

# Intensive Actuarial Review:

## Odessa Firemen's Relief and Retirement Fund

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October 2019



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## Executive Summary

### Introduction

This intensive review of Odessa Firemen's Relief and Retirement Fund ("Odessa Fire" or "the Fund") is intended to assist the Fund's board of trustees and the City of Odessa ("the City") in assessing the Fund's ability to meet its long-term pension obligation.

Odessa Fire and the City have recently made contribution increases, benefit cuts, and actuarial and investment assumption changes, but the changes have not been enough to put the Fund on a solid path to sustainability. The Pension Review Board (PRB) encourages the Fund and the City to review this report carefully and jointly adopt both short- and long-term plans to address these risks. The PRB can provide technical assistance in formulating the plan.

### Overview

Odessa Fire is currently projected to run out of assets within the next 25 years. Because benefits were not prefunded, current contributions are being used to pay benefits, like in a pay-as-you-go pension structure. Current contributions, however, are barely covering half of annual benefit payments, so the Fund is also tapping into its investment income to make up the difference. Using contributions and investment returns to pay current benefits robs the Fund of the advantages of compound interest that prefunding offers.

These practices have resulted in liability growth close to 10% per year, while assets have increased less than 2% per year, despite the past decade's strong bull market. Diverting investment income to make benefit payments affects the Fund like an oil leak in an automobile engine: the car's owner can keep adding oil, but the problem will persist until the leak is plugged. Even worse, Odessa Fire's growing benefit payments will eventually drain the Fund's assets completely unless measures are taken to plug the hole.

Another consequence of not prefunding benefits is that highly liquid assets are needed to make benefit payments, as evidenced by the Fund's extremely low non-investment cash flow rates. However, the current asset allocation is heavily weighted towards equities and alternatives implying a long-term investment horizon which the Fund does not have the luxury of relying on.

Constantly underfunding a plan places the benefits of both retirees and active members at significant risk and/or places the burden of paying for services already rendered on future generations of taxpayers and employees through contribution increases or reduction of future benefits.

### Conclusion

To plug the immediate leak in the system, Odessa Fire and the City should work together to determine the best balance between increased contributions and benefit reductions. To help the City and the Fund consider funding options, the PRB has developed projections including both contribution increases and a one-time cash infusion. For the longer term, a strong funding policy should be adopted to restore and preserve fiscal health. The Fund should also monitor investment managers' performance against benchmarks; adopt an asset allocation plan; and review the Fund's professional advisors regularly.

## Background

Texas Government Code Section 801.202(2) requires the Pension Review Board (PRB) to conduct intensive studies of potential or existing problems that threaten the actuarial soundness of or inhibit an equitable distribution of benefits in one or more public retirement systems. The PRB identified the following key metrics, in addition to amortization period, to determine and prioritize retirement systems for intensive actuarial review. The PRB selected Odessa Firemen's Relief and Retirement Fund ("Odessa Fire" or "the Fund") for review based on the 2018 actuarial valuation data shown below and at the request of the City of Odessa. Unless otherwise noted, the following metrics were calculated as of January 1, 2018.

Amort. Period (Years)	Funded Ratio	UAAL as % of Payroll	Assumed Rate of Return	Payroll Growth Rate	Actual Cont. as % of ADC <sup>1</sup>	Non-Investment Cash Flow as % of FNP	DROP as % of FNP
47.1	43.08%	510.60%	7.75%	3.50%	81.31%	-11.16%	4.54%

Contribution and cash flow data are from the Fund's 12/31/2017 financial audit.

### Plan Profile (2018 AV)

**Actuarial Accrued Liability:** \$106,469,004

**Market Value of Assets:** \$45,718,416

**Normal Cost:** 14.93% of payroll

**Contributions:** 18.00% employee  
20.00% employer

**Membership:** 165 active  
182 annuitants

**Social Security Participation:** Yes

At the time the Fund was selected for review:

- Its funded ratio of 43.08% was the sixth lowest in the state.
- Its non-investment cash flow as a percent of FNP was the second lowest in the state.
- Its UAAL as a percent of payroll was the fourth highest in the state.
- Actual contribution as a percent of actuarially determined contribution (ADC) was the 17<sup>th</sup> lowest in the state and the third lowest in its peer group.<sup>2</sup>

<sup>1</sup> For plans whose contributions are a fixed rate, based on statutory or contractual requirements, the ADC for this purpose is the contribution needed to fund the benefits accrued in the current year and maintain an amortization period that does not exceed 30 years, as required to be reported under Texas Government Code §802.101(a).

<sup>2</sup> See [Appendix](#) for peer group information.

## Key Findings

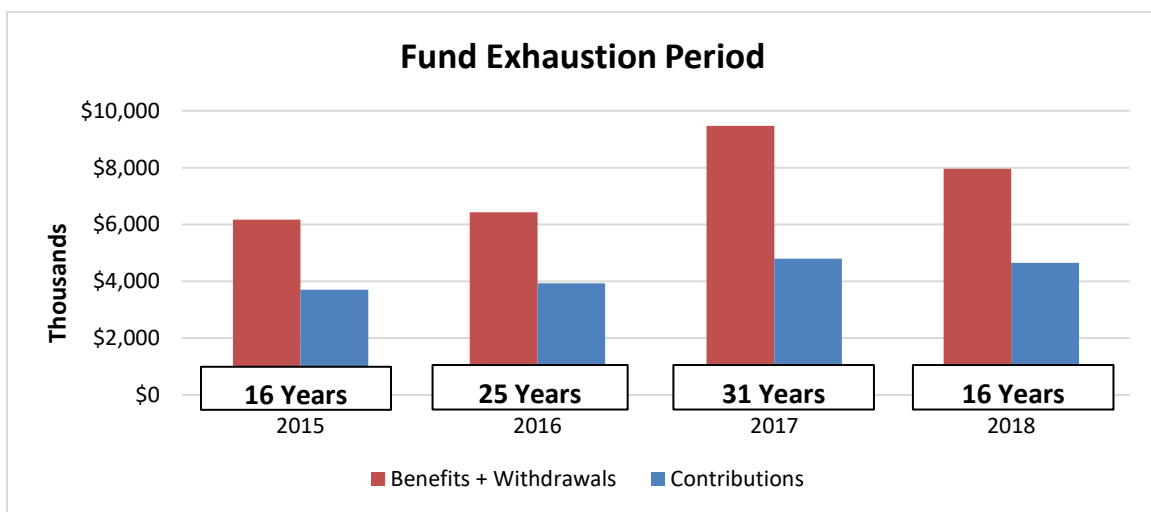
Odessa Fire should be recognized for making several significant changes in recent years in an attempt to address the long-term funding challenges it faces. In their 2016 Funding Soundness Restoration Plan (FSRP), the Fund and City reduced benefits for all employees, on a prospective basis, and increased both the City and employee contributions. To address lagging investment performance, the board took proactive steps to transition to a new investment consultant. In addition, the Fund has taken steps to improve internal data control processes.

However, the changes made in the FSRP have not been sufficient to keep the Fund on a steady path towards paying off its unfunded liability in less than 40 years (or the 30 years recommended by PRB Guidelines). The PRB has identified several specific areas of concern that warrant the Fund and City's careful consideration.

