years of benefit payments can be made, assuming no change in benefit payments and no new contributions or investment income.

Ratio of Net Pension Assets to Annual Benefit Payments
All Texas Plans



Liquidity Metrics



UAAL Volatility Metrics

- **Asset Leverage Ratio (ALR)** = MVA / Payroll
- **Liability Leverage Ratio (LLR)** = Accrued Liability / Payroll

- Direct measures of the leverage in a plan's UAAL relative to payroll.

Example: A plan with an ALR of 4 that experiences a 10% decline in assets will see UAAL increase by an additional 40% of payroll. i.e. If UAAL as a % of payroll was 200% prior to the 10% asset loss, UAAL as a % of payroll would grow to 240%.

- Also provides relative sensitivity and directional comparisons of the contribution requirements for plans.

Example: A plan with an LLR of 8 will see 4x the increase in the required contribution as a plan with an LLR of 2, for a similar percentage increase in liability.

- **Duration** measures the sensitivity of the accrued liability to a change in the interest rate.

Example: A duration of 10 indicates the plan's AAL will increase by 10% for every 1% reduction in the discount rate.

Contribution Benchmarks

- Recommended Contribution - Contribution needed for the system to achieve and maintain an amortization period that does not exceed 30 years, as reported by the system in accordance with Texas Code §802.101(a).
- UL% Tread Water Cost - Minimum contribution necessary to avoid an increase in the UAAL as a % of payroll.
- UL\$ Tread Water Cost - Minimum contribution necessary to avoid an increase in the UAAL as a dollar amount.

Legislative Requirements

- FSRP requirements
- Other triggers

Plan Sponsor Considerations

- Decline in revenues
- Balance sheet impact
- Credit ratings

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Select Plan Data & Metrics
Joint Meeting of the Investment & Actuarial Committees
May 7, 2020

Plan Name	Val Date	Amort Period	Funded Ratio	Assumed Rate of Return	Payroll Growth Rate	Non-Invest Cash Flow as % of FNP	Liquidity Ratio ¹	Assets to Ben Pay Ratio ²	UAAL as % of Payroll	Asset Lev Ratio (ALR) ³	Liab Lev Ratio (LLR) ⁴	AAL Duration ⁵	ER Cont Type	Total Cont Rate	Total Rec Cont Rate ⁶	UL% Tread Water Cost Rate ⁷	UL\$ Tread Water Cost Rate ⁸
Employees Retirement System of Texas	8/31/2019	Infinity	71%	7.50%	3.00%	-4.39%	-4.22%	10.4	168%	3.9	5.7	13.3	Fixed	19.5%	23.3%	21.3%	26.4%
Law Enforcement & Custodial Off Sup. Ret. Fund	8/31/2019	Infinity	65%	7.50%	3.00%	-5.40%	-5.11%	11.5	31%	0.6	0.9	16.0	Other	2.0%	3.9%	3.5%	4.4%
Austin Police Retirement System	12/31/2018	Infinity	58%	7.25%	3.00%	-1.31%	0.05%	11.2	342%	4.2	8.2	13.7	Fixed	34.3%	45.0%	39.5%	49.8%
Judicial Retirement System of Texas Plan Two	8/31/2019	Infinity	88%	7.50%	2.50%	-2.34%	-2.09%	15.6	73%	5.0	5.9	10.1	Fixed	25.1%	27.8%	26.8%	28.6%
Irving Firemen's Relief & Retirement Fund	12/31/2017	Infinity	72%	7.50%	3.50%	-6.66%	-3.33%	9.1	252%	6.6	8.9	7.1	Fixed	29.8%	35.0%	31.3%	40.1%
Beaumont Firemen's Relief & Retirement Fund	12/31/2018	Infinity	56%	7.50%	3.00%	-5.77%	-2.43%	9.5	457%	5.5	10.3	8.2	Fixed	31.0%	47.7%	40.8%	54.5%
Midland Firemen's Relief & Retirement Fund	12/31/2017	Infinity	61%	7.75%	4.00%	-4.27%	5.89%	9.3	363%	5.5	9.3	12.6	Fixed	36.4%	46.1%	39.6%	54.1%
McAllen Firemen's Relief & Retirement Fund	9/30/2018	Infinity	68%	7.50%	3.00%	-1.89%	3.21%	14.2	197%	4.3	6.2	11.6	Fixed	25.0%	29.2%	25.7%	31.6%
Wichita Falls Firemen's Relief & Retirement Fund	1/1/2018	Infinity	58%	7.75%	4.00%	-6.00%	-4.36%	8.8	317%	4.3	7.5	13.6	Other	25.8%	32.5%	27.1%	39.7%
Longview Firemen's Relief & Retirement Fund	12/31/2018	Infinity	40%	7.75%	3.00%	-4.31%	0.21%	6.8	470%	3.1	7.8	13.0	Fixed	35.8%	44.7%	39.0%	53.1%
Conroe Fire Fighters' Retirement Fund	12/31/2018	Infinity	58%	7.50%	4.00%	0.82%	6.31%	11.5	210%	2.6	5.0	14.5	Fixed	28.2%	33.2%	29.2%	37.6%
Orange Firemen's Relief & Retirement Fund	1/1/2019	Infinity	46%	7.75%	2.50%	-7.96%	-3.83%	6.9	361%	3.1	6.7	11.2	Fixed	27.0%	35.7%	31.2%	40.2%
Atlanta Firemen's Relief & Retirement Fund	12/31/2018	Infinity	80%	7.40%	3.00%	-2.65%	0.37%	17.1	185%	6.7	9.3	11.0	Fixed	26.0%	29.6%	28.1%	33.6%
Odessa Firemen's Relief & Retirement Fund	1/1/2019	77.5	39%	7.75%	3.50%	-9.72%	-8.05%	4.9	569%	3.3	9.4	13.5	Fixed	38.0%	46.9%	39.1%	59.0%
Harlingen Firemen's Relief & Retirement Fund	9/30/2017	59.1	66%	7.75%	3.50%	-2.55%	-1.38%	13.1	249%	4.8	7.3	11.3	Fixed	30.0%	33.3%	29.3%	38.0%
Marshall Firemen's Relief & Retirement Fund	12/31/2018	59.0	37%	7.50%	4.00%	-10.86%	-8.09%	4.5	429%	2.5	6.8	11.9	Fixed	33.8%	40.0%	32.3%	49.5%
Lubbock Fire Pension Fund	12/31/2018	52.9	69%	7.75%	3.50%	-3.05%	-1.08%	10.8	259%	5.5	8.4	10.6	Other	35.0%	38.1%	33.9%	43.0%
Cleburne Firemen's Relief & Retirement Fund	12/31/2018	48.6	60%	7.35%	3.00%	-10.52%	-7.01%	5.6	324%	4.3	8.0	10.7	Other	36.0%	39.4%	34.4%	44.1%
Dallas Employees' Retirement Fund	12/31/2018	46.0	80%	7.75%	2.75%	-5.48%	-2.17%	12.0	214%	7.7	10.7	12.2	Other	27.5%	34.6%	31.6%	37.5%
Plainview Firemen's Relief & Retirement Fund	12/31/2017	44.8	38%	7.50%	3.50%	-7.49%	-3.30%	4.5	517%	3.1	8.3	10.5	Fixed	39.7%	44.6%	35.9%	54.0%
Fort Worth Employees' Retirement Fund	12/31/2018	44.0	52%	7.00%	3.00%	-3.72%	-3.71%	10.2	436%	4.3	9.0	11.5	Actuarial	35.6%	42.5%	34.6%	47.4%
Amarillo Firemen's Relief & Retirement Fund	12/31/2017	43.5	81%	7.50%	3.50%	-3.94%	2.01%	13.2	186%	8.5	10.0	11.0	Fixed	32.6%	34.5%	33.0%	39.5%
Laredo Firefighters Retirement System	9/30/2018	43.0	60%	7.50%	2.75%	0.96%	4.76%	14.6	283%	4.2	7.0	11.6	Fixed	36.1%	38.6%	34.3%	42.1%
Texas City Firemen's Relief & Retirement Fund	12/31/2018	41.1	46%	7.50%	3.00%	-5.49%	-2.72%	6.2	349%	2.7	6.5	10.4	Fixed	32.0%	34.7%	30.0%	40.5%
Greenville Firemen's Relief & Retirement Fund	12/31/2018	40.7	47%	7.75%	4.00%	-6.42%	-3.84%	6.0	369%	2.9	6.9	9.8	Fixed	35.6%	38.5%	31.5%	46.2%
Killeen Firemen's Relief & Retirement Fund	9/30/2018	39.8	69%	7.50%	3.00%	0.96%	5.79%	15.8	131%	3.0	4.3	13.3	Fixed	24.0%	25.0%	22.9%	26.9%
Brownwood Firemen's Relief & Retirement Fund	12/31/2017	38.6	45%	7.25%	3.25%	-3.72%	0.06%	6.4	263%	2.2	4.8	11.7	Fixed	28.0%	29.7%	25.3%	33.9%
Big Spring Firemen's Relief & Retirement Fund	1/1/2019	38.3	53%	7.75%	4.50%	-0.28%	1.89%	9.1	245%	2.6	5.2	11.9	Fixed	28.0%	29.5%	25.5%	36.5%
Dallas Police & Fire Pension System-Combined Plan	1/1/2019	38.0	48%	7.25%	2.75%	-5.48%	-0.09%	6.9	642%	5.6	12.4	10.1	Other	57.0%	55.4%	45.6%	63.3%
Paris Firefighters' Relief & Retirement Fund	12/31/2018	32.1	31%	7.25%	3.50%	-9.10%	-6.63%	3.9	382%	1.5	5.5	9.6	Fixed	30.0%	30.7%	24.0%	37.4%
Austin Employees' Retirement System	12/31/2018	32.0	68%	7.50%	N/A	-1.52%	-0.71%	12.1	195%	3.7	6.0	11.1	Fixed	26.0%	27.4%	32.1%	32.1%
Abilene Firemen's Relief & Retirement Fund	10/1/2017	31.9	56%	8.00%	4.00%	-7.11%	-4.99%	7.0	342%	4.2	7.7	10.0	Fixed	32.5%	33.2%	30.3%	44.0%
San Angelo Firemen's Relief & Retirement Fund	12/31/2017	31.3	65%	7.90%	3.50%	-2.86%	0.37%	10.7	291%	5.4	8.3	11.6	Fixed	36.7%	37.0%	34.4%	44.6%
Lufkin Firemen's Relief & Retirement Fund	12/31/2018	30.7	49%	7.50%	3.00%	1.15%	3.10%	9.9	349%	3.0	6.8	10.0	Fixed	37.2%	37.4%	32.1%	42.6%
El Paso Police Pension Fund	1/1/2018	30.5	78%	7.75%	3.00%	-4.00%	-2.20%	14.1	285%	10.6	13.1	12.7	Fixed	36.3%	37.8%	34.7%	43.3%
Port of Houston Authority Retirement Plan	8/1/2019	30.0	93%	6.50%	N/A	-3.12%	-0.09%	18.3	46%	6.1	6.5	10.7	Actuarial	17.7%	17.7%	16.7%	16.7%
Galveston Employees' Retirement Plan for Police	1/1/2019	30.0	34%	7.00%	3.50%	-9.10%	-6.53%	4.2	315%	1.5	4.8	11.2	Actuarial	30.0%	30.0%	25.4%	36.4%
Fort Worth Employees' Retirement Fund Staff Plan	12/31/2018	30.0	69%	7.00%	N/A	1.88%	1.88%	27.9	157%	3.3	5.0	14.5	Actuarial	33.8%	33.8%	32.5%	32.5%
Corpus Christi Fire Fighters' Retirement System	12/31/2018	29.8	60%	7.50%	3.10%	-3.04%	-1.77%	10.0	306%	4.3	7.7	9.7	Fixed	34.4%	34.4%	29.6%	39.0%
Teacher Retirement System of Texas	8/31/2019	29.0	76%	7.25%	3.00%	-3.13%	-2.54%	13.3	104%	3.3	4.4	12.0	Fixed	16.2%	17.0%	16.2%	19.3%
CPS Energy Pension Plan	1/1/2018	29.0	83%	7.25%	N/A	-1.49%	3.50%	17.7	122%	6.0	7.0	11.6	Actuarial	24.7%	24.7%	22.9%	22.9%
Corsicana Firemen's Relief & Retirement Fund	12/31/2018	28.9	51%	7.00%	2.75%	-0.48%	2.90%	7.1	219%	2.1	4.4	12.4	Fixed	28.0%	29.1%	24.3%	30.3%
University Park Firemen's Relief & Retirement Fund	12/31/2018	28.8	43%	7.50%	N/A	3.64%	5.90%	6.0	441%	3.1	7.8	10.6	Actuarial	54.1%	54.1%	48.6%	48.6%
Temple Firemen's Relief & Retirement Fund	9/30/2018	28.6	73%	7.75%	3.75%	-3.32%	-2.49%	11.6	181%	4.9	6.7	10.6	Fixed	30.2%	30.0%	26.9%	33.7%
Houston Police Officers' Pension System	7/1/2019	28.0	82%	7.00%	2.75%	-2.92%	-2.91%	16.8	268%	12.5	14.6	9.9	Actuarial	42.3%	40.1%	35.4%	42.8%
Houston Firefighters' Relief & Retirement Fund	7/1/2019	28.0	83%	7.00%	3.00%	-3.81%	-3.21%	15.6	316%	15.4	18.4	9.3	Actuarial	42.4%	46.8%	40.3%	49.8%
Houston Municipal Employees Pension System	7/1/2019	28.0	59%	7.00%	2.75%	-3.14%	-2.80%	10.6	328%	4.9	8.1	9.9	Actuarial	32.9%	32.9%	25.3%	34.4%

This report is a compilation of pension data reported by retirement systems and metrics calculated by the PRB, sorted by amortization period and asset value.

Select Plan Data & Metrics
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May 7, 2020

Plan Name	Val Date	Amort Period	Funded Ratio	Assumed Rate of Return	Payroll Growth Rate	Non-Invest Cash Flow as % of FNP	Liquidity Ratio ¹	Assets to Ben Pay Ratio ²	UAAL as % of Payroll	Asset Lev Ratio (ALR) ³	Liab Lev Ratio (LLR) ⁴	AAL Duration ⁵	ER Cont Type	Total Cont Rate	Total Rec Cont Rate ⁶	UL% Tread Water Cost Rate ⁷	UL\$ Tread Water Cost Rate ⁸
El Paso Firemen's Pension Fund	1/1/2018	28.0	78%	7.75%	3.00%	-3.57%	-1.79%	14.2	265%	9.6	11.9	12.7	Fixed	36.5%	36.5%	34.8%	42.7%
Sweetwater Firemen's Relief & Retirement Fund	12/31/2016	27.5	70%	8.00%	4.00%	-4.00%	-1.59%	10.0	229%	5.0	7.6	10.7	Fixed	35.0%	35.0%	31.0%	40.2%
Galveston Firefighter's Relief & Retirement Fund	12/31/2017	26.8	69%	7.75%	3.00%	0.30%	2.52%	12.8	248%	5.6	8.1	10.4	Fixed	35.0%	35.0%	31.3%	38.8%
University Health System Pension Plan	1/1/2018	26.0	71%	7.00%	3.50%	3.37%	4.15%	18.0	39%	1.0	1.3	11.7	Actuarial	8.1%	8.1%	4.8%	6.2%
Tyler Firefighters' Relief & Retirement Fund	12/31/2017	25.5	76%	7.50%	3.40%	-1.77%	-0.31%	13.1	189%	6.1	7.9	9.9	Fixed	33.0%	33.0%	28.8%	35.3%
Dallas Co. Hospital Dist. Retirement Income Plan	1/1/2019	25.0	72%	7.00%	4.00%	2.91%	5.52%	17.6	62%	1.4	2.2	12.7	Actuarial	11.8%	11.8%	10.0%	12.5%
Houston MTA Workers Union Pension Plan	1/1/2019	24.0	63%	6.50%	N/A	-1.93%	2.92%	12.9	173%	2.7	4.6	10.4	Actuarial	18.8%	18.8%	15.4%	15.4%
Houston MTA Non-Union Pension Plan	1/1/2019	24.0	62%	6.50%	N/A	-1.37%	3.61%	12.8	267%	4.0	7.0	8.6	Actuarial	31.0%	31.0%	25.6%	25.6%
Texas Emergency Services Retirement System	8/31/2018	24.0	83%	7.75%	N/A	-1.99%	-1.66%	17.9	N/A	N/A	N/A	12.8	Other	N/A	N/A	N/A	N/A
Port Arthur Firemen's Relief & Retirement Fund	12/31/2017	23.7	74%	7.50%	3.50%	-4.79%	-4.11%	9.8	182%	5.4	7.1	9.8	Other	27.6%	27.6%	23.4%	29.8%
San Antonio Metropolitan Transit Retirement Plan	10/1/2018	23.0	64%	7.25%	3.25%	-2.60%	-0.48%	13.0	139%	2.6	3.9	10.3	Actuarial	16.2%	16.2%	12.6%	17.1%
Irving Supplemental Benefit Plan	1/1/2019	23.0	73%	6.75%	3.00%	0.56%	3.53%	14.5	21%	0.5	0.8	12.7	Other	4.7%	4.5%	4.1%	4.8%
Galveston Wharves Pension Plan	1/1/2019	22.0	76%	7.25%	N/A	-5.98%	4.26%	10.5	256%	8.1	10.7	8.9	Actuarial	33.8%	33.8%	29.1%	29.1%
San Benito Firemen Relief & Retirement Fund	9/30/2017	21.8	61%	7.50%	4.00%	-2.00%	3.26%	11.4	152%	2.3	3.9	12.0	Fixed	24.0%	22.1%	19.2%	25.3%
Capital MTA Bargaining	1/1/2019	20.0	51%	7.00%	3.00%	-3.70%	-2.79%	6.4	N/A	N/A	N/A	8.8	Actuarial	N/A	N/A	N/A	N/A
Capital MTA Admin Employees	1/1/2019	20.0	77%	6.75%	3.50%	5.48%	5.57%	31.9	42%	1.3	1.8	14.2	Actuarial	12.5%	12.5%	9.7%	11.2%
Brownsville Navigation District	1/1/2018	20.0	54%	6.15%	4.50%	1.37%	4.84%	8.2	95%	1.2	2.1	10.2	Fixed	14.3%	14.3%	10.0%	14.2%
Sweeny Community Hospital	1/1/2019	19.0	86%	7.00%	N/A	-13.01%	-12.54%	6.6	57%	3.4	4.2	8.8	Actuarial	13.7%	13.7%	12.1%	12.1%
Waxahachie Firemen's Relief & Retirement Fund	10/1/2018	18.9	73%	7.00%	4.00%	0.54%	3.32%	18.6	132%	3.6	4.9	12.1	Other	27.2%	24.6%	21.9%	27.1%
Texas Municipal Retirement System	12/31/2018	18.2	87%	6.75%	3.00%	-0.56%	-0.53%	19.8	65%	4.2	5.1	0.0	Actuarial	20.3%	20.2%	17.7%	19.7%
Lower Colorado River Authority Retirement Plan	1/1/2019	18.0	70%	7.25%	N/A	-4.99%	-1.31%	9.6	172%	3.6	5.8	9.5	Actuarial	22.3%	22.3%	18.0%	18.0%
Austin Fire Fighters Relief & Retirement Fund	12/31/2018	17.9	88%	7.70%	3.50%	-2.44%	-1.18%	16.2	141%	9.9	11.8	8.8	Fixed	40.8%	37.7%	34.4%	39.3%
Galveston Employees' Retirement Fund	12/31/2018	16.8	77%	7.25%	2.75%	-1.47%	1.05%	11.0	61%	1.9	2.6	10.6	Fixed	15.0%	15.0%	12.6%	14.3%
Harris County Hospital District Pension Plan	1/1/2019	16.4	74%	7.00%	N/A	-2.55%	-2.28%	14.2	146%	3.9	5.6	10.8	Actuarial	20.5%	20.5%	15.1%	15.1%
DFW Airport Board	1/1/2019	16.0	84%	7.25%	N/A	-0.56%	4.88%	21.4	187%	9.3	11.5	12.5	Actuarial	37.9%	37.9%	31.3%	31.3%
DFW Airport Board DPS	1/1/2019	16.0	79%	7.25%	3.75%	1.57%	7.00%	22.2	167%	5.9	7.8	13.6	Actuarial	37.9%	37.9%	29.5%	35.8%
Denison Firemen's Relief & Retirement Fund	12/31/2017	15.8	77%	7.50%	3.50%	-4.60%	-2.25%	10.6	155%	5.3	6.8	10.3	Fixed	27.0%	27.0%	20.4%	25.8%
Corpus Christi Regional Transportation Authority	1/1/2019	15.0	92%	7.40%	N/A	-1.46%	0.57%	18.7	31%	3.2	3.8	10.8	Actuarial	11.5%	11.5%	10.6%	10.6%
Texarkana Firemen's Relief & Retirement Fund	12/31/2017	15.0	86%	7.75%	3.25%	-5.33%	-3.21%	11.1	124%	7.7	9.0	9.9	Fixed	33.0%	29.0%	27.2%	31.2%
Denton Firemen's Relief & Retirement Fund	12/31/2017	14.6	82%	6.75%	3.00%	1.65%	17.04%	21.4	105%	4.8	5.8	11.6	Other	31.1%	31.1%	25.7%	28.8%
Weslaco Firemen's Relief & Retirement Fund	9/30/2018	14.1	72%	7.25%	3.25%	1.36%	8.81%	15.1	102%	2.7	3.6	14.1	Fixed	24.0%	20.3%	18.6%	21.9%
City of El Paso Employees Retirement Trust	9/1/2018	14.0	80%	7.50%	3.00%	-3.61%	-2.05%	12.1	120%	4.9	6.1	10.6	Fixed	23.0%	18.8%	17.4%	21.0%
San Antonio Fire & Police Pension Fund	1/1/2019	13.9	88%	7.25%	3.50%	-2.51%	0.08%	17.5	135%	9.0	11.2	12.9	Fixed	37.0%	34.0%	29.5%	34.2%
Brazos River Authority Retirement Plan	3/1/2019	13.0	62%	6.50%	N/A	-6.34%	-4.27%	8.8	N/A	N/A	N/A	9.7	Actuarial	N/A	N/A	N/A	N/A
DART Employees	10/1/2018	12.8	79%	6.75%	N/A	-3.29%	-1.02%	12.2	341%	13.1	16.4	9.4	Actuarial	45.6%	48.6%	30.4%	30.4%
Texas County & District Retirement System	12/31/2018	12.6	88%	8.00%	3.25%	-0.77%	0.73%	19.6	58%	4.2	5.0	0.0	Actuarial	18.9%	18.9%	16.1%	17.9%
Guadalupe Regional Medical Center	1/1/2019	12.0	96%	7.00%	N/A	0.52%	0.99%	31.2	9%	2.4	2.7	12.9	Other	10.9%	10.5%	10.0%	10.0%
Nacogdoches County Hospital District	7/1/2017	11.9	82%	7.25%	N/A	-4.66%	-4.66%	10.1	32%	1.5	1.8	11.4	Other	8.3%	7.3%	6.6%	6.6%
Guadalupe-Blanco River Authority	1/1/2019	10.0	87%	6.75%	N/A	-1.85%	2.90%	17.5	N/A	N/A	N/A	9.8	Actuarial	N/A	N/A	N/A	N/A
Dallas Police & Fire Pension System-Supplemental	1/1/2019	10.0	58%	7.25%	2.75%	-4.24%	1.16%	6.8	2050%	27.8	48.3	8.3	Actuarial	299.5%	299.5%	134.7%	191.1%
Northeast Medical Center Hospital Retirement Plan	7/1/2019	10.0	83%	7.25%	N/A	-8.01%	-8.01%	9.2	N/A	N/A	N/A	7.3	Actuarial	N/A	N/A	N/A	N/A
Colorado River Municipal Water Dist.	1/1/2019	8.5	83%	6.25%	N/A	-5.30%	-5.30%	10.1	51%	2.5	3.1	6.3	Actuarial	18.7%	18.7%	13.3%	13.3%
Refugio County Memorial Hospital	11/1/2018	7.0	98%	7.00%	N/A	-4.15%	-2.14%	15.7	1%	0.6	0.6	11.5	Actuarial	0.3%	0.3%	0.1%	0.1%
JPS - Tarrant County Hospital District	10/1/2017	3.8	95%	7.25%	N/A	3.36%	6.94%	34.2	5%	1.0	1.0	11.0	Other	7.8%	7.8%	5.9%	5.9%
The Woodlands Firefighters' Retirement System	1/1/2019	3.6	98%	7.00%	N/A	7.57%	11.14%	511.6	6%	2.8	2.8	15.1	Fixed	24.0%	22.6%	22.5%	22.5%
Travis County ESD #6 FRRF	12/31/2017	3.3	87%	7.00%	3.25%	10.30%	10.32%	233.7	48%	3.4	3.8	15.6	Fixed	39.2%	39.2%	25.9%	27.5%
Northwest Texas Healthcare System Retirement Plan	10/1/2017	3.0	84%	7.50%	N/A	-2.55%	1.36%	9.3	N/A	N/A	N/A	7.8	Fixed	N/A	N/A	N/A	N/A
Plano Retirement Security Plan	12/31/2017	0.0	101%	7.00%	2.75%	-0.23%	3.31%	26.5	-1%	1.0	1.0	13.5	Actuarial	3.2%	3.2%	3.2%	3.2%

This report is a compilation of pension data reported by retirement systems and metrics calculated by the PRB, sorted by amortization period and asset value.

Select Plan Data & Metrics
Joint Meeting of the Investment & Actuarial Committees
May 7, 2020

Plan Name	Val Date	Amort Period	Funded Ratio	Assumed Rate of Return	Payroll Growth Rate	Non-Invest Cash Flow as % of FNP	Liquidity Ratio ¹	Assets to Ben Pay Ratio ²	UAAL as % of Payroll	Asset Lev Ratio (ALR) ³	Liab Lev Ratio (LLR) ⁴	AAL Duration ⁵	ER Cont Type	Total Cont Rate	Total Rec Cont Rate ⁶	UL% Tread Water Cost Rate ⁷	UL\$ Tread Water Cost Rate ⁸
Citizens Medical Center	3/1/2019	0.0	110%	7.00%	3.50%	-0.54%	-0.15%	25.1	-18%	1.9	1.7	12.2	Other	6.8%	6.8%	7.2%	6.5%
Arlington Employees Deferred Income Plan	6/30/2019	0.0	107%	5.00%	3.00%	-3.21%	-0.29%	16.3	-5%	0.8	0.7	8.6	Actuarial	5.7%	3.0%	5.6%	5.4%
Anson General Hospital	7/1/2019	0.0	110%	6.00%	N/A	-7.82%	-4.76%	16.1	-81%	9.0	8.0	7.8	Actuarial	4.0%	4.0%	21.0%	21.0%
El Paso Firemen & Policemen's Pension Staff Plan	1/1/2018	0.0	113%	7.75%	3.00%	18.70%	20.20%	N/A	-6%	0.6	0.5	14.2	Fixed	12.5%	9.9%	9.9%	9.8%

1 Liquidity ratio is the ratio of all non-investment inflows and outflows during the year, plus cash-on-hand, expressed as a % of net assets as of the end of the year.

2 Assets to Ben Pay ratio is the value of a plan's assets divided by the annual benefit payments paid.

3 Asset Leverage Ratio = Market Value of Assets / Payroll

4 Liability Leverage Ratio = Actuarial Accrued Liability / Payroll

5 AAL Duration is a measure of the sensitivity of the plan's liability to a change in discount rate.

6 Recommended Contribution needed for the system to achieve and maintain an amortization period that does not exceed 30 years, as reported by the system in accordance with Texas Code §802.101(a).

7 UL% Tread Water Cost Rate = Minimum contribution necessary to avoid an increase in the UAAL as a % of payroll.

8 UL\$Tread Water Cost Rate = Minimum contribution necessary to avoid an increase in the UAAL as a dollar amount.

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Initial Plan Review Data
May 7, 2020