### Fund Exhaustion in 16 Years

The various risks faced by a pension fund all boil down to one relatively simple question, "Will there be enough money to pay benefits when due?" The Governmental Accounting Standards Board (GASB) requires single-employer defined benefit pension plans to compare projections of the pension plan's assets to projected benefit payments and identify the year when projected assets will no longer be sufficient to cover 100% of the projected benefit payments, if such date exists.<sup>3</sup> In other words, this projected date, sometimes called the Fund's exhaustion or depletion date, is the date the Fund is expected to run out of money, potentially leaving retirees vulnerable to not receiving promised benefits.

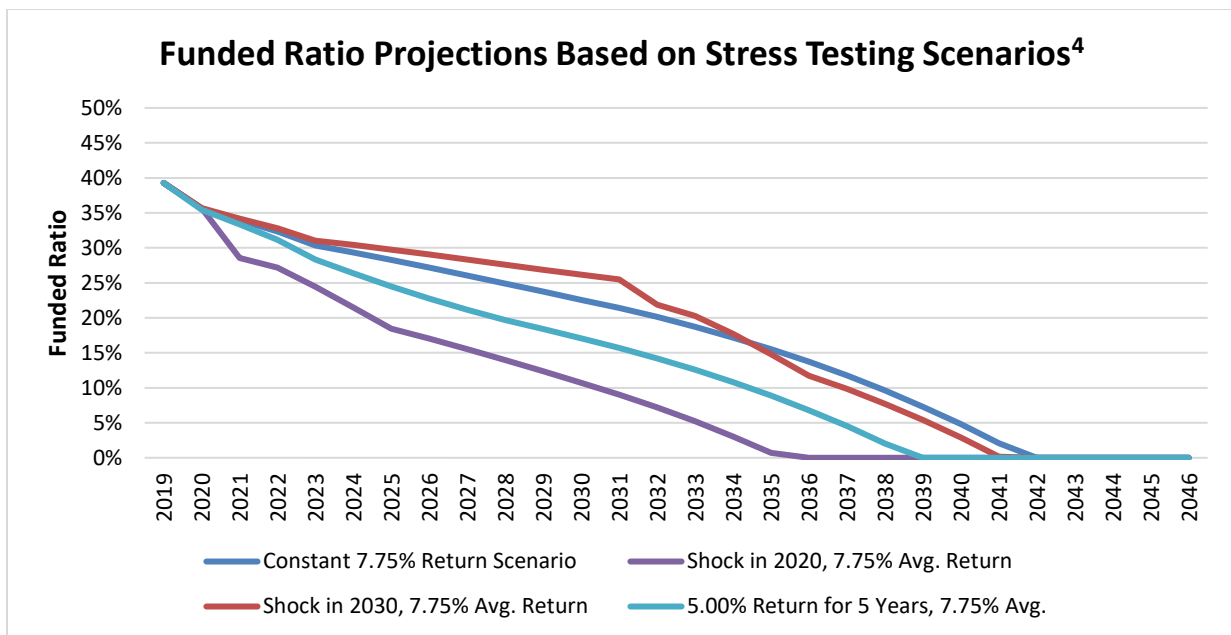
Odessa Fire has reported an exhaustion date every year since this requirement has been in effect (beginning with the 12/31/2015 annual financial report). This date improved somewhat following the 2016 plan changes made in accordance with the FSRP but returned to an alarming 16 years as of 12/31/2018.



<sup>3</sup> [Statement No. 68 of the Governmental Accounting Standards Board](#)

It is important to recognize that this projection does not include contributions expected to finance the benefits of new members hired after the valuation date. However, the PRB estimates that including those contributions would only postpone the exhaustion date by 5-10 years. While this projection does not guarantee that the Fund's assets will deplete in 16 (or 25) years, it should raise red flags that all stakeholders should take very seriously.

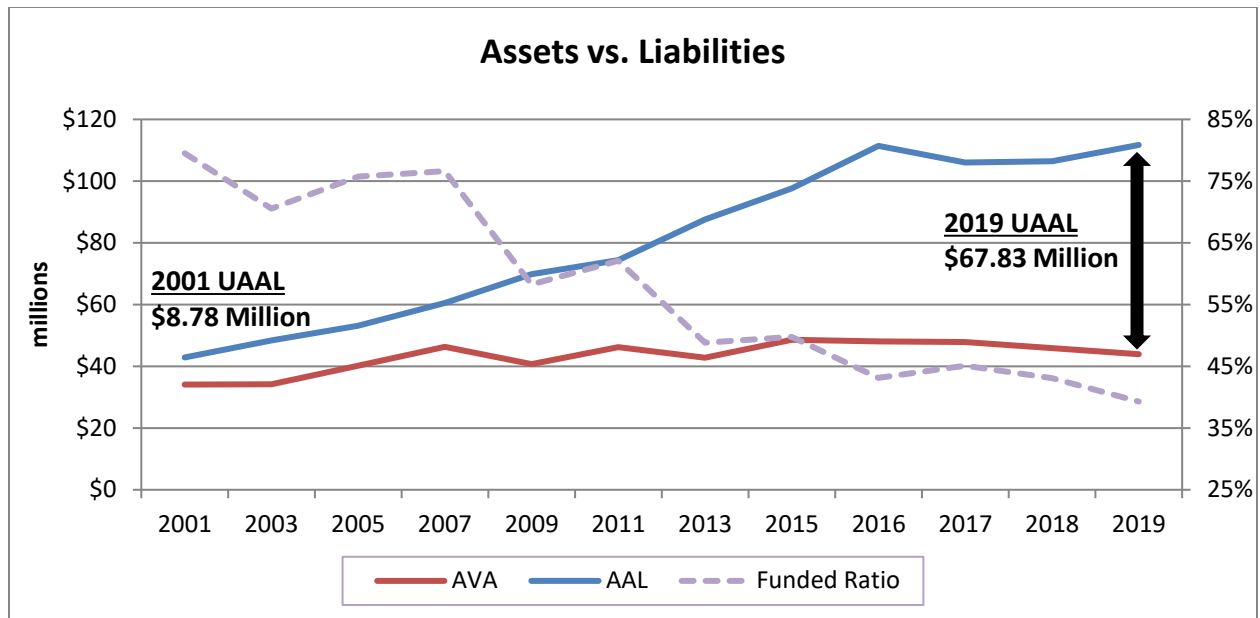
As part of this review, the PRB conducted some limited stress testing to help Odessa Fire trustees better understand how well the Fund would stand up to different market conditions. Even in scenarios where the assumed rate of return is achieved over a 30-year period, but the Fund experiences either a single negative investment shock or a short period of returns below the actuarial assumption, assets are expected to deplete sooner than under the simple constant 7.75% return in all years. The chart below shows several investment return scenarios where the average rate of return is 7.75% over the 30-year period of 2019 - 2048. The scenarios are: 1) a constant 7.75%, 2) a negative "shock" of -20% in 2020 with above average returns of 8.71% in all other years, 3) a negative shock of -20% in 2030 with above average returns of 8.71% in all other years, and 4) 5% for 5 years (2019-2023), followed by above-average returns of 8.30%.



### Assets Relatively Flat Since 2001

Since 2001, Odessa Fire's unfunded actuarial accrued liability (UAAL) has grown by nearly \$60 million. The Fund's actuarial value of assets (AVA) has remained relatively flat over the same time period, averaging a 1.6% annual growth rate while liabilities were growing at more than 10% per year until the 2016 FSRP changes.