Plan Name	Market Value of Assets	Funding Val Metrics										Fiscal Year End Metrics						
		Val Date	Amort Period Distance From Avg (25.92)		Funded Ratio Distance From Avg (69.11%)		UAAI as % of Payroll Distance From Avg (219.38%)		Assumed Rate of Return Distance From Avg (7.30%)		Payroll Growth Rate Distance From Avg (3.30%)		FYE	Actual Cont as % of ADC Distance From Avg (101.82%)		Non-Invest Cash Flow as % of FNP Distance From Avg (-2.78%)		DROP as % of FNP
			Value		Value		Value		Value		Value			Value		Value		
Employees Retirement System of Texas	\$ 27,351,224,157	8/31/2019	Infinity	N/A	70.50%	1.39%	168.10%	-51.28%	7.50%	0.20%	3.00%	-0.30%	8/31/2019	86.17%	-15.64%	-4.40%	-1.62%	N/A
Law Enforcement & Custodial Officer Sup. Ret. Fund	\$ 943,622,645	8/31/2019	Infinity	N/A	65.30%	-3.81%	31.29%	-188.09%	7.50%	0.20%	3.00%	-0.30%	8/31/2019	47.15%	-54.66%	-5.40%	-2.62%	N/A
Austin Police Retirement System	\$ 718,519,641	12/31/2018	Infinity	N/A	58.14%	-10.97%	342.08%	122.70%	7.25%	-0.05%	3.00%	-0.30%	12/31/2018	95.86%	-5.95%	-1.31%	1.47%	5.90%
Judicial Retirement System of Texas Plan Two	\$ 456,192,249	8/31/2019	Infinity	N/A	87.51%	18.40%	73.36%	-146.02%	7.50%	0.20%	2.50%	-0.80%	8/31/2019	100.33%	-1.48%	-2.34%	0.44%	N/A
Irving Firemen's Relief & Retirement Fund	\$ 213,960,011	12/31/2017	Infinity	N/A	71.61%	2.50%	252.13%	32.75%	7.50%	0.20%	3.50%	0.20%	12/31/2018	76.07%	-25.75%	-6.66%	-3.88%	27.02%
Beaumont Firemen's Relief & Retirement Fund	\$ 105,769,426	12/31/2018	Infinity	N/A	55.80%	-13.31%	457.43%	238.05%	7.50%	0.20%	3.00%	-0.30%	12/31/2018	76.85%	-24.97%	-5.77%	-2.99%	36.70%
Midland Firemen's Relief & Retirement Fund	\$ 89,023,115	12/31/2017	Infinity	N/A	60.91%	-8.20%	362.54%	143.16%	7.75%	0.45%	4.00%	0.70%	12/31/2018	69.68%	-32.14%	-4.27%	-1.49%	0.53%
McAllen Firemen's Relief & Retirement Fund	\$ 52,675,409	9/30/2018	Infinity	N/A	68.16%	-0.95%	196.53%	-22.85%	7.50%	0.20%	3.00%	-0.30%	9/30/2018	97.16%	-4.66%	-2.46%	0.32%	N/A
Wichita Falls Firemen's Relief & Retirement Fund	\$ 51,317,643	1/1/2018	Infinity	N/A	57.70%	-11.41%	316.54%	97.16%	7.75%	0.45%	4.00%	0.70%	12/31/2018	83.37%	-18.45%	-6.00%	-3.22%	N/A
Longview Firemen's Relief & Retirement Fund	\$ 41,560,527	12/31/2018	Infinity	N/A	39.85%	-29.26%	469.68%	250.30%	7.75%	0.45%	3.00%	-0.30%	12/31/2018	84.03%	-17.79%	-4.31%	-1.53%	N/A
Conroe Fire Fighters' Retirement Fund	\$ 24,501,501	12/31/2018	Infinity	N/A	58.05%	-11.06%	209.84%	-9.54%	7.50%	0.20%	4.00%	0.70%	12/31/2018	92.36%	-9.45%	0.82%	3.60%	5.27%
Orange Firemen's Relief & Retirement Fund	\$ 7,961,733	1/1/2019	Infinity	N/A	46.28%	-22.83%	360.64%	141.26%	7.75%	0.45%	2.50%	-0.80%	12/31/2018	74.34%	-27.47%	-7.96%	-5.18%	N/A
Atlanta Firemen's Relief & Retirement Fund	\$ 3,801,042	12/31/2018	Infinity	N/A	80.03%	10.92%	184.83%	-34.55%	7.40%	0.10%	3.00%	-0.30%	12/31/2018	112.05%	10.24%	-2.65%	0.13%	N/A
Odessa Firemen's Relief & Retirement Fund	\$ 39,242,821	1/1/2019	77.5	51.6	39.29%	-29.82%	569.08%	349.70%	7.75%	0.45%	3.50%	0.20%	12/31/2018	80.29%	-21.52%	-9.72%	-6.95%	4.42%
Harlingen Firemen's Relief & Retirement Fund	\$ 31,224,379	9/30/2017	59.1	33.2	66.06%	-3.05%	248.99%	29.61%	7.75%	0.45%	3.50%	0.20%	9/30/2018	81.92%	-19.89%	-2.55%	0.22%	1.85%
Marshall Firemen's Relief & Retirement Fund	\$ 7,278,840	12/31/2018	59.0	33.1	36.66%	-32.45%	429.30%	209.92%	7.50%	0.20%	4.00%	0.70%	12/31/2018	78.11%	-23.71%	-10.86%	-8.08%	0.00%
Lubbock Fire Pension Fund	\$ 186,484,535	12/31/2018	52.9	27.0	69.34%	0.23%	258.52%	39.14%	7.75%	0.45%	3.50%	0.20%	12/31/2018	96.72%	-5.10%	-3.35%	-0.57%	N/A
Cleburne Firemen's Relief & Retirement Fund	\$ 19,362,808	12/31/2018	48.6	22.7	59.61%	-9.50%	324.13%	104.75%	7.35%	0.05%	3.00%	-0.30%	12/31/2018	100.27%	-1.54%	-10.52%	-7.74%	0.08%
Dallas Employees' Retirement Fund	\$ 3,265,402,000	12/31/2018	46.0	20.1	79.97%	10.86%	213.98%	-5.40%	7.75%	0.45%	2.75%	-0.55%	12/31/2018	72.60%	-29.21%	-5.48%	-2.71%	N/A
Plainview Firemen's Relief & Retirement Fund	\$ 6,154,425	12/31/2017	44.8	18.9	37.67%	-31.44%	517.48%	298.10%	7.50%	0.20%	3.50%	0.20%	12/31/2018	91.85%	-9.96%	-7.49%	-4.71%	N/A
Fort Worth Employees' Retirement Fund	\$ 2,147,041,319	12/31/2018	44.0	18.1	52.38%	-16.73%	435.50%	216.12%	7.00%	-0.30%	3.00%	-0.30%	9/30/2019	83.07%	-18.75%	-3.72%	-0.95%	5.15%
Amarillo Firemen's Relief & Retirement Fund	\$ 171,845,402	12/31/2017	43.5	17.6	81.47%	12.36%	185.69%	-33.69%	7.50%	0.20%	3.50%	0.20%	12/31/2018	91.08%	-10.73%	-3.94%	-1.17%	N/A
Laredo Firefighters Retirement System	\$ 154,813,837	9/30/2018	43.0	17.1	59.86%	-9.25%	282.55%	63.17%	7.50%	0.20%	2.75%	-0.55%	9/30/2019	86.41%	-15.40%	0.96%	3.74%	N/A
Texas City Firemen's Relief & Retirement Fund	\$ 14,389,108	12/31/2018	41.1	15.2	45.92%	-23.19%	348.98%	129.60%	7.50%	0.20%	3.00%	-0.30%	12/31/2018	104.17%	2.35%	-5.49%	-2.71%	N/A
Greenville Firemen's Relief & Retirement Fund	\$ 12,254,104	12/31/2018	40.7	14.8	46.61%	-22.50%	368.76%	149.38%	7.75%	0.45%	4.00%	0.70%	12/31/2018	82.71%	-19.10%	-6.42%	-3.64%	N/A
Killeen Firemen's Relief & Retirement Fund	\$ 43,947,221	9/30/2018	39.8	13.9	69.35%	0.24%	131.39%	-87.99%	7.50%	0.20%	3.00%	-0.30%	9/30/2018	95.94%	-5.87%	0.96%	3.74%	N/A
Brownwood Firemen's Relief & Retirement Fund	\$ 4,158,090	12/31/2017	38.6	12.7	45.03%	-24.08%	263.23%	43.85%	7.25%	-0.05%	3.25%	-0.05%	12/31/2018	93.12%	-8.69%	-3.72%	-0.94%	N/A
Big Spring Firemen's Relief & Retirement Fund	\$ 10,902,959	1/1/2019	38.3	12.4	53.22%	-15.89%	245.07%	25.69%	7.75%	0.45%	4.50%	1.20%	12/31/2018	109.86%	8.05%	-1.09%	1.69%	N/A
Dallas Police & Fire Pension System-Combined Plan	\$ 2,041,914,130	1/1/2019	38.0	12.1	48.10%	-21.01%	642.47%	423.09%	7.25%	-0.05%	2.75%	-0.55%	12/31/2018	95.07%	-6.74%	-5.51%	-2.73%	9.50%
Paris Firefighters' Relief & Retirement Fund	\$ 4,152,310	12/31/2018	32.1	6.2	30.50%	-38.61%	382.48%	163.10%	7.25%	-0.05%	3.50%	0.20%	12/31/2018	83.50%	-18.31%	-9.10%	-6.33%	N/A
Austin Employees' Retirement System	\$ 2,461,383,436	12/31/2018	32.0	6.1	67.56%	-1.55%	194.81%	-24.57%	7.50%	0.20%	N/A	N/A	12/31/2018	93.12%	-8.70%	-1.52%	1.26%	N/A
Abilene Firemen's Relief & Retirement Fund	\$ 57,456,309	10/1/2017	31.9	6.0	55.69%	-13.42%	341.79%	122.41%	8.00%	0.70%	4.00%	0.70%	9/30/2018	96.44%	-5.37%	-7.11%	-4.33%	0.00%
San Angelo Firemen's Relief & Retirement Fund	\$ 66,618,737	12/31/2017	31.3	5.4	64.92%	-4.19%	291.10%	71.72%	7.90%	0.60%	3.50%	0.20%	12/31/2018	98.30%	-3.52%	-2.85%	-0.07%	0.00%
Lufkin Firemen's Relief & Retirement Fund	\$ 15,659,035	12/31/2018	30.7	4.8	48.81%	-20.30%	349.28%	129.90%	7.50%	0.20%	3.00%	-0.30%	12/31/2018	96.19%	-5.62%	1.15%	3.93%	2.27%
El Paso Police Pension Fund	\$ 870,658,507	1/1/2018	30.5	4.6	78.30%	9.19%	284.50%	65.12%	7.75%	0.45%	3.00%	-0.30%	12/31/2018	90.82%	-11.00%	-4.00%	-1.22%	2.34%
Port of Houston Authority Retirement Plan	\$ 184,407,686	8/1/2019	30.0	4.1	92.94%	23.83%	46.05%	-173.33%	6.50%	-0.80%	N/A	N/A	7/31/2018	105.00%	3.19%	-3.12%	-0.34%	N/A
Galveston Employees' Retirement Plan for Police	\$ 17,856,397	1/1/2019	30.0	4.1	33.95%	-35.16%	315.26%	95.88%	7.00%	-0.30%	3.50%	0.20%	12/31/2018	64.00%	-37.82%	-9.10%	-6.32%	N/A
Fort Worth Employees' Retirement Fund Staff Plan	\$ 4,916,880	12/31/2018	30.0	4.1	68.90%	-0.21%	156.69%	-62.69%	7.00%	-0.30%	N/A	N/A	9/30/2019	99.12%	-2.70%	1.88%	4.65%	0.00%
Corpus Christi Fire Fighters' Retirement System	\$ 139,811,086	12/31/2018	29.8	3.9	60.21%	-8.90%	305.70%	86.32%	7.50%	0.20%	3.10%	-0.20%	12/31/2018	100.00%	-1.82%	-3.04%	-0.26%	N/A
Teacher Retirement System of Texas	\$ 157,978,199,075	8/31/2019	29.0	3.1	76.40%	7.29%	104.37%	-115.01%	7.25%	-0.05%	3.00%	-0.30%	8/31/2019	97.03%	-4.79%	-3.13%	-0.35%	0.00%
CPS Energy Pension Plan	\$ 1,627,840,308	1/1/2018	29.0	3.1	82.58%	13.47%	122.42%	-96.96%	7.25%	-0.05%	N/A	N/A	12/31/2018	92.51%	-9.31%	-2.63%	0.14%	N/A
Corsicana Firemen's Relief & Retirement Fund	\$ 8,563,597	12/31/2018	28.9	3.0	50.67%	-18.44%	218.76%	-0.62%	7.00%	-0.30%	2.75%	-0.55%	12/31/2018	118.30%	16.48%	-0.48%	2.30%	N/A
University Park Firemen's Relief & Retirement Fund	\$ 9,447,674	12/31/2018	28.8	2.8	43.36%	-25.75%	441.37%	221.99%	7.50%	0.20%	N/A	N/A	12/31/2018	191.49%	89.67%	3.64%	6.42%	N/A
Temple Firemen's Relief & Retirement Fund	\$ 44,243,769	9/30/2018	28.6	2.7	72.96%	3.85%	181.02%	-38.36%	7.75%	0.45%	3.75%	0.45%	9/30/2018	102.19%	0.37%	-4.44%	-1.66%	N/A
Houston Police Officers' Pension System	\$ 5,674,647,000	7/1/2019	28.0	2.1	81.67%	12.56%	268.36%	48.98%	7.00%	-0.30%	2.75%	-0.55%	6/30/2019	100.87%	-0.95%	-2.92%	-0.14%	33.84%
Houston Firefighters' Relief & Retirement Fund	\$ 4,237,692,000	7/1/2019	28.0	2.1	82.86%	13.75%	315.82%	96.44%	7.00%	-0.30%	3.00%	-0.30%	6/30/2019	87.62%	-14.19%	-3.81%	-1.03%	30.02%
Houston Municipal Employees Pension System	\$ 3,100,999,000	7/1/2019	28.0	2.1	59.30%	-9.81%	328.17%	108.79%	7.00%	-0.30%	2.75%	-0.55%	6/30/2019	98.92%	-2.90%	-3.16%	-0.39%	20.04%
El Paso Firemen's Pension Fund	\$ 601,790,721	1/1/2018	28.0	2.1	77.78%	8.67%	265.17%	45.79%	7.75%	0.45%	3.00%	-0.30%	12/31/2018	101.26%	-0.56%	-3.57%	-0.79%	1.45%
Sweetwater Firemen's Relief & Retirement Fund	\$ 7,826,879	12/31/2016	27.5	1.6	69.99%	0.88%	229.12%	9.74%	8.00%	0.70%	4.00%	0.70%	12/31/2018	100.00%	-1.82%	-4.00%	-1.22%	N/A
Galveston Firefighter's Relief & Retirement Fund	\$ 44,651,640	12/31/2017	26.8	0.9	69.16%	0.05%	248.42%	29.04%	7.75%	0.45%	3.00%	-0.30%	12/31/2018	168.45%	66.63%	0.30%	3.07%	N/A
University Health System Pension Plan	\$ 363,779,588	1/1/2018	26.0	0.1	70.74%	1.63%	39.14%	-180.24%	7.00%	-0.30%	3.50%	0.20%	12/31/2018	110.41%	8.60%	3.37%	6.14%	N/A