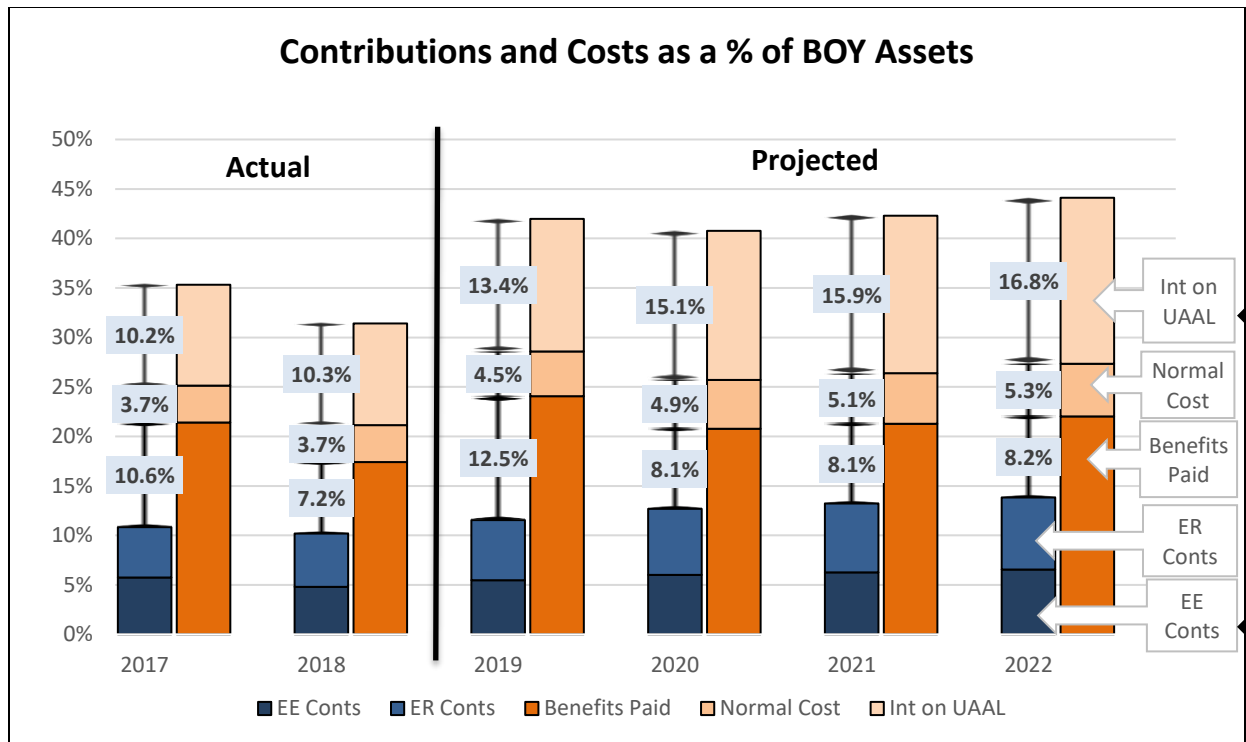
<sup>4</sup> Projections were calculated using expected salaries, projected actuarial accrued liability, and expected benefit payments provided by the Fund's actuary.



The stagnant asset level appears to be largely attributable to benefit payments significantly higher than contributions, the effect of which is compounded given the low funded ratio of the past decade. In the 2018 annual financial report, the auditor noted the Fund's contribution arrangement (2018 total contributions received of \$4,655,268) was only enough to cover roughly 60% of the total benefit disbursements (\$7,958,420) and stated, "As the Plan matures, we expect this gap to widen and then stabilize."<sup>5</sup>

The gap between contributions received and benefits paid puts a large onus on investments to make up the remaining assets needed to pay benefits due, much less cover the normal cost, the interest accrued on the unfunded liability, and make progress towards decreasing the UAAL to put the Fund on a path to full funding. As evidenced in the chart below, the investment return needed just to pay benefits in recent years was near or higher than the assumed return and is only projected to get higher as total assets decrease. This means that in the years in which the Fund experiences positive asset returns, at least some, if not all, of the investment gains would be needed to pay benefits rather than grow the assets. In years in which losses are experienced, assets would have to be sold at the worst time to cover benefit payments, further exacerbating the loss.

<sup>5</sup> Odessa Firefighters' Relief and Retirement Fund Financial Statements and Independent Auditor's Report, December 31, 2018 and 2017, page 1.



### Asset Allocation Process

According to the Fund and based on a review of the current and previous investment policy statements, the board does not have an asset allocation plan nor does it engage in any strategic asset allocation review. The board is relying primarily on the investment consultant to recommend and set the Fund's strategic asset allocation. This approach does not follow the industry best practices. The Government Finance Officers Association (GFOA) recommends retirement systems establish an asset allocation plan within their overall investment policy.<sup>7</sup> The first step to develop an asset allocation should be for the board of trustees, in consultation with the investment consultant, to conduct a thorough assessment of the Fund's funding goals, risk tolerance, investment horizon, and liquidity needs.<sup>8,9</sup>

Odessa Fire's asset allocation process appears to be based on an asset-only model with an expected long-term investment horizon which may not adequately consider the funding status and liquidity needs associated with the Fund's liabilities. Further, the focus appears to be on achieving a predetermined overall target rate of return, currently set as 7.75%. The IPS does not discuss how risk is measured, nor what constitutes a reasonable level of risk given the Fund's near-term liquidity needs to pay out benefits.

<sup>7</sup> *Asset Allocation for Defined Benefit Plans*, Government Finance Officers Association, October 2009, <https://www.gfoa.org/asset-allocation-defined-benefit-plans>.

<sup>8</sup> *Pension Investing: Fundamentals and Best Practices*, Nicholas Greifer, Government Finance Officers Association, [https://www.gfoa.org/sites/default/files/PensionInvesting\\_FundamentalsAndBestPractices.pdf](https://www.gfoa.org/sites/default/files/PensionInvesting_FundamentalsAndBestPractices.pdf)

<sup>9</sup> *A Primer for Investment Trustees: Understanding Investment Committee Responsibilities*, Jeffery Bailey and Thomas Richards, CFA Institute Research Foundation, <https://www.cfainstitute.org/-/media/documents/book/rf-publication/2017/rf-v2017-n3-1.ashx>



On the surface, this makes it seem like the asset allocation is being structured to meet the pre-determined assumed rate of return, rather than the assumed rate of return being calculated as a function of a fund-appropriate asset allocation.

If the Fund were in a stronger financial position, this approach might not raise significant concern. However, given the reported exhaustion period, lack of any asset growth for nearly two decades, and projected negative cash flow illustrating a high likelihood of the need for greater liquidity, the lack of consideration given to these pressing issues does raise alarm.

### **Revised Funding Soundness Restoration Plan**

Odessa Fire's 2016 FSRP changes lowered the Fund's amortization period from infinite (as of 1/1/2016) to 46.5 years (as of 1/1/2017). Higher amortization periods are more sensitive to even small actuarial losses. Thus, even though only 20% of the asset losses experienced in 2018 are reflected in the calculation due to asset smoothing, the Fund's amortization rose to 77.5 years as of its 1/1/2019 valuation.

The FSRP, despite attempting to address the long-term funding challenges, is therefore already insufficient to achieve the 40-year amortization period by the target date (2026). Texas Government Code §802.2015(d) requires the Fund to work with the City of Odessa to develop a revised FSRP before the end of November 2019.<sup>10</sup>

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<sup>10</sup> [Texas Government Code §802.2015](#)

## Analysis/Recommendations

### Funding Options

As of the January 1, 2019 actuarial valuation, Odessa Fire's UAAL was \$67,827,402 and would take approximately 77.5 years to amortize, assuming all assumptions are met. Based on amortization period projections provided by the Fund's actuary, the PRB estimates a reduction in UAAL of approximately \$7.2 million would bring the Fund back in compliance with current FSRP requirements and achieve an amortization period of 40 years by the target date (end of 2026). The UAAL would need to be reduced by approximately \$18.3 million to bring the projected funding period within the *PRB Pension Funding Guidelines* preferred maximum of 30 years.<sup>11, 12</sup>

To shore up funding, Odessa Fire and the City should work together to determine the best balance between increased contributions and benefit reductions. However, it should be noted that a reduction in future benefit accruals will have virtually no impact on near-term cash outflows and the threat of a potential asset exhaustion date. Thus, certain actions which may achieve compliance with state law, may not properly address the risks faced by the Fund. Given Odessa Fire's current funding level, an increase in contributions over the near term is likely needed to stabilize the Fund.

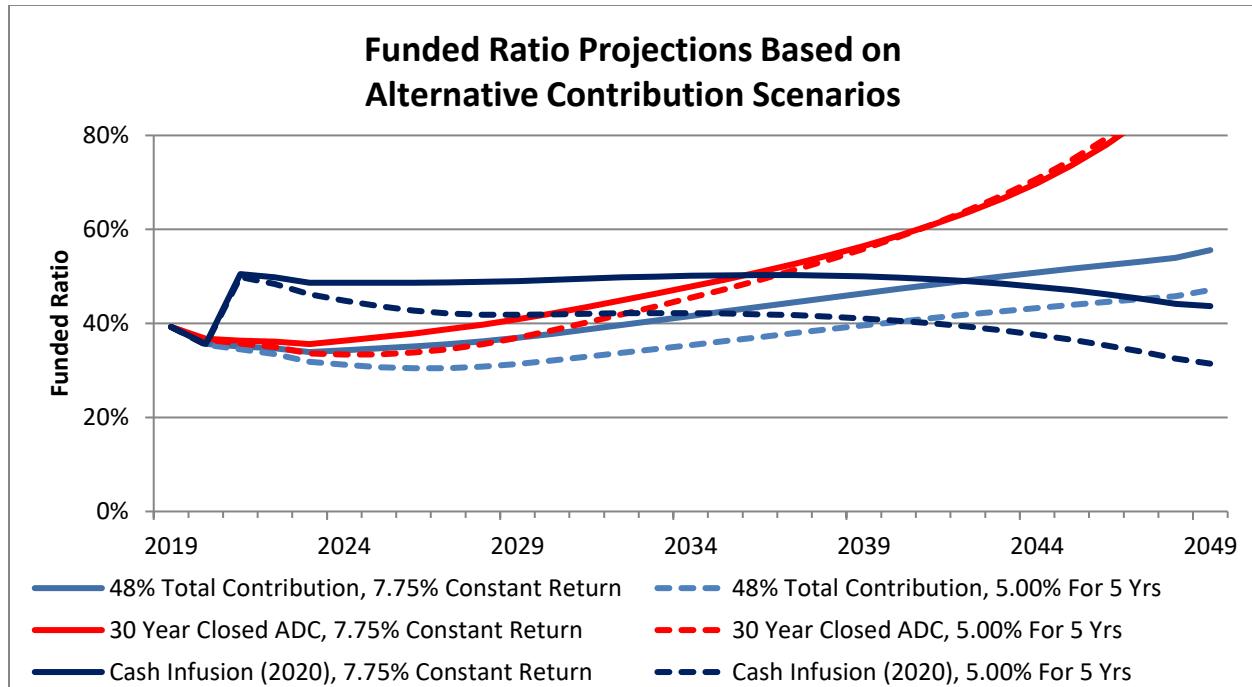
Multiple options exist for adjusting contributions to the Fund. For example, contribution increases from the City, the employees, or both could be utilized alone or in combination with a one-time cash infusion. To help the City and the Fund begin to consider options for how to remedy the funding shortfall, the PRB developed some projections based on different contribution scenarios.

The following graph illustrates three potential options as examples: increasing the total contribution rate from 38% to 48% beginning in 2020; basing the total contribution on a 30-year closed ADC rate; or leaving the contribution arrangement as it currently is but assuming a significant one-time cash infusion of \$18.3 million to the Fund during the 2020 fiscal year. The alternative contribution scenarios are shown using two different investment scenarios to illustrate how each scenario reacts to changing market conditions: 1) a constant 7.75% (solid line) and 2) 5% for 5 years (2019-2023), followed by above-average returns of 8.30% (dotted line). In all three scenarios, the Fund avoids depleting its actuarial assets for at least 30 years.

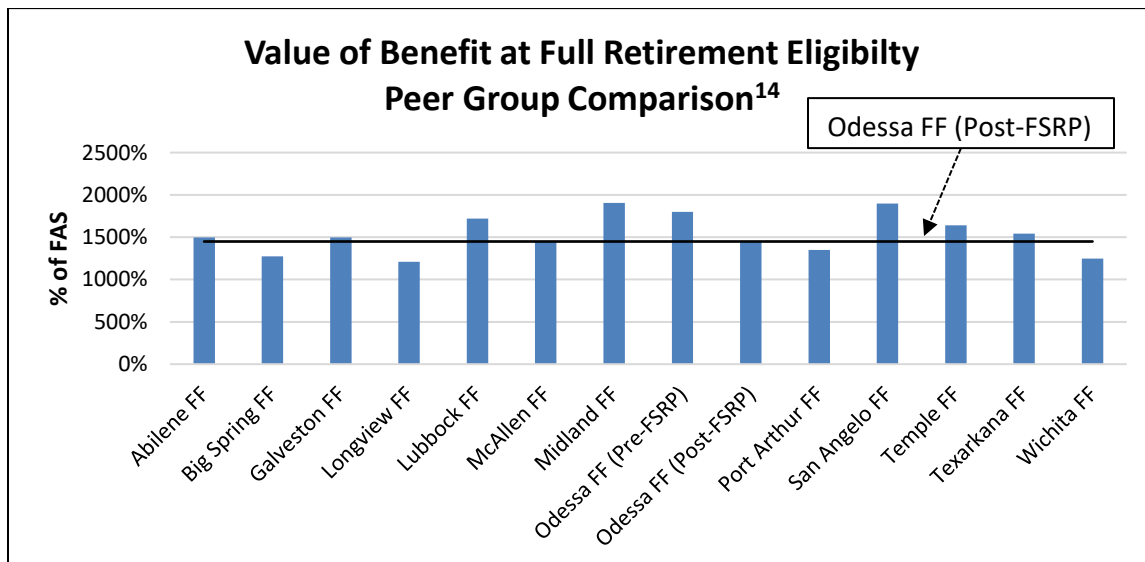
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<sup>11</sup> These estimates are based solely on information provided in conjunction with the 1/1/2019 actuarial valuation and identify the minimum necessary to comply with state law and PRB guidelines. They do not take into account the open group projection analysis used in other areas of this review.