Initial Plan Review Data
May 7, 2020

Plan Name		Market Value of Assets	Funding Val Metrics										Fiscal Year End Metrics						
			Amort Period		Funded Ratio		UAAAL as % of Payroll		Assumed Rate of Return		Payroll Growth Rate		Actual Cont as % of ADC		Non-Invest Cash Flow as % of FNP		DROP as % of FNP		
			Val Date	Value	Distance From Avg (25.92)	Value	Distance From Avg (69.11%)	Value	Distance From Avg (219.38%)	Value	Distance From Avg (7.30%)	Value	Distance From Avg (3.30%)	FYE	Value	Distance From Avg (101.82%)	Value	Distance From Avg (-2.78%)	Value
Tyler Firefighters' Relief & Retirement Fund		\$ 70,141,881	12/31/2017	25.5	-0.4	76.18%	7.07%	188.81%	-30.57%	7.50%	0.20%	3.40%	0.10%	12/31/2018	107.28%	5.47%	-1.78%	1.00%	N/A
Dallas Co. Hospital Dist. Retirement Income Plan		\$ 948,034,161	1/1/2019	25.0	-0.9	71.53%	2.42%	61.92%	-157.46%	7.00%	-0.30%	4.00%	0.70%	12/31/2018	132.93%	31.11%	2.91%	5.68%	N/A
Houston MTA Workers Union Pension Plan		\$ 254,400,189	1/1/2019	24.0	-1.9	62.52%	-6.59%	173.09%	-46.29%	6.50%	-0.80%	N/A	N/A	12/31/2018	97.13%	-4.68%	-1.93%	0.85%	N/A
Houston MTA Non-Union Pension Plan		\$ 162,565,041	1/1/2019	24.0	-1.9	61.75%	-7.36%	266.71%	47.33%	6.50%	-0.80%	N/A	N/A	12/31/2018	100.11%	-1.70%	-1.37%	1.40%	N/A
Texas Emergency Services Retirement System		\$ 115,863,894	8/31/2018	24.0	-1.9	83.39%	14.28%	0.00%	-219.38%	7.75%	0.45%	N/A	N/A	8/31/2019	101.72%	-0.10%	-1.99%	0.78%	N/A
Port Arthur Firemen's Relief & Retirement Fund		\$ 49,890,603	12/31/2017	23.7	-2.2	74.22%	5.11%	182.37%	-37.01%	7.50%	0.20%	3.50%	0.20%	12/31/2018	101.57%	-0.25%	-4.79%	-2.02%	N/A
San Antonio Metropolitan Transit Retirement Plan		\$ 298,393,798	10/1/2018	23.0	-2.9	64.05%	-5.06%	139.47%	-79.91%	7.25%	-0.05%	3.25%	-0.05%	9/30/2018	153.95%	52.14%	-2.60%	0.18%	N/A
Irving Supplemental Benefit Plan		\$ 58,112,359	1/1/2019	23.0	-2.9	73.46%	4.35%	20.97%	-198.41%	6.75%	-0.55%	3.00%	-0.30%	12/31/2018	98.10%	-3.71%	0.56%	3.33%	N/A
Galveston Wharves Pension Plan		\$ 12,411,631	1/1/2019	22.0	-3.9	76.06%	6.95%	255.74%	36.36%	7.25%	-0.05%	N/A	N/A	12/31/2018	136.46%	34.64%	-5.98%	-3.20%	N/A
San Benito Firemen Relief & Retirement Fund		\$ 3,503,753	9/30/2017	21.8	-4.1	60.68%	-8.43%	152.30%	-67.08%	7.50%	0.20%	4.00%	0.70%	9/30/2018	118.81%	17.00%	-2.00%	0.77%	N/A
Capital MTA Retirement Plan for Bargaining Unit Employees		\$ 29,894,535	1/1/2019	20.0	-5.9	50.64%	-18.47%	0.00%	-219.38%	7.00%	-0.30%	3.00%	-0.30%	12/31/2018	161.25%	59.43%	-3.70%	-0.93%	N/A
Capital MTA Retirement Plan for Administrative Employees		\$ 29,770,966	1/1/2019	20.0	-5.9	76.94%	7.83%	41.75%	-177.63%	6.75%	-0.55%	3.50%	0.20%	12/31/2018	0.00%	-101.82%	5.48%	8.26%	N/A
Employees of Brownsville Navigation District		\$ 5,082,503	1/1/2018	20.0	-5.9	54.30%	-14.81%	95.32%	-124.06%	6.15%	-1.15%	4.50%	1.20%	12/31/2018	117.18%	15.36%	1.27%	4.05%	N/A
Sweeny Community Hospital		\$ 3,023,456	1/1/2019	19.0	-6.9	86.36%	17.25%	57.17%	-162.21%	7.00%	-0.30%	N/A	N/A	12/31/2018	100.01%	-1.80%	-13.01%	-10.23%	N/A
Waxahachie Firemen's Relief & Retirement Fund		\$ 17,428,039	10/1/2018	18.9	-7.0	73.08%	3.97%	131.82%	-87.56%	7.00%	-0.30%	4.00%	0.70%	9/30/2018	106.59%	4.78%	0.54%	3.32%	N/A
Texas Municipal Retirement System		\$ 27,683,629,439	12/31/2018	18.2	-7.7	87.11%	18.00%	65.22%	-154.16%	6.75%	-0.55%	3.00%	-0.30%	12/31/2018	103.09%	1.27%	-0.56%	2.21%	N/A
Lower Colorado River Authority Retirement Plan		\$ 388,300,639	1/1/2019	18.0	-7.9	70.26%	1.15%	171.78%	-47.60%	7.25%	-0.05%	N/A	N/A	12/31/2018	126.37%	24.55%	-4.99%	-2.22%	N/A
Austin Fire Fighters Relief & Retirement Fund		\$ 909,117,796	12/31/2018	17.9	-8.0	88.02%	18.91%	141.13%	-78.25%	7.70%	0.40%	3.50%	0.20%	12/31/2018	117.85%	16.04%	-2.45%	0.33%	10.94%
Galveston Employees' Retirement Fund		\$ 48,514,328	12/31/2018	16.8	-9.1	76.63%	7.52%	61.29%	-158.09%	7.25%	-0.05%	2.75%	-0.55%	12/31/2018	100.00%	-1.81%	-1.47%	1.31%	N/A
Harris County Hospital District Pension Plan		\$ 635,273,806	1/1/2019	16.4	-9.5	73.97%	4.86%	145.90%	-73.48%	7.00%	-0.30%	N/A	N/A	12/31/2018	99.99%	-1.82%	-2.55%	0.23%	N/A
Dallas/Fort Worth Airport Board Retirement Plan		\$ 493,301,369	1/1/2019	16.0	-9.9	83.66%	14.55%	187.49%	-31.89%	7.25%	-0.05%	N/A	N/A	12/31/2018	110.37%	8.56%	-0.56%	2.22%	N/A
Dallas/Fort Worth Airport Board DPS Retirement Plan		\$ 188,058,481	1/1/2019	16.0	-9.9	78.53%	9.42%	167.45%	-51.93%	7.25%	-0.05%	3.75%	0.45%	12/31/2018	109.51%	7.69%	1.57%	4.35%	N/A
Denison Firemen's Relief & Retirement Fund		\$ 17,725,070	12/31/2017	15.8	-10.1	77.26%	8.15%	155.45%	-63.93%	7.50%	0.20%	3.50%	0.20%	12/31/2018	100.00%	-1.82%	-4.60%	-1.82%	N/A
Texarkana Firemen's Relief & Retirement Fund		\$ 34,819,005	12/31/2017	15.0	-10.9	86.32%	17.21%	123.72%	-95.66%	7.75%	0.45%	3.25%	-0.05%	12/31/2018	125.28%	23.47%	-5.33%	-2.56%	N/A
Corpus Christi Regional Transportation Authority		\$ 33,900,179	1/1/2019	15.0	-10.9	91.78%	22.67%	31.10%	-188.28%	7.40%	0.10%	N/A	N/A	12/31/2018	119.63%	17.82%	-1.46%	1.32%	N/A
Denton Firemen's Relief & Retirement Fund		\$ 85,388,283	12/31/2017	14.6	-11.3	82.07%	12.96%	104.60%	-114.78%	6.75%	-0.55%	3.00%	-0.30%	12/31/2018	100.00%	-1.82%	1.65%	4.43%	N/A
Weslaco Firemen's Relief & Retirement Fund		\$ 11,577,179	9/30/2018	14.1	-11.8	71.99%	2.88%	101.90%	-117.48%	7.25%	-0.05%	3.25%	-0.05%	9/30/2018	152.70%	50.89%	1.36%	4.13%	N/A
City of El Paso Employees Retirement Trust		\$ 820,416,288	9/1/2018	14.0	-11.9	80.33%	11.22%	120.47%	-98.91%	7.50%	0.20%	3.00%	-0.30%	8/31/2019	160.23%	58.42%	-3.61%	-0.84%	N/A
San Antonio Fire & Police Pension Fund		\$ 3,015,158,660	1/1/2019	13.9	-12.0	87.94%	18.83%	134.97%	-84.41%	7.25%	-0.05%	3.50%	0.20%	12/31/2018	141.03%	39.21%	-2.51%	0.26%	N/A
Brazos River Authority Retirement Plan		\$ 19,851,827	3/1/2019	13.0	-12.9	61.71%	-7.40%	0.00%	-219.38%	6.50%	-0.80%	N/A	N/A	2/28/2019	100.00%	-1.82%	-6.34%	-3.57%	N/A
DART Employees' Defined Benefit Retirement Plan & Trust		\$ 186,844,635	10/1/2018	12.8	-13.1	79.22%	10.11%	341.24%	121.86%	6.75%	-0.55%	N/A	N/A	9/30/2018	155.11%	53.30%	-2.50%	0.28%	N/A
Texas County & District Retirement System		\$ 29,260,546,258	12/31/2018	12.6	-13.3	88.46%	19.35%	57.61%	-161.77%	8.00%	0.70%	3.25%	-0.05%	12/31/2018	107.03%	5.22%	-0.78%	2.00%	N/A
Guadalupe Regional Medical Center		\$ 67,977,745	1/1/2019	12.0	-13.9	96.47%	27.36%	9.48%	-209.90%	7.00%	-0.30%	N/A	N/A	12/31/2018	130.56%	28.74%	0.52%	3.30%	N/A
Nacogdoches County Hospital District Retirement Plan		\$ 46,841,434	7/1/2017	11.9	-14.0	81.96%	12.85%	31.73%	-187.65%	7.25%	-0.05%	N/A	N/A	6/30/2016	131.32%	29.51%	-4.66%	-1.88%	N/A
Guadalupe-Blanco River Authority		\$ 28,731,703	1/1/2019	10.0	-15.9	86.94%	17.83%	0.00%	-219.38%	6.75%	-0.55%	N/A	N/A	12/31/2018	110.69%	8.88%	-1.85%	0.93%	N/A
Dallas Police & Fire Pension System-Supplemental		\$ 18,317,893	1/1/2019	10.0	-15.9	57.56%	-11.55%	2050.36%	1830.98%	7.25%	-0.05%	2.75%	-0.55%	12/31/2018	91.32%	-10.50%	-4.27%	-1.49%	0.96%
Northeast Medical Center Hospital Retirement Plan		\$ 9,405,456	7/1/2019	10.0	-15.9	82.73%	13.62%	0.00%	-219.38%	7.25%	-0.05%	N/A	N/A	6/30/2019	100.00%	-1.82%	-8.01%	-5.24%	N/A
Colorado River Municipal Water Dist. Pension Trust		\$ 9,251,681	1/1/2019	8.5	-17.4	83.31%	14.20%	50.95%	-168.43%	6.25%	-1.05%	N/A	N/A	12/31/2018	95.22%	-6.60%	-5.30%	-2.52%	N/A
Refugio County Memorial Hospital District Retirement Plan		\$ 1,834,666	11/1/2018	7.0	-18.9	97.79%	28.68%	1.42%	-217.96%	7.00%	-0.30%	N/A	N/A	10/31/2017	0.00%	-101.82%	-4.15%	-1.38%	N/A
JPS Pension Plan - Tarrant County Hospital District		\$ 257,037,806	10/1/2017	3.8	-22.1	95.06%	25.95%	4.99%	-214.39%	7.25%	-0.05%	N/A	N/A	9/30/2018	100.00%	-1.82%	3.36%	6.14%	N/A
The Woodlands Firefighters' Retirement System		\$ 32,836,586	1/1/2019	3.6	-22.3	97.84%	28.73%	6.08%	-213.30%	7.00%	-0.30%	N/A	N/A	12/31/2018	114.24%	12.43%	7.57%	10.35%	0.00%
Travis County ESD #6 Firefighter's Relief & Retirement Fund		\$ 19,688,064	12/31/2017	3.3	-22.6	87.20%	18.09%	48.27%	-171.11%	7.00%	-0.30%	3.25%	-0.05%	12/31/2018	100.00%	-1.82%	10.30%	13.08%	N/A
Northwest Texas Healthcare System Retirement Plan		\$ 21,800,110	10/1/2017	3.0	-22.9	83.92%	14.81%	0.00%	-219.38%	7.50%	0.20%	N/A	N/A	9/30/2018	243.81%	141.99%	-2.55%	0.23%	N/A
Plano Retirement Security Plan		\$ 148,516,307	12/31/2017	0.0	-25.9	100.79%	31.68%	-0.77%	-220.15%	7.00%	-0.30%	2.75%	-0.55%	12/31/2018	100.00%	-1.82%	-0.23%	2.55%	N/A
Citizens Medical Center		\$ 108,407,575	3/1/2019	0.0	-25.9	110.41%	41.30%	-17.69%	-237.07%	7.00%	-0.30%	3.50%	0.20%	2/28/2019	103.64%	1.82%	-0.54%	2.24%	N/A
Arlington Employees Deferred Income Plan		\$ 2,999,905	6/30/2019	0.0	-25.9	107.17%	38.06%	-5.33%	-224.71%	5.00%	-2.30%	3.00%	-0.30%	6/30/2018	0.00%	-101.82%	-3.21%	-0.43%	N/A
Anson General Hospital		\$ 1,957,233	7/1/2019	0.0	-25.9	110.14%	41.03%	-81.37%	-300.75%	6.00%	-1.30%	N/A	N/A	6/30/2018	0.00%	-101.82%	-7.82%	-5.04%	N/A
El Paso Firemen & Policemen's Pension Staff Plan		\$ 419,843	1/1/2018	0.0	-25.9	113.12%	44.01%	-6.31%	-225.69%	7.75%	0.45%	3.00%	-0.30%	12/31/2018	154.07%	52.26%	18.70%	21.47%	0.00%
Texas Average				25.92		69.11%		219.38%		7.30%		3.30%			101.82%		-2.78%		
Texas Standard Deviation				13.66		15.92%		239.56%		0.40%		0.46%			27.64%		3.80%		
National Average						72.28%		286.78%		7.21%		2.95%			102.32%				

This report is a compilation of pension data reported by retirement systems in their most recent AVs, sorted by amortization period.

Initial Plan Review Data Key:

Amortization Periods

Infinite
 >= 40 years, but not infinite
 > 30 years, < 40 years
 > 25 years, <= 30 years
 >= 10 years, <= 25 years
 > 0 years, < 10 years
 0 years

of plans

13
12
10
17
36
6
5

Discount Rates

>= 8.00%
 > 7.50%, < 8.00%
 7.50%
 > 7.00%, < 7.50%
 7.00%
 > 6.50%, < 7.00%
 <= 6.50%

of plans

3
19
23
21
19
6
8

Funded Ratios

< 40%
 >= 40%, < 60%
 >= 60%, < 80%
 >= 80%

6
21
39
33

Actual Cont as % of ADC

Bottom Quartile (<=91.85%)

25

DROP as % of FNP

> 15%

5

UAAL as % of Payroll

Top Quartile (>=305.70%)

24

Payroll Growth Rate

Top Quartile (>=3.50%)

30

Plan Name

Prior Review Completed

Review Currently In-Process

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Actuarial Valuation Report
May 7, 2020

Summary of Key Statistics

Assets and Liabilities

	Current Actuarial Valuation		Prior Actuarial Valuation
	5/7/2020	2/6/2020	
Funded Ratio	77.1%	77.1%	77.5%
Market Value of Assets (MVA)	\$ 282,406,110,769	\$ 282,168,089,652	\$ 281,048,039,537
Actuarial Value of Assets (AVA)	\$ 289,470,429,362	\$ 289,120,557,490	\$ 277,737,685,372
Actuarial Accrued Liability (AAL)	\$ 375,508,917,531	\$ 375,230,179,844	\$ 358,375,446,161
Unfunded Actuarial Accrued Liability (UAAL = AAL - AVA)	\$ 86,038,488,169	\$ 86,109,622,354	\$ 80,637,760,789

Plan Amortization Periods

	Current Actuarial Valuation		Prior Actuarial Valuation
	5/7/2020	2/6/2020	
Infinite	13	13	6
>= 40 years, but not infinite	12	13	15
> 30 years, < 40 years	10	10	16
> 25 years, <= 30 years	17	16	18
>= 10 years, <= 25 years	36	35	29
> 0 years, < 10 years	6	7	9
0 years	5	5	6
Total Plans Registered	99	99	99

Plan Discount Rates

	Current Actuarial Valuation		Prior Actuarial Valuation
	5/7/2020	2/6/2020	
>=8%	3	3	13
> 7.50%, < 8.00%	19	20	26
7.50%	23	25	14
> 7.00%, < 7.50%	21	19	20
7.00%	19	20	14
> 6.50%, < 7.00%	6	5	8
<= 6.50%	8	7	4
Total Plans Registered	99	99	99

	Current Actuarial Valuation		Prior Actuarial Valuation
	5/7/2020	2/6/2020	
Mean	7.27%	7.29%	7.39%
Standard Deviation	0.47%	0.45%	0.49%
Median	7.25%	7.40%	7.50%
Liability Weighted Mean	7.30%	7.30%	7.31%
Liability Weighted Median	7.25%	7.25%	7.25%

Actuarial Valuation Report
May 7, 2020

Plan Name	Plan Status (1)	Current Actuarial Valuation								Prior Actuarial Valuation		
		Effective Date	Discount Rate	Effective Amort Period (2)	Funded Ratio %	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Unfunded Actuarial Accrued Liability (UAAAL = AAL - AVA)	UAAAL as % of Payroll	Effective Date	Prior Effective Amort Period (2)	Funded Ratio %
Employees Retirement System of Texas	Active	8/31/2019	7.50%	Infinite	70.5	\$ 27,351,224,157	\$ 28,060,120,223	\$ 11,741,238,455	168.10%	8/31/2018	Infinite	70.2
Law Enforcement & Custodial Off Sup. Ret. Fund	Active	8/31/2019	7.50%	Infinite	65.3	\$ 943,622,645	\$ 968,129,751	\$ 514,505,451	31.29%	8/31/2018	Infinite	65.6
Austin Police Retirement System	Active	12/31/2018	7.25%	Infinite	58.1	\$ 718,519,641	\$ 807,978,988	\$ 581,681,628	342.08%	12/31/2017	35.0	65.8
Judicial Retirement System of Texas Plan Two	Active	8/31/2019	7.50%	Infinite	87.5	\$ 456,192,249	\$ 467,787,034	\$ 66,776,712	73.36%	8/31/2018	69.0	91.7
Irving Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	Infinite	71.6	\$ 213,960,011	\$ 207,493,775	\$ 82,260,569	252.13%	12/31/2015	46.5	74.9
Beaumont Firemen's Relief & Retirement Fund	Active	12/31/2018	7.50%	Infinite	55.8	\$ 105,769,426	\$ 111,769,628	\$ 88,543,261	457.43%	12/31/2016	104.0	67.5
Midland Firemen's Relief & Retirement Fund	Active	12/31/2017	7.75%	Infinite	60.9	\$ 89,023,115	\$ 91,856,742	\$ 58,952,399	362.54%	12/31/2015	44.7	65.8
McAllen Firemen's Relief & Retirement Fund (3)	Active	9/30/2018	7.50%	Infinite	68.2	\$ 52,675,409	\$ 51,901,271	\$ 24,240,176	196.53%	10/1/2016	33.4	69.1
Wichita Falls Firemen's Relief & Retirement Fund	Active	1/1/2018	7.75%	Infinite	57.7	\$ 51,317,643	\$ 51,317,643	\$ 37,628,438	316.54%	1/1/2017	49.4	62.5
Longview Firemen's Relief & Retirement Fund	Active	12/31/2018	7.75%	Infinite	39.9	\$ 41,560,527	\$ 41,560,527	\$ 62,740,191	469.68%	12/31/2017	40.2	46.1
Conroe Fire Fighters' Retirement Fund	Active	12/31/2018	7.50%	Infinite	58.1	\$ 24,501,501	\$ 26,951,651	\$ 19,476,502	209.84%	12/31/2017	39.0	62.0
Orange Firemen's Relief & Retirement Fund	Active	1/1/2019	7.75%	Infinite	46.3	\$ 7,961,733	\$ 7,961,733	\$ 9,241,746	360.64%	1/1/2017	69.3	49.9
Atlanta Firemen's Relief & Retirement Fund	Active	12/31/2018	7.40%	Infinite	80.0	\$ 3,801,042	\$ 4,181,146	\$ 1,043,126	184.83%	12/31/2016	28.4	82.1
Odessa Firemen's Relief & Retirement Fund	Active	1/1/2019	7.75%	77.5	39.3	\$ 39,242,821	\$ 43,886,792	\$ 67,827,042	569.08%	1/1/2018	47.1	43.1
Harlingen Firemen's Relief & Retirement Fund	Active	9/30/2017	7.75%	59.1	66.1	\$ 31,224,379	\$ 31,224,379	\$ 16,040,541	248.99%	12/31/2015	Infinite	63.1
Marshall Firemen's Relief & Retirement Fund	Active	12/31/2018	7.50%	59.0	36.7	\$ 7,278,840	\$ 7,278,840	\$ 12,576,960	429.30%	12/31/2016	56.4	42.0
Lubbock Fire Pension Fund	Active	12/31/2018	7.75%	52.9	69.3	\$ 186,484,535	\$ 199,266,188	\$ 88,127,819	258.52%	12/31/2016	33.5	72.6
Cleburne Firemen's Relief & Retirement Fund	Active	12/31/2018	7.35%	48.6	59.6	\$ 19,362,808	\$ 21,731,172	\$ 14,724,082	324.13%	12/31/2016	28.8	66.7
Dallas Employees' Retirement Fund	Active	12/31/2018	7.75%	46.0	80.0	\$ 3,265,402,000	\$ 3,620,319,000	\$ 906,677,000	213.98%	12/31/2017	47.0	82.3
Plainview Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	44.8	37.7	\$ 6,154,425	\$ 6,219,603	\$ 10,290,086	517.48%	12/31/2015	31.6	37.3
Fort Worth Employees' Retirement Fund	Active	12/31/2018	7.00%	44.0	52.4	\$ 2,147,041,319	\$ 2,324,698,216	\$ 2,113,627,945	435.50%	12/31/2017	Infinite	57.8
Amarillo Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	43.5	81.5	\$ 171,845,402	\$ 165,443,481	\$ 37,625,269	185.69%	12/31/2015	34.5	81.8
Laredo Firefighters Retirement System	Active	9/30/2018	7.50%	43.0	59.9	\$ 154,813,837	\$ 155,509,979	\$ 104,273,436	282.55%	9/30/2016	28.0	59.3
Texas City Firemen's Relief & Retirement Fund	Active	12/31/2018	7.50%	41.1	45.9	\$ 14,389,108	\$ 15,828,019	\$ 18,643,387	348.98%	12/31/2016	28.0	50.4
Greenville Firemen's Relief & Retirement Fund	Active	12/31/2018	7.75%	40.7	46.6	\$ 12,254,104	\$ 13,479,514	\$ 15,438,433	368.76%	12/31/2016	55.0	47.7
Killeen Firemen's Relief & Retirement Fund	Active	9/30/2018	7.50%	39.8	69.4	\$ 43,947,221	\$ 42,970,465	\$ 18,990,872	131.39%	9/30/2016	22.8	69.7
Brownwood Firemen's Relief & Retirement Fund	Active	12/31/2017	7.25%	38.6	45.0	\$ 4,158,090	\$ 4,165,427	\$ 5,085,187	263.23%	12/31/2015	36.1	44.6
Big Spring Firemen's Relief & Retirement Fund	Active	1/1/2019	7.75%	38.3	53.2	\$ 10,902,959	\$ 11,874,904	\$ 10,439,548	245.07%	1/1/2017	36.2	54.9
Dallas Police & Fire Pension System-Combined Plan	Active	1/1/2019	7.25%	38.0	48.1	\$ 2,041,914,130	\$ 2,161,899,662	\$ 2,332,922,842	642.47%	1/1/2018	45.0	47.7

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Plan Name	Plan Status (1)	Current Actuarial Valuation								Prior Actuarial Valuation		
		Effective Date	Discount Rate	Effective Amort Period (2)	Funded Ratio %	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	Unfunded Actuarial Accrued Liability (UAAAL = AAL - AVA)	UAAAL as % of Payroll	Effective Date	Prior Effective Amort Period (2)	Funded Ratio %
Paris Firefighters' Relief & Retirement Fund	Active	12/31/2018	7.25%	32.1	30.5	\$ 4,152,310	\$ 4,663,640	\$ 10,625,400	382.48%	12/31/2016	41.9	35.6
Austin Employees' Retirement System	Active	12/31/2018	7.50%	32.0	67.6	\$ 2,461,383,436	\$ 2,695,388,390	\$ 1,294,171,747	194.81%	12/31/2017	30.0	68.3
Abilene Firemen's Relief & Retirement Fund	Active	10/1/2017	8.00%	31.9	55.7	\$ 57,456,309	\$ 59,425,441	\$ 47,286,729	341.79%	10/1/2015	31.5	56.6
San Angelo Firemen's Relief & Retirement Fund	Active	12/31/2017	7.90%	31.3	64.9	\$ 66,618,737	\$ 66,067,685	\$ 35,702,196	291.10%	12/31/2015	38.5	65.7
Lufkin Firemen's Relief & Retirement Fund	Active	12/31/2018	7.50%	30.7	48.8	\$ 15,659,035	\$ 17,334,531	\$ 18,178,233	349.28%	12/31/2016	33.1	46.7
El Paso Police Pension Fund	Active	1/1/2018	7.75%	30.5	78.3	\$ 870,658,507	\$ 843,966,894	\$ 233,937,349	284.50%	1/1/2016	33.0	81.1
Port of Houston Authority Retirement Plan	Closed	8/1/2019	6.50%	30.0	92.9	\$ 184,407,686	\$ 184,407,686	\$ 14,001,387	46.05%	8/1/2018	30.0	98.4
Galveston Employees' Retirement Plan for Police (4)	Active	1/1/2019	7.00%	30.0	34.0	\$ 17,856,397	\$ 19,642,037	\$ 38,211,442	315.26%	1/1/2018	35.5	39.3
Fort Worth Employees' Retirement Fund Staff Plan	Active	12/31/2018	7.00%	30.0	68.9	\$ 4,916,880	\$ 5,189,502	\$ 2,341,994	156.69%	12/31/2017	32.0	77.2
Corpus Christi Fire Fighters' Retirement System	Active	12/31/2018	7.50%	29.8	60.2	\$ 139,811,086	\$ 151,136,552	\$ 99,896,125	305.70%	12/31/2016	23.1	62.1
Teacher Retirement System of Texas	Active	8/31/2019	7.25%	29.0	76.4	\$ 157,978,199,075	\$ 160,233,295,324	\$ 49,486,391,723	104.37%	8/31/2018	87.0	76.9
CPS Energy Pension Plan	Active	1/1/2018	7.25%	29.0	82.6	\$ 1,627,840,308	\$ 1,574,817,503	\$ 332,296,648	122.42%	1/1/2017	30.0	80.8
Corsicana Firemen's Relief & Retirement Fund	Active	12/31/2018	7.00%	28.9	50.7	\$ 8,563,597	\$ 9,310,272	\$ 9,065,130	218.76%	12/31/2016	28.9	53.1
University Park Firemen's Relief & Retirement Fund	Closed	12/31/2018	7.50%	28.8	43.4	\$ 9,447,674	\$ 10,460,367	\$ 13,664,013	441.37%	12/31/2016	Infinite	44.0
Temple Firemen's Relief & Retirement Fund	Active	9/30/2018	7.75%	28.6	73.0	\$ 44,243,769	\$ 44,233,922	\$ 16,392,673	181.02%	9/30/2016	28.4	75.1
Houston Police Officers' Pension System	Active	7/1/2019	7.00%	28.0	81.7	\$ 5,674,647,000	\$ 5,434,933,000	\$ 1,220,210,000	268.36%	7/1/2018	29.0	79.4
Houston Firefighters' Relief & Retirement Fund	Active	7/1/2019	7.00%	28.0	82.9	\$ 4,237,692,000	\$ 4,190,934,000	\$ 866,825,000	315.82%	7/1/2018	29.0	81.4
Houston Municipal Employees Pension System	Active	7/1/2019	7.00%	28.0	59.3	\$ 3,100,999,000	\$ 3,019,255,000	\$ 2,071,890,000	328.17%	7/1/2018	29.0	57.7
El Paso Firemen's Pension Fund	Active	1/1/2018	7.75%	28.0	77.8	\$ 601,790,721	\$ 581,448,450	\$ 166,117,632	265.17%	1/1/2016	26.0	79.2
Sweetwater Firemen's Relief & Retirement Fund	Active	12/31/2016	8.00%	27.5	70.0	\$ 7,826,879	\$ 8,437,694	\$ 3,617,210	229.12%	12/31/2014	58.8	69.0
Galveston Firefighter's Relief & Retirement Fund	Active	12/31/2017	7.75%	26.8	69.2	\$ 44,651,640	\$ 44,330,845	\$ 19,767,545	248.42%	12/31/2016	Infinite	68.0
University Health System Pension Plan	Active	1/1/2018	7.00%	26.0	70.7	\$ 363,779,588	\$ 347,115,543	\$ 143,589,317	39.14%	1/1/2017	27.0	67.5
Tyler Firefighters' Relief & Retirement Fund	Active	12/31/2017	7.50%	25.5	76.2	\$ 70,141,881	\$ 69,570,894	\$ 21,757,655	188.81%	12/31/2015	21.6	75.9
Dallas Co. Hospital Dist. Retirement Income Plan	Active	1/1/2019	7.00%	25.0	71.5	\$ 948,034,161	\$ 1,026,482,932	\$ 408,636,930	61.92%	1/1/2018	26.0	73.4
Houston MTA Workers Union Pension Plan	Closed	1/1/2019	6.50%	24.0	62.5	\$ 254,400,189	\$ 273,167,539	\$ 163,748,117	173.09%	1/1/2018	25.0	66.3
Houston MTA Non-Union Pension Plan	Closed	1/1/2019	6.50%	24.0	61.8	\$ 162,565,041	\$ 175,433,638	\$ 108,676,891	266.71%	1/1/2018	25.0	65.6
Texas Emergency Services Retirement System	Active	8/31/2018	7.75%	24.0	83.4	\$ 115,863,894	\$ 114,668,709	\$ 22,845,636	N/A	8/31/2016	30.0	80.2
Port Arthur Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	23.7	74.2	\$ 49,890,603	\$ 48,844,714	\$ 16,966,441	182.37%	12/31/2015	18.3	78.0
San Antonio Metropolitan Transit Retirement Plan	Active	10/1/2018	7.25%	23.0	64.1	\$ 298,393,798	\$ 282,899,551	\$ 158,753,455	139.47%	10/1/2017	24.0	62.4

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Irving Supplemental Benefit Plan	Active	1/1/2019	6.75%	23.0	73.5	\$ 58,112,359	\$ 63,087,137	\$ 22,787,104	20.97%	1/1/2018	32.0	72.5
Galveston Wharves Pension Plan	Closed	1/1/2019	7.25%	22.0	76.1	\$ 12,411,631	\$ 12,411,631	\$ 3,906,450	255.74%	1/1/2018	23.0	83.8
San Benito Firemen Relief & Retirement Fund	Active	9/30/2017	7.50%	21.8	60.7	\$ 3,503,753	\$ 3,503,753	\$ 2,270,845	152.30%	12/31/2015	21.7	60.5
Capital MTA Bargaining	Frozen	1/1/2019	7.00%	20.0	50.6	\$ 29,894,535	\$ 32,489,724	\$ 31,669,611	N/A	1/1/2018	21.0	51.9
Capital MTA Admin Employees (5)	Active	1/1/2019	6.75%	20.0	76.9	\$ 29,770,966	\$ 31,697,978	\$ 9,500,815	41.75%	1/1/2017	20.0	72.6
Employees of Brownsville Navigation District	Active	1/1/2018	6.15%	20.0	54.3	\$ 5,082,503	\$ 4,948,651	\$ 4,164,072	95.32%	1/1/2017	19.8	52.8
Sweeny Community Hospital	Closed	1/1/2019	7.00%	19.0	86.4	\$ 3,023,456	\$ 3,191,805	\$ 504,209	57.17%	1/1/2018	20.0	85.8
Waxahachie Firemen's Relief & Retirement Fund	Active	10/1/2018	7.00%	18.9	73.1	\$ 17,428,039	\$ 17,428,039	\$ 6,419,351	131.82%	10/1/2016	25.4	66.9
Texas Municipal Retirement System (6)	Active	12/31/2018	6.75%	18.2	87.1	\$ 27,683,629,439	\$ 29,385,096,235	\$ 4,346,354,832	65.22%	12/31/2017	18.8	87.4
Lower Colorado River Authority Retirement Plan	Closed	1/1/2019	7.25%	18.0	70.3	\$ 388,300,639	\$ 432,019,765	\$ 182,885,080	171.78%	1/1/2018	19.0	74.0
Austin Fire Fighters Relief & Retirement Fund	Active	12/31/2018	7.70%	17.9	88.0	\$ 909,117,796	\$ 954,574,840	\$ 129,958,768	141.13%	12/31/2017	17.0	88.3
Galveston Employees' Retirement Fund	Active	12/31/2018	7.25%	16.8	76.6	\$ 48,514,328	\$ 52,374,631	\$ 15,972,792	61.29%	12/31/2017	11.6	79.6
Harris County Hospital District Pension Plan (7)	Closed	1/1/2019	7.00%	16.4	74.0	\$ 635,273,806	\$ 679,205,807	\$ 239,033,271	145.90%	1/1/2018	16.9	75.5
DFW Airport Board	Active	1/1/2019	7.25%	16.0	83.7	\$ 493,301,369	\$ 511,070,267	\$ 99,847,700	187.49%	1/1/2018	17.0	82.4
DFW Airport Board DPS	Active	1/1/2019	7.25%	16.0	78.5	\$ 188,058,481	\$ 194,887,387	\$ 53,283,221	167.45%	1/1/2018	17.0	77.7
Denison Firemen's Relief & Retirement Fund	Active	12/31/2017	7.50%	15.8	77.3	\$ 17,725,070	\$ 17,524,049	\$ 5,159,287	155.45%	12/31/2015	27.1	74.4
Corpus Christi Regional Transportation Authority	Active	1/1/2019	7.40%	15.0	91.8	\$ 33,900,179	\$ 37,050,795	\$ 3,318,026	31.10%	1/1/2018	6.0	98.3
Texarkana Firemen's Relief & Retirement Fund	Active	12/31/2017	7.75%	15.0	86.3	\$ 34,819,005	\$ 35,250,649	\$ 5,584,452	123.72%	12/31/2015	16.3	87.4
Denton Firemen's Relief & Retirement Fund	Active	12/31/2017	6.75%	14.6	82.1	\$ 85,388,283	\$ 84,410,626	\$ 18,435,302	104.60%	12/31/2015	31.6	80.8
Weslaco Firemen's Relief & Retirement Fund	Active	9/30/2018	7.25%	14.1	72.0	\$ 11,577,179	\$ 11,412,283	\$ 4,440,304	101.90%	9/30/2016	14.1	68.5
City of El Paso Employees Retirement Trust	Active	9/1/2018	7.50%	14.0	80.3	\$ 820,416,288	\$ 822,926,030	\$ 201,453,137	120.47%	9/1/2016	17.0	79.2
San Antonio Fire & Police Pension Fund	Active	1/1/2019	7.25%	13.9	87.9	\$ 3,015,158,660	\$ 3,297,010,974	\$ 452,239,886	134.97%	1/1/2018	9.9	90.3
Brazos River Authority Retirement Plan	Frozen	3/1/2019	6.50%	13.0	61.7	\$ 19,851,827	\$ 20,372,827	\$ 12,641,846	N/A	3/1/2018	14.0	66.4
DART Employees	Closed	10/1/2018	6.75%	12.8	79.2	\$ 186,844,635	\$ 185,524,973	\$ 48,651,130	341.24%	10/1/2017	11.8	78.9
Texas County & District Retirement System (6)	Active	12/31/2018	8.00%	12.6	88.5	\$ 29,260,546,258	\$ 30,553,846,707	\$ 3,987,324,758	57.61%	12/31/2017	12.3	89.1
Guadalupe Regional Medical Center	Active	1/1/2019	7.00%	12.0	96.5	\$ 67,977,745	\$ 72,252,517	\$ 2,641,934	9.48%	1/1/2018	3.0	98.4
Nacogdoches County Hospital District	Active	7/1/2017	7.25%	11.9	82.0	\$ 46,841,434	\$ 46,180,125	\$ 10,166,263	31.73%	7/1/2015	9.8	84.3
Guadalupe-Blanco River Authority	Frozen	1/1/2019	6.75%	10.0	86.9	\$ 28,731,703	\$ 30,900,491	\$ 4,643,707	N/A	1/1/2018	7.6	85.6
Dallas Police & Fire Pension System-Supplemental (5)	Active	1/1/2019	7.25%	10.0	57.6	\$ 18,317,893	\$ 18,317,893	\$ 13,506,880	2050.36%	1/1/2018	10.0	51.5

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Northeast Medical Center Hospital Retirement Plan (5)	Frozen	7/1/2019	7.25%	10.0	82.7	\$ 9,405,456	\$ 9,405,456	\$ 1,963,048	N/A	7/1/2018	10.0	83.8
Colorado River Municipal Water Dist. (7)	Active	1/1/2019	6.25%	8.5	83.3	\$ 9,251,681	\$ 9,251,681	\$ 1,853,616	50.95%	1/1/2018	7.4	93.8
Refugio County Memorial Hospital	Frozen	11/1/2018	7.00%	7.0	97.8	\$ 1,834,666	\$ 1,834,666	\$ 41,529	1.42%	11/1/2017	0.0	111.1
JPS - Tarrant County Hospital District	Active	10/1/2017	7.25%	3.8	95.1	\$ 257,037,806	\$ 246,203,390	\$ 12,785,570	4.99%	10/1/2016	4.8	93.6
The Woodlands Firefighters' Retirement System	Active	1/1/2019	7.00%	3.6	97.8	\$ 32,836,586	\$ 32,836,586	\$ 726,156	6.08%	1/1/2018	0.0	106.0
Travis County ESD #6 FRRF	Active	12/31/2017	7.00%	3.3	87.2	\$ 19,688,064	\$ 19,010,963	\$ 2,790,432	48.27%	12/31/2015	5.8	71.6
Northwest Texas Healthcare System Retirement Plan	Frozen	10/1/2017	7.50%	3.0	83.9	\$ 21,800,110	\$ 21,561,210	\$ 4,130,838	N/A	10/1/2016	5.0	73.0
Plano Retirement Security Plan	Active	12/31/2017	7.00%	0.0	100.8	\$ 148,516,307	\$ 144,040,464	\$ (1,131,618)	-0.77%	12/31/2015	19.0	99.2
Citizens Medical Center	Active	3/1/2019	7.00%	0.0	110.4	\$ 108,407,575	\$ 108,340,272	\$ (10,217,364)	-17.69%	3/1/2018	0.0	107.1
Arlington Employees Deferred Income Plan	Active	6/30/2019	5.00%	0.0	107.2	\$ 2,999,905	\$ 2,999,905	\$ (200,717)	-5.33%	6/30/2018	0.0	106.2
Anson General Hospital	Frozen	7/1/2019	6.00%	0.0	110.1	\$ 1,957,233	\$ 1,911,086	\$ (176,007)	-81.37%	7/1/2018	0.0	120.1
El Paso Firemen & Policemen's Pension Staff Plan	Active	1/1/2018	7.75%	0.0	113.1	\$ 419,843	\$ 397,086	\$ (46,068)	-6.31%	1/1/2016	0.0	282.9
Grand Totals:					77.1%	\$ 282,406,110,769	\$ 289,470,429,362	\$ 86,038,488,169				77.5%

Notes

- (1) Plan status indicates whether a plan is active (admitting new hires), closed to new hires (but still accruing benefits), or frozen (not accruing benefits).
- (2) The effective amortization period is the time it would take to theoretically eliminate the UAAL assuming no future gains or losses and taking into account both the plan's stated and historical contribution policy.
- (3) 10/1/2016 am period was adjusted from 41.4 reflecting an increase in employee contribution from 11% to 12% effective April 9, 2018.
- (4) Current amortization period reflects an employer contribution increase to 14.83% of payroll as of February 17, 2018.
- (5) Reported amortization period is based on an open amortization funding policy.
- (6) Amortization period is calculated using system-wide aggregate UAAL and payroll amounts.
- (7) Amortization period is calculated by the PRB.