<sup>12</sup> *Pension Funding Guidelines*, Texas Pension Review Board, 30 June 2017, <https://www.prb.texas.gov/txpen/wp-content/uploads/2017/03/Funding-Guidelines.pdf>



While further benefit reductions will not help in the near term, they should still be considered for the long term. To help both the City and the Fund understand how current benefit levels compare to peer systems, the graph below depicts the present value of benefits at full retirement eligibility (as a percent of final average salary), both before and after the 2016 FSRP changes, in comparison with its peers.<sup>13</sup> Prior to the changes made in the 2016 FSRP, the Fund's value of benefit was the third highest amongst its peers but fell below the peer group average after the benefit changes.



<sup>13</sup> For this graph, Odessa Fire's peers are defined as other defined benefit TLFFRA plans that have a similar amount of actuarial assets, within roughly \$15 million of Odessa Fire's assets, or are located relatively close geographically. Please refer to the [Peer Group Value of Benefits Comparison](#) in the appendix for more details.

<sup>14</sup> Firefighters in McAllen, Odessa, and Wichita Falls also contribute to social security.

When developing the revised FSRP, the Fund and the City are encouraged to think beyond the 40-year amortization period requirement and develop a strong funding policy. The goals of a funding policy are threefold: establish clear and concrete funding objectives, set boundaries on what is allowable for actuarial calculations, and develop plans for both positive and negative experiences. The funding policy should strive to balance the three primary pension funding goals so that member benefits are secure; employers are afforded some level of contribution predictability from year to year; and liabilities are managed so that future taxpayers are not burdened with costs associated with a previous generation's service. For more detail, please see the PRB's *January 2019 Interim Study: Funding Policies for Fixed-Rate Pension Plans*.<sup>15</sup>

The Fund should use the new funding policy requirement in Senate Bill 2224 (86R) and the revised FSRP process as an opportunity to work with the City of Odessa to address both the short- and long-term challenges faced by the Fund before funding levels deteriorate further.<sup>16</sup>

### Investment Practices and Governance

As noted above, the Fund identified concerns with their previous investment consultant and took proactive steps resulting in hiring a new consultant. This is a positive sign that the Fund is closely monitoring the performance of its advisors and is willing to take action if deemed necessary. However, the PRB has further concerns regarding the overall asset allocation and investment decision-making process.

The Fund should consider taking the following steps to continue to improve its investment governance and to gain a better understanding of the specific risks the Fund faces associated with its significant negative cash flow and potential future asset depletion.

#### *Asset Allocation Plan*

Implement GFOA's recommendation to establish an asset allocation plan within the overall investment policy.<sup>17</sup> This provides the board a framework to create and continually monitor its asset allocation.

#### *Asset-Liability Study*

Perform asset-liability studies, which model future asset and liability cash flows under various scenarios, to identify if the asset allocation is sufficient to support the future benefit payment stream. These studies can be utilized from time to time to assist the Fund in evaluating its asset allocation and investment risks.

#### *Stress Testing*

Stress testing should be a regular part of reviewing portfolio performance, and should be used as a gauge to help assess and manage the level of risk. The Society of Actuaries Blue Ribbon Panel on Public Pension

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<sup>15</sup> *Interim Study: Funding Policies for Fixed-Rate Pension Plans*, Texas Pension Review Board, January 2019, <https://www.prb.texas.gov/txpen/wp-content/uploads/2019/02/Funding-Policy-Paper.pdf>

<sup>16</sup> SB 2224, 86<sup>th</sup> Texas Legislature, Regular Session, 2019, <https://capitol.texas.gov/tlodocs/86R/billtext/html/SB02224F.htm>

<sup>17</sup> *Asset Allocation for Defined Benefit Plans*, Government Finance Officers Association, October 2009, <https://www.gfoa.org/asset-allocation-defined-benefit-plans>.

Plan Funding recommends the use of stress testing as a means to measure investment and contribution risks over a 30-year period.<sup>18</sup>

#### *Investment Practices and Performance Evaluation*

Texas Government Code §802.109 (SB 322, 86R) requires certain Texas retirement systems to complete an Investment Practices and Performance Evaluation by May 1, 2020.<sup>19</sup> This new requirement will further help current trustees, plan members, and other stakeholders gain a better understanding of current investment policies, procedures, and practices as well as how they compare against both their peers and industry best practices. This will be particularly helpful for Odessa Fire given the concerns raised in this review related to investment governance.

#### **Review of Professional Advisor Performance**

As previously noted, the board of trustees recently hired a new investment consultant after reviewing the previous consultant and determining they were not receiving sufficient value for the cost of services. The Fund should be commended for this important step.

Best practice suggests RFPs should be issued for all outside services at regular, pre-determined intervals to continuously evaluate the level of service being provided.<sup>20</sup> The board is encouraged to review all professional advisors on a regular basis, either through internal performance review or by hiring an independent, third-party reviewer. For example, in the 2015 actuarial valuation, it was noted that the previous actuary was not fully valuing the cost-of-living adjustment. An actuarial audit, in which a second actuary reviews or audits the work of the Fund's actuary, may have discovered this and included a recommendation to fully value this benefit.

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<sup>18</sup> Society of Actuaries. Report of the Blue Ribbon Panel on Public Pension Plan Funding. Schaumburg, Illinois. Feb 2014.

<sup>19</sup> SB 322, 86<sup>th</sup> Texas Legislature, Regular Session, 2019,  
<https://capitol.texas.gov/tlodocs/86R/billtext/html/SB00322F.htm>

<sup>20</sup> Procuring Actuarial Services, Government Finance Officers Association, October 2012,  
<https://www.gfoa.org/procuring-actuarial-services>

## **Appendix**

## Key Metrics

<b>Metric</b>	Amortization period (47.1 years)
<b>What it measures</b>	Approximately how long it would take to fully fund the unfunded actuarial accrued liability (UAAL) based on the current funding policy.
<b>Why it is important</b>	Given the Fund's current assumptions, an amortization period above 17 years indicates the contributions to the Fund in the coming year are less than the interest accumulated for that same period and therefore the total UAAL is expected to grow over the near term. In addition, for a plan that contributes on a fixed-rate basis such as Odessa Fire, the higher the amortization period, the more sensitive it is to small changes in the UAAL.
<b>Peer comparison</b>	Odessa Fire currently ranks second highest amongst its peer TLFFRA plans (TLFFRA plans within a market value of assets of \$15 million and plans with a close proximity to the city).

<b>Metric</b>	Funded ratio (43.08%)
<b>What it measures</b>	The percent of a fund's actuarially accrued liabilities covered by its actuarial value of assets.
<b>Why it is important</b>	The lower the funded ratio, the fewer assets a fund has to pay its current and future benefit payments.
<b>Peer comparison</b>	Odessa Fire's funded ratio is the lowest in its peer group and one of the lowest in the state.

<b>Metric</b>	UAAL as a percent of payroll (510.6%)
<b>What it measures</b>	The size of a plan's unfunded liability compared to the annual payroll of its active members.
<b>Why it is important</b>	Provides a way to compare plans of various sizes and expresses the outstanding "pension debt" relative to current personnel costs.
<b>Peer comparison</b>	The Fund's UAAL as a percent of payroll is the fourth highest in the State of Texas.

<b>Metric</b>	Assumed rate of return (7.75%)
<b>What it measures</b>	The estimated annual rate of return on the Fund's assets.
<b>Why it is important</b>	If actual future returns are lower than the assumed rate of return, future contributions will need to increase significantly, especially for a poorly funded plan. Odessa Fire's assumed rate of return is 7.75%, while its actual ten-year investment rate of return for the period ending December 31, 2017 was only 3.76%.
<b>Peer comparison</b>	Odessa Fire's assumed rate of return is higher than the national average of 7.27%. <sup>21</sup>

<b>Metric</b>	Payroll growth rate (3.50%)
<b>What it measures</b>	The estimated annual growth in the total payroll of active members contributing into the Fund.
<b>Why it is important</b>	Contributions are calculated as a percent of active members' pay and are back-loaded based on the expected growth in total payroll. If payroll does not increase at this rate, actual contributions will not meet those expected in the Fund's actuarial valuations. Given the Fund's inactive and active liabilities are not fully funded; contributions below expected levels will have serious consequences on the Fund's long-term solvency.
<b>Peer comparison</b>	The Fund's payroll growth rate of 3.50% percent is average for its peer group.

<b>Metric</b>	Actual contributions as a percent of actuarially determined contributions (81.31%)
<b>What it measures</b>	Whether the current employer contributions have met a theoretical minimum threshold. <sup>22</sup>
<b>Why it is important</b>	The employer's portion of the contribution is less than 82% of the amount needed to fund the Fund on a rolling 30-year amortization period. The PRB's 2014 Study of the Financial Health of Texas Public Retirement Systems found that plans that have consistently received adequate funding are in a better position to meet their long-term obligations.
<b>Peer comparison</b>	This is the third largest shortfall percentage in its peer group.

<sup>21</sup> NASRA Issue Brief: Public Pension Plan Investment Return Assumptions. February 2019.

<sup>22</sup> The theoretical minimum threshold, or actuarially determined contribution (ADC), is a target or recommended contribution "to the Fund as determined by the actuary using a contribution allocation procedure," as defined in Actuarial Standards of Practice No 4. If contributions to the Fund are made as a fixed rate based on statutory or contractual requirements, the ADC for this purpose is the contribution needed to fund the benefits accrued in the current year and maintain an amortization period that does not exceed 30 years, as required to be reported under Texas Government Code §802.101(a).



<b><i>Metric</i></b>	Non-investment cash flow as a percent of fiduciary net position (-11.16%)
<b><i>What it measures</i></b>	Non-investment cash flow shows how much the Fund is receiving through contributions in relation to its outflows: benefit payments, withdrawals and expenses.
<b><i>Why it is important</i></b>	Viewing this metric as a percent of total net assets (or fiduciary net position (FNP)), in conjunction with the funded ratio and recognition of the relative maturity of a plan, provides information about the stability of a plan's funding arrangement.
<b><i>Peer comparison</i></b>	Odessa Fire's non-investment cash flow as a percent of FNP is the second lowest in the State. If this trend continues, the Fund could face the potential risk of needing to liquidate a portion of existing assets to pay current benefits and/or expenses.

## Plan Summary

The Odessa Firemen's Relief and Retirement Fund ("Odessa Fire" or "the Fund") is established in the Texas Local Fire Fighter's Retirement Act (TLFFRA). TLFFRA provides general guidelines for fund management, but leaves administration, plan design, contributions, and specific investments to the discretion of the board of trustees. Odessa Fire, as with all TLFFRA systems, is entirely locally funded.

### Benefits

<b>Retirement Eligibility</b>	Frozen Benefit – Age 50 with 20 Years of Creditable Service Post 2016 Benefit – Age 55 with 25 Years of Creditable Service
<b>Vesting</b>	Frozen Benefit – 20 Years of Service Post 2016 Benefit – 20 Years of Service, with full benefits payable at 25 years of service.
<b>Benefit Formula</b>	Frozen Benefit – Final Average Salary x 3.6% x Years of creditable service plus a longevity benefit equal to \$107 per month for each year of creditable service in excess of 20 years (prior to 12/31/2016) Post 2016 Benefit – Final Average Salary x 2.88% x Years of creditable service after 12/31/2016, <= 25 years.
<b>Final Average Salary (FAS)</b>	Frozen Benefit - Highest 5 years within final 10 years of credited service prior to 12/31/2016. Post 2016 Benefit - Final 5 years
<b>COLA</b>	1% applied to frozen benefit only for members hired prior to 1/31/2013, payable each January 1. Ad hoc for members who do not meet requirements for automatic COLA, 1% of monthly frozen benefit provided the Fund's investment performance is not less than a rolling 5-year average of 8.50%.
<b>Retirement Benefit Options</b>	3 DROP Options, must have completed 20 years of Credited Service as of 12/31/2016 for eligibility: 1. Regular DROP, 3 yr. max. 4% interest (on benefit credits only and must be participating in DROP prior to 1/1/2017) and employee contributions credited. 2. Retro DROP, 3 yr. max, employee contributions credited, no interest. 3. Immediate DROP - a partial lump sum option.
<b>Social Security</b>	Yes

### Contributions

As of the January 1, 2018 actuarial valuation, active members of Odessa Fire contribute 18% of pay while the City of Odessa contributes 20% of pay.

### Membership

Total Active Members	Retired Members	Terminated	Total Members	Active-to-Annuitant Ratio
160	186	18	364	0.86

*TLFFRA Board Structure*

Active Members	3 - Members of the retirement system; elected by fund members. Three-year terms.
Sponsor Government	1 - Mayor or designated representative, or the political subdivision's Chief Operating Officer or designated representative. 1 - Chief Financial Officer of the political subdivision, or designated representative. Terms correspond to term of office.
Taxpayer, Not Affiliated With Fund/Sponsor Govt.	2 - Residents of the State of Texas, must not be officers/employees of the political subdivision; elected by other board of trustee members. Two-year terms.

*Contribution and Benefit Decision-Making*

TLFFRA authorizes members of the retirement systems to determine their contribution rates by voting. The statute requires cities to make contributions at the same rate paid by employees or 12 percent, whichever is smaller. TLFFRA also allows a city to contribute at a higher rate than employees do through a change in city ordinance.

TLFFRA allows the board of trustees to make decisions to modify the benefits (increases and reductions). However, a proposed addition or change must be approved by the actuary and a majority of participating plan members. Benefit changes cannot deprive a member, retiree or beneficiary of the right to receive vested accrued benefits.

*Asset Allocation*

Asset Allocation (as of 12/31/2018)					
Asset Class	Equities	Fixed Income	Alternatives	Real Estate	Other*
Current Allocation	59.73%	19.02%	9.07%	6.84%	5.35%
Target Allocation	65.00%	25.00%	0.00%	10.00%	0.00%

\*Other includes capital assets, receivables and cash

*Investment Returns*

Rates of Return (as of 12/31/2018)			
Time Period	1-year	3-year	10-year
Gross Return	-6.00%	6.00%	N/A
Net Return	-7.00%	5.00%	7.02%

*Expense Breakdown*

Fiscal Year ending 12/31/2018	
Fiduciary Net Position (FNP)	\$39,242,633
Investment Expenses	\$190,488
Investment Expenses % of FNP	0.49%
Administrative Expenses	\$321,902
Administrative Expenses % of FNP	0.82%

## Historical Trends

To conduct an intensive review of risks associated with the long-term funding of a pension Fund, it is important to analyze trends in multiple metrics. A plan with an asset level lower than its accrued liability has insufficient funds to cover benefits. A plan can experience an increase in unfunded liability due to various factors, including insufficient investment returns, inadequate contributions and inaccurate or overly aggressive assumptions. Hence, a single metric cannot effectively capture the different drivers contributing to the increase of a plan's unfunded pension obligation. This section analyzes historical trends in various metrics identified by the PRB and makes comparisons to understand the sources of growth in unfunded liability for Odessa Fire.