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**AV Supplemental Report
May 7, 2020
(Dollars in Millions)**

Plan Name	Fiscal Year End	Discount Rate	(a) Total Pension Liability (TPL) (1)	(b) Fiduciary Net Position (2)	(a) - (b) Net Pension Liability (NPL) (3)	(b) / (a) NPL Funded Ratio %	NPL at Disc. Rate -1% (4)	NPL -1% Funded Ratio %	10 Year Net Return (5)	Expected Depletion Date (6)
Abilene Firemen's Relief & Retirement Fund	9/30/2018	8.00%	\$ 109.22	\$ 57.13	\$ 52.09	52.3	\$ 63.92	47.2	6.50%	N/A
Amarillo Firemen's Relief & Retirement Fund	12/31/2018	7.50%	\$ 211.24	\$ 162.77	\$ 48.47	77.1	\$ 73.90	68.8	9.45%	N/A
Anson General Hospital	6/30/2018	7.50%	\$ 1.54	\$ 1.95	\$ (0.41)	126.7	\$ (0.28)	116.6	5.94%	N/A
Arlington Employees Deferred Income Plan	6/30/2018	5.00%	\$ 2.66	\$ 2.82	\$ (0.16)	106.1	\$ 0.10	96.6	3.62%	N/A
Atlanta Firemen's Relief & Retirement Fund	12/31/2018	7.40%	\$ 5.30	\$ 3.80	\$ 1.50	71.8	\$ 2.13	64.1	6.93%	N/A
Austin Employees' Retirement System	12/31/2018	7.50%	\$ 3,989.56	\$ 2,461.38	\$ 1,528.18	61.7	\$ 2,011.39	55.0	8.60%	N/A
Austin Fire Fighters Relief & Retirement Fund	12/31/2018	7.70%	\$ 1,107.22	\$ 909.12	\$ 198.10	82.1	\$ 304.09	74.9	8.37%	N/A
Austin Police Retirement System	12/31/2018	4.70%	\$ 1,904.95	\$ 718.52	\$ 1,186.43	37.7	\$ 1,475.73	32.7	5.26%	2041
Beaumont Firemen's Relief & Retirement Fund	12/31/2018	6.61%	\$ 196.88	\$ 105.77	\$ 91.11	53.7	\$ 108.45	49.4	7.58%	2058
Big Spring Firemen's Relief & Retirement Fund	12/31/2018	7.75%	\$ 22.38	\$ 10.90	\$ 11.49	48.7	\$ 14.31	43.2	7.22%	N/A
Brazos River Authority Retirement Plan	2/28/2019	6.50%	\$ 32.83	\$ 19.85	\$ 12.98	60.5	\$ 16.44	54.7	8.09%	N/A
Brownwood Firemen's Relief & Retirement Fund	12/31/2018	7.25%	\$ 9.57	\$ 3.83	\$ 5.74	40.1	\$ 6.96	35.5	4.31%	N/A
CPS Energy Pension Plan	12/31/2018	7.25%	\$ 1,982.35	\$ 1,522.05	\$ 460.30	76.8	\$ 710.60	68.2	9.38%	N/A
Capital MTA Admin Employees	12/31/2018	5.54%	\$ 49.26	\$ 29.77	\$ 19.49	60.4	\$ 27.18	52.3	8.54%	2054
Capital MTA Bargaining	12/31/2018	7.00%	\$ 64.16	\$ 29.89	\$ 34.26	46.6	\$ 40.40	42.5	7.40%	N/A
Citizens Medical Center	2/28/2019	7.25%	\$ 101.72	\$ 108.40	\$ (6.67)	106.6	\$ 6.91	94.0	11.47%	N/A
City of El Paso Employees Retirement Trust	8/31/2019	7.50%	\$ 1,054.39	\$ 806.62	\$ 247.76	76.5	\$ 372.82	68.4	8.21%	N/A
Cleburne Firemen's Relief & Retirement Fund	12/31/2018	7.35%	\$ 36.46	\$ 19.36	\$ 17.09	53.1	\$ 21.26	47.7	7.48%	N/A
Colorado River Municipal Water Dist.	12/31/2018	6.25%	\$ 10.81	\$ 9.25	\$ 1.55	85.6	\$ 2.28	80.2	8.57%	N/A
Conroe Fire Fighters' Retirement Fund	12/31/2018	5.51%	\$ 64.01	\$ 24.50	\$ 39.51	38.3	\$ 49.83	33.0	4.56%	2054
Corpus Christi Fire Fighters' Retirement System	12/31/2018	7.75%	\$ 243.93	\$ 139.81	\$ 104.12	57.3	\$ 129.69	51.9	8.26%	N/A
Corpus Christi Regional Transportation Authority	12/31/2018	7.40%	\$ 40.37	\$ 33.90	\$ 6.47	84.0	\$ 11.20	75.2	9.09%	N/A
Corsicana Firemen's Relief & Retirement Fund	12/31/2018	7.00%	\$ 18.01	\$ 8.56	\$ 9.45	47.5	\$ 11.89	41.9	6.49%	N/A
DART Employees	9/30/2018	6.75%	\$ 234.18	\$ 186.85	\$ 47.33	79.8	\$ 70.95	72.5	6.58%	N/A
DFW Airport Board	12/31/2018	7.25%	\$ 610.92	\$ 493.30	\$ 117.62	80.7	\$ 201.34	71.0	8.30%	N/A
DFW Airport Board DPS	12/31/2018	7.25%	\$ 248.17	\$ 188.06	\$ 60.11	75.8	\$ 97.43	65.9	8.30%	N/A
Dallas Co. Hospital Dist. Retirement Income Plan	12/31/2018	7.00%	\$ 1,435.12	\$ 947.68	\$ 487.44	66.0	\$ 686.03	58.0	4.06%	N/A
Dallas Employees' Retirement Fund	12/31/2018	5.98%	\$ 5,547.96	\$ 3,282.31	\$ 2,265.65	59.2	\$ 3,006.85	52.2	9.72%	2048
Dallas Police & Fire Pension System-Combined Plan	12/31/2018	7.25%	\$ 4,501.67	\$ 2,041.91	\$ 2,459.76	45.4	\$ 2,953.14	40.9	3.30%	N/A
Dallas Police & Fire Pension System-Supplemental	12/31/2018	7.25%	\$ 31.83	\$ 18.32	\$ 13.51	57.5	\$ 16.36	52.8	3.30%	N/A
Denison Firemen's Relief & Retirement Fund	12/31/2018	7.50%	\$ 23.29	\$ 16.59	\$ 6.70	71.2	\$ 9.31	64.0	8.38%	N/A
Denton Firemen's Relief & Retirement Fund	12/31/2018	6.75%	\$ 109.45	\$ 86.83	\$ 22.62	79.3	\$ 36.37	70.5	7.57%	N/A
El Paso Firemen & Policemen's Pension Staff Plan (7)	12/31/2018	7.75%	\$ 0.45	\$ 0.48	\$ (0.03)	107.4	\$ 0.04	92.9	8.19%	N/A
El Paso Firemen's Pension Fund	12/31/2018	7.75%	\$ 778.51	\$ 550.81	\$ 227.71	70.8	\$ 336.70	62.1	8.34%	N/A
El Paso Police Pension Fund	12/31/2018	7.75%	\$ 1,119.92	\$ 798.67	\$ 321.25	71.3	\$ 478.44	62.5	8.34%	N/A
Employees Retirement System of Texas	8/31/2019	4.42%	\$ 57,336.38	\$ 27,351.22	\$ 29,985.16	47.7	\$ 38,393.84	41.6	8.09%	2047
Employees of Brownsville Navigation District (7)	12/31/2018	6.15%	\$ 9.45	\$ 4.89	\$ 4.56	51.8	\$ 5.10	48.9	6.31%	N/A
Fort Worth Employees' Retirement Fund	9/30/2018	5.35%	\$ 5,422.61	\$ 2,324.34	\$ 3,098.28	42.9	\$ 3,919.18	37.2	6.52%	2042

This report is a compilation of pension data reported by retirement systems to the PRB in their most recently published Annual Financial Report and PRB-1000.

**AV Supplemental Report
May 7, 2020
(Dollars in Millions)**

Plan Name	Fiscal Year End	Discount Rate	(a) Total Pension Liability (TPL) (1)	(b) Fiduciary Net Position (2)	(a) - (b) Net Pension Liability (NPL) (3)	(b) / (a) NPL Funded Ratio %	NPL at Disc. Rate -1% (4)	NPL -1% Funded Ratio %	10 Year Net Return (5)	Expected Depletion Date (6)
Fort Worth Employees' Retirement Fund Staff Plan	9/30/2018	7.75%	\$ 6.65	\$ 5.17	\$ 1.48	77.7	\$ 2.55	67.0	6.52%	N/A
Galveston Employees' Retirement Fund	12/31/2018	7.25%	\$ 68.35	\$ 48.51	\$ 19.83	71.0	\$ 27.67	63.7	7.37%	N/A
Galveston Employees' Retirement Plan for Police	12/31/2018	7.00%	\$ 57.85	\$ 17.86	\$ 40.00	30.9	\$ 47.15	27.5	6.58%	N/A
Galveston Firefighter's Relief & Retirement Fund	12/31/2018	7.75%	\$ 67.10	\$ 42.49	\$ 24.61	63.3	\$ 32.17	56.9	6.98%	N/A
Galveston Wharves Pension Plan	12/31/2018	7.25%	\$ 16.32	\$ 12.50	\$ 3.82	76.6	\$ 5.48	69.5	9.23%	N/A
Greenville Firemen's Relief & Retirement Fund	12/31/2018	8.00%	\$ 30.77	\$ 12.25	\$ 18.52	39.8	\$ 21.75	36.0	7.37%	N/A
Guadalupe Regional Medical Center	12/31/2018	7.00%	\$ 73.99	\$ 67.98	\$ 6.01	91.9	\$ 16.50	80.5	9.62%	N/A
Guadalupe-Blanco River Authority	12/31/2018	7.00%	\$ 36.69	\$ 28.73	\$ 7.96	78.3	\$ 11.83	70.8	7.41%	N/A
Harlingen Firemen's Relief & Retirement Fund	9/30/2018	7.75%	\$ 52.81	\$ 32.90	\$ 19.91	62.3	\$ 26.43	55.5	7.20%	N/A
Harris County Hospital District Pension Plan	12/31/2018	7.00%	\$ 914.62	\$ 634.72	\$ 279.90	69.4	\$ 386.81	62.1	9.10%	N/A
Houston Firefighters' Relief & Retirement Fund	6/30/2019	7.25%	\$ 4,928.81	\$ 4,237.69	\$ 691.12	86.0	\$ 1,192.93	78.0	9.13%	N/A
Houston MTA Non-Union Pension Plan	12/31/2018	6.50%	\$ 280.78	\$ 162.57	\$ 118.21	57.9	\$ 144.36	53.0	8.80%	N/A
Houston MTA Workers Union Pension Plan	12/31/2018	6.50%	\$ 428.82	\$ 254.40	\$ 174.42	59.3	\$ 222.62	53.3	8.40%	N/A
Houston Municipal Employees Pension System	6/30/2019	7.00%	\$ 5,236.13	\$ 3,101.00	\$ 2,135.13	59.2	\$ 2,701.00	53.4	9.32%	N/A
Houston Police Officers' Pension System	6/30/2019	7.00%	\$ 6,920.55	\$ 5,674.65	\$ 1,245.90	82.0	\$ 2,003.25	73.9	9.20%	N/A
Irving Firemen's Relief & Retirement Fund	12/31/2018	7.50%	\$ 296.82	\$ 195.30	\$ 101.51	65.8	\$ 124.00	61.2	8.86%	N/A
Irving Supplemental Benefit Plan	12/31/2018	6.75%	\$ 85.87	\$ 58.11	\$ 27.76	67.7	\$ 39.69	59.4	5.72%	N/A
JPS - Tarrant County Hospital District	9/30/2018	7.25%	\$ 284.56	\$ 292.60	\$ (8.04)	102.8	\$ 26.09	91.8	8.42%	N/A
Judicial Retirement System of Texas Plan Two	8/31/2019	5.45%	\$ 648.30	\$ 456.19	\$ 192.11	70.4	\$ 262.67	63.5	8.09%	2045
Killeen Firemen's Relief & Retirement Fund	9/30/2018	7.75%	\$ 60.27	\$ 43.95	\$ 16.32	72.9	\$ 24.55	64.2	6.35%	N/A
Laredo Firefighters Retirement System	9/30/2018	7.90%	\$ 250.96	\$ 154.81	\$ 96.15	61.7	\$ 127.82	54.8	6.45%	N/A
Law Enforcement & Custodial Off Sup. Ret. Fund	8/31/2019	3.29%	\$ 2,609.36	\$ 943.62	\$ 1,665.73	36.2	\$ 2,131.72	30.7	8.09%	2037
Longview Firemen's Relief & Retirement Fund	12/31/2018	5.45%	\$ 136.06	\$ 41.56	\$ 94.50	30.5	\$ 113.94	26.7	6.88%	2042
Lower Colorado River Authority Retirement Plan	12/31/2018	7.25%	\$ 614.91	\$ 382.64	\$ 232.27	62.2	\$ 295.62	56.4	3.20%	N/A
Lubbock Fire Pension Fund	12/31/2018	7.75%	\$ 290.04	\$ 186.48	\$ 103.55	64.3	\$ 138.44	57.4	7.01%	N/A
Lufkin Firemen's Relief & Retirement Fund	12/31/2018	7.50%	\$ 35.73	\$ 15.66	\$ 20.07	43.8	\$ 23.91	39.6	6.36%	N/A
Marshall Firemen's Relief & Retirement Fund	12/31/2018	7.50%	\$ 20.17	\$ 7.28	\$ 12.89	36.1	\$ 15.52	31.9	7.37%	N/A
McAllen Firemen's Relief & Retirement Fund	9/30/2018	7.50%	\$ 78.76	\$ 52.68	\$ 26.09	66.9	\$ 40.48	56.5	6.68%	N/A
Midland Firemen's Relief & Retirement Fund	12/31/2018	5.29%	\$ 208.63	\$ 80.01	\$ 128.62	38.4	\$ 157.43	33.7	5.39%	2043
Nacogdoches County Hospital District	6/30/2016	7.25%	\$ 54.03	\$ 43.66	\$ 10.37	80.8	\$ 17.08	71.9	5.22%	N/A
Northeast Medical Center Hospital Retirement Plan	6/30/2018	7.50%	\$ 11.33	\$ 9.50	\$ 1.83	83.8	\$ 2.72	77.8	9.58%	2058
Northwest Texas Healthcare System Retirement Plan	9/30/2018	7.50%	\$ 25.11	\$ 23.37	\$ 1.74	93.1	\$ 3.86	85.8	6.38%	N/A
Odessa Firemen's Relief & Retirement Fund	12/31/2018	4.70%	\$ 157.56	\$ 39.24	\$ 118.32	24.9	\$ 141.90	21.7	7.02%	2034
Orange Firemen's Relief & Retirement Fund	12/31/2018	5.44%	\$ 21.51	\$ 7.96	\$ 13.55	37.0	\$ 15.70	33.7	6.73%	2047
Paris Firefighters' Relief & Retirement Fund	12/31/2018	7.50%	\$ 15.38	\$ 4.15	\$ 11.23	27.0	\$ 12.82	24.5	5.23%	N/A
Plainview Firemen's Relief & Retirement Fund	12/31/2018	7.50%	\$ 16.80	\$ 5.44	\$ 11.36	32.4	\$ 13.28	29.0	5.60%	N/A
Plano Retirement Security Plan	12/31/2018	7.00%	\$ 152.12	\$ 139.93	\$ 12.19	92.0	\$ 34.70	80.1	9.07%	N/A
Port Arthur Firemen's Relief & Retirement Fund	12/31/2018	7.50%	\$ 67.66	\$ 44.77	\$ 22.89	66.2	\$ 30.09	59.8	7.82%	N/A

This report is a compilation of pension data reported by retirement systems to the PRB in their most recently published Annual Financial Report and PRB-1000.