Odessa Fire's funded status has been steadily declining since 2000. Numerous factors have contributed to this deterioration, including inadequate contributions, investment returns being lower than the chosen assumption, increased benefit payments, and the inclusion of DROP accounts accruing interest.

### Assets and Liabilities

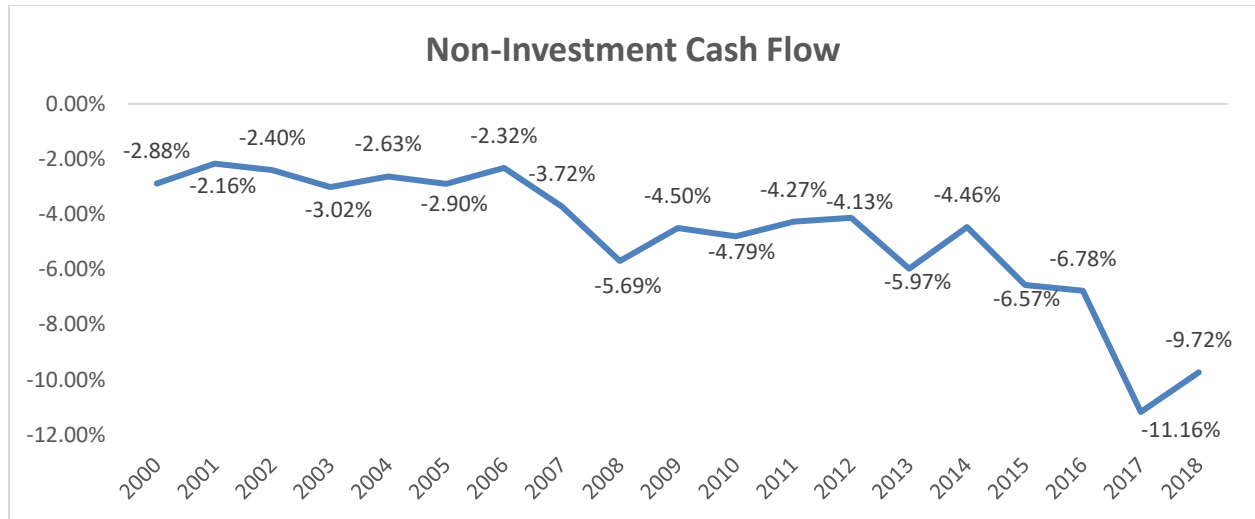
Funding Trends									
Funded Ratio, Assets, Liabilities and Year over Year Growth									
Valuation Year	2007	2009	2011	2013	2015	2016	2017	2018	2019
Funded Ratio	76.59%	58.28%	62.09%	48.82%	49.75%	43.12%	45.12%	43.08%	39.29%
Am Period (years)	38	Infinite	71	Infinite	Infinite	Infinite	46.5	47.1	77.5
UAAL (in millions)	\$14.16	\$29.13	\$28.19	\$44.83	\$49.09	\$63.35	\$58.20	\$60.60	\$67.83
AVA (in millions)	\$46.43	\$40.70	\$46.17	\$42.76	\$48.59	\$48.03	\$47.85	\$45.87	\$43.89
AVA Growth (YoY)	7.35%	-6.29%	6.51%	-3.77%	6.60%	-0.58%	-0.19%	-2.09%	-2.18%
AAL (in millions)	\$60.50	\$69.83	\$74.36	\$87.59	\$97.68	\$111.38	\$106.05	\$106.47	\$111.71
AAL Growth (YoY)	6.75%	7.43%	3.19%	8.53%	5.60%	6.78%	-2.42%	0.2%	2.43%

Odessa Fire's actuarial accrued liability (AAL) nearly doubled between 2007 and 2019. During the same time period, the actuarial value of assets (AVA) declined. The Fund was 77% funded in 2000 but fell to below 40% in 2019.

### Cash Flow

Odessa Fire had the second lowest non-investment cash flow in the State of Texas in 2017. The large drop in 2017 was primarily caused by larger than normal DROP distributions. Total contributions have grown on average by 7% annually since 2009 but are being outpaced by the average growth in yearly benefit disbursements of 8%. Benefit disbursements and contribution refunds are nearly double the amount of contributions the Fund receives.

A negative non-investment cash flow is not abnormal for mature defined benefit pension plans. However, a cash flow percentage this low is likely to be a drag on potential investment returns because a plan must either invest in a higher proportion of income-producing investments, which traditionally provide lower returns, or must liquidate existing assets to pay out current benefits and/or expenses.



## Peer Group Key Metric Comparison

		Funding Val Metrics						Fiscal Year End Metrics			
Peer Group Plans	MVA	Am Period Date	Am Period	Funded Ratio	UAAL as % of Payroll	Assumed Interest	Payroll Growth	FYE	Actual Cont. as % of ADC	DROP as % of FNP	Non-Investment Cash Flow as % of FNP
Midland Firemen's Relief & Retirement Fund	\$ 89,754,731	12/31/2015	44.7	65.78%	264.77%	8.00%	4.50%	12/31/2016	89.77%	0.32%	-2.44%
Abilene Firemen's Relief & Retirement Fund	\$ 57,127,453	10/1/2017	31.9	55.69%	341.79%	8.00%	4.00%	9/30/2017	97.77%	0.34%	-4.77%
Wichita Falls Firemen's Relief & Retirement Fund	\$ 51,447,622	1/1/2018	Infinite	57.70%	316.54%	7.75%	4.00%	12/31/2017	63.05%	N/A	-5.31%
Port Arthur Firemen's Relief & Retirement Fund	\$ 49,890,603	12/31/2015	18.3	77.97%	160.73%	8.00%	4.00%	12/31/2017	100.07%	N/A	-2.01%
McAllen Firemen's Relief & Retirement Fund	\$ 49,459,309	10/1/2016	41.4	69.11%	187.25%	7.75%	4.00%	9/30/2017	89.78%	N/A	-2.19%
<b>Odessa Firemen's Relief &amp; Retirement Fund</b>	<b>\$ 45,717,250</b>	<b>1/1/2018</b>	<b>47.1</b>	<b>43.08%</b>	<b>510.60%</b>	<b>7.75%</b>	<b>3.50%</b>	<b>12/31/2017</b>	<b>81.31%</b>	<b>4.54%</b>	<b>-11.16%</b>
Galveston Firefighter's Relief & Retirement Fund	\$ 44,651,640	12/31/2017	26.8	69.16%	248.42%	7.75%	3.00%	12/31/2017	63.67%	N/A	-4.75%
Longview Firemen's Relief & Retirement Fund	\$ 44,353,523	12/31/2017	40.2	46.05%	389.47%	8.00%	3.00%	12/31/2017	81.60%	0.00%	-5.56%
Temple Firemen's Relief & Retirement Fund	\$ 44,243,769	9/30/2016	28.4	75.12%	164.97%	7.75%	3.75%	9/30/2018	95.60%	N/A	-4.44%
Killeen Firefighters' Relief & Retirement Fund	\$ 43,947,221	9/30/2016	22.8	69.74%	114.49%	7.75%	3.25%	9/30/2017	95.94%	N/A	-0.29%
Texarkana Firemen's Relief & Retirement Fund	\$ 34,819,005	12/31/2017	15.0	86.32%	123.72%	7.75%	3.25%	12/31/2017	101.88%	N/A	-3.61%