**AV Supplemental Report
May 7, 2020
(Dollars in Millions)**

Plan Name	Fiscal Year End	Discount Rate	(a) Total Pension Liability (TPL) (1)	(b) Fiduciary Net Position (2)	(a) - (b) Net Pension Liability (NPL) (3)	(b) / (a) NPL Funded Ratio %	NPL at Disc. Rate -1% (4)	NPL -1% Funded Ratio %	10 Year Net Return (5)	Expected Depletion Date (6)
Port of Houston Authority Retirement Plan	7/31/2018	6.75%	\$ 189.63	\$ 184.29	\$ 5.34	97.2	\$ 27.32	87.1	7.06%	N/A
Refugio County Memorial Hospital	10/31/2017	7.00%	\$ 2.01	\$ 2.23	\$ (0.22)	111.1	\$ 0.04	98.4	4.07%	N/A
San Angelo Firemen's Relief & Retirement Fund	12/31/2018	6.50%	\$ 125.69	\$ 61.21	\$ 64.48	48.7	\$ 80.32	43.2	7.61%	2053
San Antonio Fire & Police Pension Fund	12/31/2018	7.25%	\$ 3,756.28	\$ 3,015.16	\$ 741.12	80.3	\$ 1,273.71	70.3	7.40%	N/A
San Antonio Metropolitan Transit Retirement Plan (8)	9/30/2018	7.25%	\$ 440.82	\$ 298.39	\$ 142.42	67.7	\$ 191.27	60.9	N/A	N/A
San Benito Firemen Relief & Retirement Fund	9/30/2018	7.50%	\$ 6.06	\$ 3.82	\$ 2.23	63.1	\$ 3.03	55.8	1.78%	N/A
Sweeny Community Hospital	12/31/2018	7.00%	\$ 3.74	\$ 3.02	\$ 0.72	80.8	\$ 1.07	73.8	9.31%	N/A
Sweetwater Firemen's Relief & Retirement Fund	12/31/2018	8.00%	\$ 13.21	\$ 7.76	\$ 5.45	58.8	\$ 6.97	52.7	7.03%	N/A
Teacher Retirement System of Texas	8/31/2019	7.25%	\$ 209,961.33	\$ 157,978.20	\$ 51,983.13	75.2	\$ 79,905.62	66.4	9.12%	N/A
Temple Firemen's Relief & Retirement Fund	9/30/2018	7.75%	\$ 60.63	\$ 44.24	\$ 16.38	73.0	\$ 23.36	65.4	6.02%	N/A
Texarkana Firemen's Relief & Retirement Fund	12/31/2018	7.75%	\$ 42.10	\$ 31.36	\$ 10.74	74.5	\$ 15.25	67.3	7.61%	N/A
Texas City Firemen's Relief & Retirement Fund	12/31/2018	7.75%	\$ 33.62	\$ 14.39	\$ 19.23	42.8	\$ 22.81	38.7	6.95%	N/A
Texas County & District Retirement System (9)	12/31/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.02%	N/A
Texas Emergency Services Retirement System	8/31/2019	7.75%	\$ 143.50	\$ 115.16	\$ 28.35	80.2	\$ 50.38	69.6	8.22%	N/A
Texas Municipal Retirement System (9)	12/31/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.43%	N/A
The Woodlands Firefighters' Retirement System (7)	12/31/2018	7.00%	\$ 33.56	\$ 32.95	\$ 0.61	98.2	\$ 6.28	84.0	-0.18%	N/A
Travis County ESD #6 FRRF	12/31/2018	7.00%	\$ 28.77	\$ 20.89	\$ 7.88	72.6	\$ 12.82	62.0	6.20%	N/A
Tyler Firefighters' Relief & Retirement Fund	12/31/2018	7.50%	\$ 95.70	\$ 64.60	\$ 31.10	67.5	\$ 41.20	61.1	7.54%	N/A
University Health System Pension Plan	12/31/2018	7.00%	\$ 526.50	\$ 360.80	\$ 165.71	68.5	\$ 233.34	60.7	8.83%	N/A
University Park Firemen's Relief & Retirement Fund	12/31/2018	7.50%	\$ 24.30	\$ 9.45	\$ 14.85	38.9	\$ 17.70	34.8	6.48%	N/A
Waxahachie Firemen's Relief & Retirement Fund	9/30/2018	7.00%	\$ 23.85	\$ 17.43	\$ 6.42	73.1	\$ 9.57	64.6	7.34%	N/A
Weslaco Firemen's Relief & Retirement Fund	9/30/2018	7.25%	\$ 15.85	\$ 11.58	\$ 4.28	73.0	\$ 6.74	63.2	5.52%	N/A
Wichita Falls Firemen's Relief & Retirement Fund	12/31/2018	4.90%	\$ 130.68	\$ 46.70	\$ 83.98	35.7	\$ 103.53	31.1	6.87%	2040

Grand Totals: **\$ 329,588.73** **\$ 225,368.17** **\$ 104,220.55** **68.4%** **\$ 148,341** **60.3%**

Notes

- (1) Total Pension Liability is the actuarial accrued liability calculated in accordance with GASB 67, as reported in the system's Annual Financial Report.
- (2) Fiduciary Net Position is the market value of assets as of the Fiscal Year End, as reported in the system's Annual Financial Report.
- (3) Net Pension Liability is measured as the Total Pension Liability less the amount of the pension plan's Fiduciary Net Position.
- (4) Net Pension Liability measured using a discount rate 1% lower than the stated discount rate.
- (5) 10 Year Net Return (gross return net of investment expenses) as reported for the Fiscal Year on the PRB-1000 Investment Returns and Assumptions Report.
- (6) Expected Depletion Date is the year when plan assets plus future contributions for active participants are projected to be insufficient to pay annual benefit payments in accordance with GASB 67.
- (7) The plan is less than 10 years old; return is calculated since date of inception.
- (8) A 10 Year Net Return was not available from this plan.
- (9) Plan is an Agent Multiple Employer Defined Benefit Plan and is not subject to the majority of GASB 67 reporting requirements.

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**Contribution Report
May 7, 2020**

Plan Name	Plan Status (1)	Fiscal Year End	Covered Payroll	(a) Total NC (% of Pay) (2), (3)	(b) EE Cont (% of Pay) (3)	(c) = (a) - (b) ER Normal Cost (% of Pay) (3)	(d) Amort Pmt (% of Pay) (3)	(e) = (c) + (d) ER Rec Cont (% of Pay) (3), (4)	(f) Actual ER Cont (% of Pay) (5)	Actual ER Cont Type	(f) / (e) Percent of Rec Cont Paid
Law Enforcement & Custodial Off Sup. Ret. Fund	Active	8/31/2019	\$ 1,682,633,066	2.09%	0.50%	1.59%	1.67%	3.26%	1.54%	Other	47%
Galveston Employees' Retirement Plan for Police	Active	12/31/2018	\$ 11,808,927	12.05%	12.00%	0.05%	22.62%	22.67%	14.51%	Actuarial	64%
Midland Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 17,568,234	25.98%	14.20%	11.78%	20.08%	31.86%	22.20%	Fixed	70%
Fort Worth Employees' Retirement Fund	Active	9/30/2018	\$ 467,754,197	13.32%	8.06%	5.26%	22.91%	28.17%	19.99%	Fixed	71%
Dallas Employees' Retirement Fund	Active	12/31/2018	\$ 423,803,000	21.40%	13.32%	8.08%	11.72%	19.80%	14.38%	Other	73%
Orange Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 2,396,549	12.76%	12.00%	0.76%	18.49%	19.25%	14.31%	Fixed	74%
Irving Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 33,831,773	21.22%	13.00%	8.22%	13.80%	22.02%	16.75%	Fixed	76%
Beaumont Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 18,605,194	18.93%	15.13%	3.80%	16.37%	20.17%	15.50%	Fixed	77%
Marshall Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 2,770,350	16.39%	14.00%	2.39%	22.00%	24.39%	19.05%	Fixed	78%
Odessa Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 12,183,628	14.93%	18.00%	0.00%	28.24%	25.17%	20.21%	Fixed	80%
Harlingen Firemen's Relief & Retirement Fund	Active	9/30/2018	\$ 6,423,120	18.74%	15.00%	3.74%	14.57%	18.31%	15.00%	Fixed	82%
Greenville Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 4,094,242	16.71%	16.30%	0.41%	21.14%	21.55%	17.82%	Fixed	83%
Wichita Falls Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 11,348,015	14.63%	13.00%	1.63%	13.76%	15.39%	12.83%	Other	83%
Paris Firefighters' Relief & Retirement Fund	Active	12/31/2018	\$ 2,695,608	9.54%	15.00%	0.00%	20.43%	14.97%	12.50%	Fixed	84%
Longview Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 12,887,040	15.14%	16.81%	0.00%	23.44%	21.77%	18.29%	Fixed	84%
Employees Retirement System of Texas (7)	Active	8/31/2019	\$ 6,947,624,737	13.86%	9.50%	4.36%	9.26%	13.62%	11.74%	Fixed	86%
Houston Firefighters' Relief & Retirement Fund	Active	6/30/2019	\$ 272,498,000	27.71%	10.50%	17.21%	20.44%	37.65%	32.99%	Actuarial	88%
Laredo Firefighters Retirement System	Active	9/30/2018	\$ 36,107,647	19.96%	15.00%	4.96%	17.46%	22.42%	20.13%	Fixed	90%
El Paso Police Pension Fund	Active	12/31/2018	\$ 89,173,129	21.23%	18.00%	3.23%	16.59%	19.82%	18.00%	Fixed	91%
Amarillo Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 20,282,338	25.60%	13.00%	12.60%	8.89%	21.49%	19.57%	Fixed	91%
Dallas Police & Fire Pension System-Supplemental	Active	12/31/2018	\$ 916,000	32.23%	13.98%	18.25%	218.38%	236.63%	216.08%	Actuarial	91%
Plainview Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 2,010,853	15.23%	15.00%	0.23%	29.38%	29.61%	27.20%	Fixed	92%
Conroe Fire Fighters' Retirement Fund	Active	12/31/2018	\$ 9,018,331	19.57%	13.24%	6.33%	9.91%	16.24%	15.00%	Fixed	92%
CPS Energy Pension Plan	Active	12/31/2018	\$ 270,313,692	15.98%	5.00%	10.98%	12.09%	23.07%	21.34%	Actuarial	93%
Austin Employees' Retirement System	Active	12/31/2018	\$ 647,143,050	17.73%	8.00%	9.73%	9.60%	19.33%	18.00%	Fixed	93%
Brownwood Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 1,912,275	14.77%	8.00%	6.77%	14.96%	21.73%	20.24%	Fixed	93%
Dallas Police & Fire Pension System-Combined Plan	Active	12/31/2018	\$ 346,037,000	17.89%	13.50%	4.39%	41.01%	45.40%	43.16%	Other	95%
Colorado River Municipal Water Dist.	Active	12/31/2018	\$ 3,680,075	10.12%	0.00%	10.12%	4.98%	15.10%	14.38%	Actuarial	95%
Austin Police Retirement System	Active	12/31/2018	\$ 165,088,323	23.15%	13.00%	10.15%	12.12%	22.27%	21.35%	Fixed	96%

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May 7, 2020**

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Killeen Firemen's Relief & Retirement Fund	Active	9/30/2018	\$ 13,983,445	16.00%	11.00%	5.00%	8.55%	13.55%	13.00%	Fixed	96%
Lufkin Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 5,135,838	16.85%	14.20%	2.65%	21.26%	23.91%	23.00%	Fixed	96%
Abilene Firemen's Relief & Retirement Fund	Active	9/30/2018	\$ 13,525,947	16.61%	13.20%	3.41%	16.55%	19.96%	19.25%	Fixed	96%
Lubbock Fire Pension Fund	Active	12/31/2018	\$ 33,080,326	22.20%	12.43%	9.77%	12.78%	22.55%	21.81%	Other	97%
Teacher Retirement System of Texas	Active	8/31/2019	\$ 45,232,074,364	11.69%	7.70%	3.99%	5.49%	9.48%	9.20%	Fixed	97%
Houston MTA Workers Union Pension Plan	Closed	12/31/2018	\$ 97,250,761	4.16%	0.00%	4.16%	12.44%	16.60%	16.12%	Actuarial	97%
McAllen Firemen's Relief & Retirement Fund	Active	9/30/2018	\$ 11,901,023	15.53%	12.00%	3.53%	9.85%	13.38%	13.00%	Fixed	97%
Irving Supplemental Benefit Plan	Active	12/31/2018	\$ 107,628,647	3.34%	2.50%	0.84%	1.27%	2.11%	2.07%	Other	98%
San Angelo Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 11,759,292	21.58%	16.45%	5.13%	15.42%	20.55%	20.20%	Fixed	98%
Houston Municipal Employees Pension System	Active	6/30/2019	\$ 614,451,273	11.27%	3.00%	8.27%	20.73%	29.00%	28.69%	Actuarial	99%
Harris County Hospital District Pension Plan	Closed	12/31/2018	\$ 169,885,000	4.87%	0.00%	4.87%	13.37%	18.24%	18.24%	Actuarial	100%
Sweetwater Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 1,624,778	21.86%	17.00%	4.86%	13.14%	18.00%	18.00%	Fixed	100%
Travis County ESD #6 FRRF	Active	12/31/2018	\$ 6,074,844	24.11%	20.00%	4.11%	15.09%	19.20%	19.20%	Fixed	100%
Plano Retirement Security Plan	Active	12/31/2018	\$ 149,344,120	3.56%	0.00%	3.56%	0.06%	3.62%	3.62%	Actuarial	100%
JPS - Tarrant County Hospital District	Active	9/30/2018	\$ 256,365,871	5.51%	1.00%	4.51%	2.24%	6.75%	6.75%	Other	100%
Brazos River Authority Retirement Plan (6)	Frozen	2/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Actuarial	100%
Denison Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 3,365,460	14.19%	12.00%	2.19%	12.81%	15.00%	15.00%	Fixed	100%
Northeast Medical Center Hospital Retirement Plan (6)	Frozen	6/30/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Actuarial	100%
Corpus Christi Fire Fighters' Retirement System	Active	12/31/2018	\$ 31,298,070	15.91%	13.10%	2.81%	17.97%	20.78%	20.78%	Fixed	100%
Denton Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 18,562,198	21.77%	12.60%	9.17%	9.33%	18.50%	18.50%	Other	100%
Galveston Employees' Retirement Fund	Active	12/31/2018	\$ 26,308,178	9.33%	6.00%	3.33%	5.67%	9.00%	9.00%	Fixed	100%
Sweeny Community Hospital	Closed	12/31/2018	\$ 985,300	7.35%	0.00%	7.35%	5.40%	12.75%	12.75%	Actuarial	100%
Houston MTA Non-Union Pension Plan	Closed	12/31/2018	\$ 41,769,919	7.85%	0.00%	7.85%	18.63%	26.48%	26.51%	Actuarial	100%
Cleburne Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 4,507,461	19.90%	14.00%	5.90%	16.10%	22.00%	22.06%	Other	100%
Judicial Retirement System of Texas Plan Two	Active	8/31/2019	\$ 79,710,813	20.83%	7.46%	13.37%	3.01%	16.38%	16.43%	Fixed	100%
Houston Police Officers' Pension System	Active	6/30/2019	\$ 444,871,000	24.35%	10.50%	13.85%	17.89%	31.74%	32.02%	Actuarial	101%
El Paso Firemen's Pension Fund	Active	12/31/2018	\$ 65,506,552	22.17%	18.00%	4.17%	14.33%	18.50%	18.73%	Fixed	101%
Port Arthur Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 9,194,408	16.10%	13.50%	2.60%	11.45%	14.05%	14.27%	Other	102%
Texas Emergency Services Retirement System (6)	Active	8/31/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Other	102%

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University Health System Pension Plan	Active	12/31/2018	\$ 354,486,512	4.09%	2.00%	2.09%	4.59%	6.68%	6.80%	Actuarial	102%
Temple Firemen's Relief & Retirement Fund	Active	9/30/2018	\$ 8,623,033	20.57%	15.00%	5.57%	9.37%	14.94%	15.27%	Fixed	102%
Fort Worth Employees' Retirement Fund Staff Plan	Active	9/30/2018	\$ 1,588,685	18.65%	8.25%	10.40%	4.99%	15.39%	15.74%	Fixed	102%
Texas Municipal Retirement System	Active	12/31/2018	\$ 6,444,177,866	15.04%	6.63%	8.41%	4.86%	13.27%	13.68%	Actuarial	103%
Citizens Medical Center	Active	2/28/2019	\$ 55,569,699	8.47%	3.94%	4.53%	-0.71%	3.82%	3.96%	Other	104%
Texas City Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 5,176,888	12.77%	16.00%	0.00%	18.59%	15.36%	16.00%	Fixed	104%
Port of Houston Authority Retirement Plan	Closed	7/31/2018	\$ 29,960,300	13.86%	0.00%	13.86%	2.85%	16.71%	17.55%	Actuarial	105%
Waxahachie Firemen's Relief & Retirement Fund	Active	9/30/2018	\$ 4,437,733	18.19%	12.00%	6.19%	8.36%	14.55%	15.51%	Other	107%
Texas County & District Retirement System	Active	12/31/2018	\$ 6,921,029,795	13.53%	6.77%	6.76%	4.98%	11.74%	12.57%	Actuarial	107%
Tyler Firefighters' Relief & Retirement Fund	Active	12/31/2018	\$ 11,620,007	21.10%	13.50%	7.60%	11.90%	19.50%	20.92%	Fixed	107%
DFW Airport Board DPS	Active	12/31/2018	\$ 30,006,000	23.63%	7.00%	16.63%	13.97%	30.60%	33.51%	Actuarial	110%
Big Spring Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 4,030,000	15.84%	13.00%	2.84%	11.47%	14.31%	15.72%	Fixed	110%
DFW Airport Board	Active	12/31/2018	\$ 54,095,000	17.90%	0.00%	17.90%	19.77%	37.67%	41.58%	Actuarial	110%
Atlanta Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 666,400	18.58%	13.00%	5.58%	7.42%	13.00%	14.57%	Fixed	112%
The Woodlands Firefighters' Retirement System	Active	12/31/2018	\$ 11,482,958	22.66%	12.00%	10.66%	0.00%	10.66%	12.18%	Fixed	114%
Employees of Brownsville Navigation District	Active	12/31/2018	\$ 4,368,477	8.38%	4.00%	4.38%	5.87%	10.25%	12.01%	Fixed	117%
Austin Fire Fighters Relief & Retirement Fund	Active	12/31/2018	\$ 91,086,698	28.49%	18.70%	9.79%	8.92%	18.71%	22.05%	Fixed	118%
Corsicana Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 4,187,264	15.73%	14.00%	1.73%	12.27%	14.00%	16.56%	Fixed	118%
San Benito Firemen Relief & Retirement Fund	Active	9/30/2018	\$ 1,424,217	13.90%	12.00%	1.90%	8.20%	10.10%	12.00%	Fixed	119%
Corpus Christi Regional Transportation Authority	Active	12/31/2018	\$ 10,677,430	9.99%	0.00%	9.99%	1.17%	11.16%	13.35%	Actuarial	120%
Guadalupe-Blanco River Authority	Frozen	12/31/2018	\$ 5,826,719	5.02%	0.00%	5.02%	11.10%	16.12%	19.36%	Other	120%
Texarkana Firemen's Relief & Retirement Fund	Active	12/31/2018	\$ 4,306,156	21.60%	13.50%	8.10%	7.44%	15.54%	19.47%	Fixed	125%
Lower Colorado River Authority Retirement Plan	Closed	12/31/2018	\$ 108,601,000	5.48%	0.00%	5.48%	11.93%	17.41%	22.00%	Actuarial	126%
Guadalupe Regional Medical Center	Active	12/31/2018	\$ 25,355,241	9.12%	4.00%	5.12%	0.68%	5.80%	7.57%	Other	131%
Nacogdoches County Hospital District	Active	6/30/2016	\$ 30,057,297	4.56%	2.91%	1.65%	2.66%	4.31%	5.66%	Other	131%
Dallas Co. Hospital Dist. Retirement Income Plan	Active	12/31/2018	\$ 659,891,000	7.53%	6.20%	1.33%	3.23%	4.56%	6.06%	Actuarial	133%
Galveston Wharves Pension Plan	Closed	12/31/2018	\$ 2,017,084	6.91%	0.00%	6.91%	14.19%	21.10%	28.51%	Actuarial	135%
San Antonio Fire & Police Pension Fund	Active	12/31/2018	\$ 318,038,000	23.86%	12.32%	11.54%	5.92%	17.46%	24.62%	Fixed	141%
Weslaco Firemen's Relief & Retirement Fund	Active	9/30/2018	\$ 4,249,692	13.65%	12.00%	1.65%	6.31%	7.96%	12.16%	Fixed	153%

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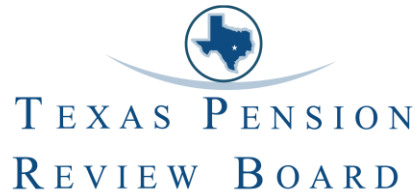
Contribution Report
May 7, 2020

Plan Name	Plan Status (1)	Fiscal Year End	Covered Payroll	(a) Total NC (% of Pay) (2), (3)	(b) EE Cont (% of Pay) (3)	(c) = (a) - (b) ER Normal Cost (% of Pay) (3)	(d) Amort Pmt (% of Pay) (3)	(e) = (c) + (d) ER Rec Cont (% of Pay) (3), (4)	(f) Actual ER Cont (% of Pay) (5)	Actual ER Cont Type	(f) / (e) Percent of Rec Cont Paid
San Antonio Metropolitan Transit Retirement Plan	Active	9/30/2018	\$ 65,166,072	7.58%	4.23%	3.35%	9.09%	12.44%	19.15%	Actuarial	154%
El Paso Firemen & Policemen's Pension Staff Plan	Active	12/31/2018	\$ 734,360	10.24%	5.00%	5.24%	-0.39%	4.85%	7.47%	Fixed	154%
DART Employees	Closed	9/30/2018	\$ 14,333,000	7.35%	0.02%	7.33%	37.65%	44.98%	69.77%	Actuarial	155%
City of El Paso Employees Retirement Trust	Active	8/31/2019	\$ 167,255,529	11.94%	8.95%	2.99%	6.87%	9.86%	15.80%	Fixed	160%
Capital MTA Bargaining (6)	Frozen	12/31/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Actuarial	161%
Galveston Firefighter's Relief & Retirement Fund	Active	12/31/2018	\$ 8,273,793	19.50%	18.00%	1.50%	15.50%	17.00%	28.64%	Fixed	168%
University Park Firemen's Relief & Retirement Fund	Closed	12/31/2018	\$ 3,011,825	18.13%	10.48%	7.65%	22.05%	29.70%	56.87%	Fixed	191%
Northwest Texas Healthcare System Retirement Plan (6)	Frozen	9/30/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Other	244%
Anson General Hospital	Frozen	6/30/2018	\$ 222,685	17.53%	4.00%	13.53%	-13.53%	0.00%	0.00%	Actuarial	N/A
Arlington Employees Deferred Income Plan	Active	6/30/2018	\$ 3,337,767	4.97%	3.00%	1.97%	-1.97%	0.00%	1.39%	Actuarial	N/A
Refugio County Memorial Hospital	Frozen	10/31/2017	\$ 3,234,547	0.00%	0.00%	0.00%	0.00%	0.00%	1.85%	Actuarial	N/A

Notes

- (1) Plan status indicates whether a plan is active (admitting new hires), closed to new hires (but still accruing benefits), or frozen (not accruing benefits).
- (2) Normal Cost includes any explicit provisions for administrative expenses.
- (3) Values may differ from that reported by the system due to differences in timing and/or rounding. For systems that do not indicate the fiscal year associated with this value (or the requisite valuation has not been provided to the PRB), they are based on the most recently reported valuation date on or before the beginning of the fiscal year.
- (4) Recommended Contribution needed for the system to achieve and maintain an amortization period that does not exceed 30 years, in accordance with Texas Code §802.101(a).
- (5) Actual contribution rate is determined as the employer contributions made to the plan during the fiscal year divided by the covered payroll shown. This may differ from the plan's stated contribution rate due to differences between actual and assumed covered payroll.
- (6) Covered payroll is not reported for this plan.
- (7) Plan calculates a recommended contribution based on a 31-year amortization period.

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Summary of Funding Soundness Restoration Plans (FSRPs) Submitted Since the Prior PRB Meeting

Texas Government Code Section 802.2015(e) requires FSRPs to be developed by the public retirement system and the associated governmental entity in accordance with the system's governing statute; and be designed to achieve a contribution rate that will be sufficient to amortize the unfunded actuarial accrued liability within 40 years not later than the 10th anniversary of the date on which the final version of an FSRP is agreed to. The following table summarizes the FSRPs received by the PRB since the last board meeting.

Retirement System	FSRP Trigger Amortization Period	Plan Changes		
		Employee Contributions	Employer Contributions	Other
University Park Firemen's Relief & Retirement Fund	Infinite	N/A	Before: 21.52% After: Closed 30-year ADC beginning October 1, 2017	<ul style="list-style-type: none"> • Employer contributing a biennially recalculated ADC rate. • Plan is closed and new hires are required to participate in TMRS.

Systems Immediately Subject to FSRP Formulation Requirement

The FSRP requirement is triggered for retirement systems that have had amortization periods over 40 years for three consecutive annual actuarial valuations, or two consecutive actuarial valuations if the systems conduct the valuations every two or three years.

Systems Immediately Subject to an FSRP Formulation Requirement							
Retirement System	Am Period	Date of AV	Am Period	Date of AV	Am Period	Date of AV	FSRP Due Date
Irving Firemen's Relief & Retirement Fund – Revised FSRP ¹	63.4	1/1/2014	46.5	12/31/2015	Infinite	12/31/2017	4/17/2019
Midland Firemen's Relief & Retirement Fund – Revised FSRP ¹	59.1	1/1/2014	44.7	12/31/2015	Infinite	12/31/2017	8/21/2019
Longview Firemen's Relief & Retirement Fund ²	50.7	12/31/2016	40.2	12/31/2017	Infinite	12/31/2018	2/12/2020
Orange Firemen's Relief & Retirement Fund – Second Revised FSRP ¹	58.2	1/1/2015	69.3	1/1/2017	Infinite	1/1/2019	4/18/2020
Marshall Firemen's Relief & Retirement Fund – Revised FSRP ¹	43.2	12/31/2014	56.4	12/31/2016	59.0	12/31/2018	5/5/2020
Beaumont Firemen's Relief & Retirement Fund	39.1	12/31/2014	104.0	12/31/2016	Infinite	12/31/2018	7/17/2020

¹ Texas Government Code Section 802.2015(d) requires systems to formulate a revised FSRP if the system conducts an actuarial valuation showing that the system's amortization period exceeds 40 years, and the previously formulated FSRP has not been adhered to.

² An FSRP has been received from the system but an actuarial analysis of the changes made has not yet been confirmed by the PRB.

Systems at Risk of FSRP Formulation Requirement

These at-risk systems' most recent actuarial valuation shows an amortization period that exceeds 40 years but does not yet trigger the FSRP requirement.

Systems at Risk of an FSRP - <u>Not Yet Subject to FSRP Requirement</u>							
Retirement System	Am Period	Date of AV	Am Period	Date of AV	Am Period	Date of AV	FSRP Due Date
Amarillo Firemen's Relief & Retirement Fund	28.8	1/1/2014	34.5	12/31/2015	43.5	12/31/2017	N/A
Plainview Firemen's Relief & Retirement Fund	31.4	12/31/2013	31.6	12/31/2015	44.8	12/31/2017	N/A
Laredo Firefighters Retirement System	29.8	9/30/2014	28.0	9/30/2016	43.0	9/30/2018	N/A
McAllen Firemen's Relief & Retirement Fund	29.0	10/1/2014	33.4 ¹	10/1/2016	Infinite	10/1/2018	N/A
Atlanta Firemen's Relief & Retirement Fund	36.2	12/31/2014	28.4	12/31/2016	Infinite	12/31/2018	N/A
Austin Police Retirement System	27.3	12/31/2016	35.0	12/31/2017	Infinite	12/31/2018	N/A
Cleburne Firemen's Relief & Retirement Fund	27.3	12/31/2014	28.8	12/31/2016	48.6	12/31/2018	N/A
Conroe Fire Fighter's Retirement Fund	31.4	12/31/2015	39.0	12/31/2017	Infinite	12/31/2018	N/A
Lubbock Fire Pension Fund	27.6	1/1/2015	33.5	12/31/2016	52.8	12/31/2018	N/A
Texas City Firemen's Relief & Retirement Fund	31.6	12/31/2014	28.0	12/31/2018	41.1	12/31/2018	N/A

¹ Reflects an increase in employee contribution from 11% to 12% effective April 9, 2018.

Progress Report on Previously Submitted FSRPs

The following systems have previously formulated an FSRP. The table below outlines their progress towards the FSRP requirement.

Systems Still Working Towards Meeting the 40-Year Amortization Period Requirement						
Retirement System	FSRP Trigger		Current Progress ¹		Goal Year ²	Update Required
	Am Period	Date	Am Period	Date		
Fort Worth Employees' Retirement Fund	Infinite	12/31/2016	44.0	12/31/2018	2026	5/2021
Harlingen Firemen's Relief & Retirement Fund – Revised FSRP	59.1	9/30/2017	30.0 ³	9/30/2017	2026	6/2021
Dallas Employees' Retirement Fund	Infinite	12/31/2015	46.0	12/31/2018	2026	7/2021
Wichita Falls Firemen's Relief & Retirement Fund – Revised FSRP	Infinite	1/1/2018	< 47	1/1/2018	2026	8/2021
Greenville Firemen's Relief & Retirement Fund – Revised FSRP	55.0	12/31/2016	40.7	12/31/2018	2026	9/2021
Odessa Firefighters' Relief & Retirement Fund – Revised FSRP	77.5	1/1/2019	< 48	1/1/2019	2026	12/2022
Systems that Have Submitted Post-FSRP Actuarial Valuations Showing Amortization Period Below 40 Years						
University Park Firemen's Relief & Retirement Fund – Revised FSRP	Infinite	12/31/2016	28.8	12/31/2018	2026	N/A

¹ Based on the most recent actuarial valuation or FSRP.

² The year in which a system must reach an amortization period of 40 years or less.

³ The amortization period reflects estimates of actions that occurred after the valuation date. Systems will be removed from the list if a subsequent valuation reflects an amortization period of 40 years or less.

Previously Completed FSRP Requirement Systems

The following table is a list of all systems that have submitted an FSRP that has lowered their amortization period below 40 years in a subsequent actuarial valuation.

Systems that Have Submitted Post-FSRP Actuarial Valuations Showing Amortization Period Below 40 Years					
Retirement System	FSRP Trigger		Completed Progress ¹		Goal Year ²
	Am Period	Date	Am Period	Date	
Dallas Police & Fire Pension System (Combined Plan)	44.0	1/1/2017	38.0 ³	1/1/2019	2027
Galveston Employees' Retirement Plan for Police	55.1	1/1/2014	35.3	1/1/2018	2026
Galveston Firefighter's Relief & Retirement Fund – REVISED FSRP	Infinite	12/31/2016	26.8	12/31/2017	2026
Lufkin Firemen's Relief & Retirement Fund	40.6	12/31/2014	33.1	12/31/2016	2026
Sweetwater Firemen's Relief & Retirement Fund	58.8	12/31/2014	27.5	12/31/2016	2026

¹ Based on the valuation in which the system completed its FSRP requirement.

² The year in which a system was expected to reach an amortization period of 40 years or less.

³ The amortization period reflects a payroll projection based upon the City of Dallas' Hiring Plan which has yet to materialize, a concern that was noted by the system's actuary in its latest actuarial valuation.

6. Possible delays in reporting by pension systems

7. Invitation for public comment

8. Adjournment