## Peer Group Sponsor Funding Comparison

Peer Group Plans	General Fund Expenditures (GFE)	EOY GF Bal	UAAL	Expected Employer Contributions	ADC	30-yr Shortfall	30-Y SF % of ADC	30-Y SF % of GFE
Midland Firemen's Relief & Retirement Fund	\$ 119,672,568	\$ 84,781,426	\$ 58,952,399	\$ 3,609,935	\$ 5,180,744	\$ 1,570,809	30.32%	1.31%
Abilene Firemen's Relief & Retirement Fund	\$ 86,557,678	\$ 28,228,036	\$ 47,286,729	\$ 2,663,240	\$ 2,761,469	\$ 98,229	3.56%	0.11%
Wichita Falls Firemen's Relief & Retirement Fund	\$ 75,116,308	\$ 18,302,309	\$ 37,628,438	\$ 1,525,133	\$ 2,321,579	\$ 796,446	34.31%	1.06%
Port Arthur Firemen's Relief & Retirement Fund	\$ 56,688,967	\$ 24,633,956	\$ 16,966,441	\$ 1,307,126	N/A	No Shortfall	N/A	N/A
McAllen Firemen's Relief & Retirement Fund	\$ 108,224,906	\$ 52,747,641	\$ 21,571,433	\$ 1,497,603	\$ 1,668,099	\$ 170,496	10.22%	0.16%
<b>Odessa Firemen's Relief &amp; Retirement Fund</b>	<b>\$ 96,559,369</b>	<b>\$ 25,859,030</b>	<b>\$ 60,600,337</b>	<b>\$ 2,373,699</b>	<b>\$ 2,987,300</b>	<b>\$ 613,601</b>	<b>20.54%</b>	<b>0.64%</b>
Galveston Firefighter's Relief & Retirement Fund	\$ 46,926,941	\$ 19,821,390	\$ 19,767,545	\$ 1,352,717	N/A	No Shortfall	N/A	N/A
Longview Firemen's Relief & Retirement Fund	\$ 59,460,750	\$ 19,184,004	\$ 50,377,694	\$ 2,360,600	\$ 2,815,904	\$ 455,304	16.17%	0.77%
Temple Firemen's Relief & Retirement Fund	\$ 71,640,414	\$ 27,779,728	\$ 16,392,673	\$ 1,380,104	N/A	No Shortfall	N/A	N/A
Killeen Firefighters' Relief & Retirement Fund	\$ 76,891,477	\$ 22,315,018	\$ 18,990,872	\$ 1,878,929	\$ 2,020,571	\$ 141,642	7.01%	0.18%
Texarkana Firemen's Relief & Retirement Fund	\$ 32,041,049	\$ 14,114,855	\$ 5,584,452	\$ 880,171	N/A	No Shortfall	N/A	N/A

## Peer Group Expense Comparison

Peer Group Plans	10 yr. return (Net) <sup>23</sup>	Active/ Annuitants	Average Benefit	NPL	Admin Expenses	Admin Exp as % of Assets	Investment Expenses	Inv Exp as % of Assets	Other Expenses	Total Expenses	Exp as % of Assets
Midland Firemen's Relief & Retirement Fund	3.97%	1.26	\$ 49,417	\$ 58,207,074	\$ 145,324	0.16%	\$ 735,812	0.82%	\$134,245	\$ 1,015,381	1.13%
Abilene Firemen's Relief & Retirement Fund	4.40%	0.94	\$ 41,351	\$ 52,087,861	\$ 38,825	0.07%	\$ 224,051	0.39%	-	\$ 262,876	0.46%
Wichita Falls Firemen's Relief & Retirement Fund	5.81%	1.15	\$ 32,947	\$ 70,486,203	\$ 157,958	0.31%	\$ 198,290	0.39%	-	\$ 356,248	0.69%
Port Arthur Firemen's Relief & Retirement Fund	5.98%	1.42	\$ 46,802	\$ 12,214,539	\$ 59,039	0.12%	\$ 47,624	0.10%	-	\$ 106,663	0.21%
McAllen Firemen's Relief & Retirement Fund	4.17%	1.65	\$ 33,865	\$ 25,632,406	\$ 33,822	0.07%	\$ 295,831	0.60%	-	\$ 329,653	0.67%
<b>Odessa Firemen's Relief &amp; Retirement Fund</b>	<b>3.76%</b>	<b>0.91</b>	<b>\$ 52,055</b>	<b>\$ 92,884,709</b>	<b>\$ 204,605</b>	<b>0.45%</b>	<b>\$ 218,069</b>	<b>0.48%</b>	<b>-</b>	<b>\$ 422,674</b>	<b>0.92%</b>
Galveston Firefighter's Relief & Retirement Fund	5.30%	1.59	\$ 12,259	\$ 12,508,868	\$ 133,006	0.30%	\$ 102,848	0.23%	-	\$ 235,854	0.53%
Longview Firemen's Relief & Retirement Fund	3.17%	1.19	\$ 42,251	\$46,871,450	\$ 97,453	0.22%	\$ 176,452	0.40%	-	\$ 273,905	0.62%
Temple Firemen's Relief & Retirement Fund	4.17%	1.32	\$ 48,054	\$ 16,382,826	\$ 47,886	0.11%	\$ 105,167	0.24%	-	\$ 153,053	0.35%
Killeen Firefighters' Relief & Retirement Fund	4.30%	3.13	\$ 35,937	\$ 16,319,951	\$ 96,351	0.22%	\$ 54,185	0.12%	-	\$ 150,536	0.34%
Texarkana Firemen's Relief & Retirement Fund	5.73%	1.12	\$ 31,216	\$ 6,016,096	\$ 60,495	0.17%	\$ 232,794	0.67%	-	\$ 293,289	0.84%

<sup>23</sup> All 10-year returns are as of the respective plan's 2017 fiscal year.



## Peer Group Value of Benefits Comparison

Peer Group Plans	Retirement Age	YCS	(a) Multiplier as % of FAS	Normal Form of Payment	COLA	Social Security?	(b) Annuity Factor <sup>24</sup>	(a)*(b) PVFB as % of FAS
Abilene Firemen's Relief & Retirement Fund	50	20	60.00%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	No	24.9775	1498.65%
Big Spring Firemen's Relief & Retirement Fund	50	20	51.00%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	No	24.9775	1273.85%
Galveston Firefighter's Relief & Retirement Fund	50	20	60.00%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	No	24.9775	1498.65%
Longview Firemen's Relief & Retirement Fund	55	20	60.00%	Life Annuity	None	No	20.1329	1207.97%
Lubbock Fire Pension Fund	50	20	68.92%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	No	24.9775	1721.45%
McAllen Firemen's Relief & Retirement Fund	50	20	58.00%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	Yes	24.9775	1448.70%
Midland Firemen's Relief & Retirement Fund	50	20	75.00%	Life Annuity with 75% continued to surviving spouse (J&75%)	None	No	25.3996	1904.97%
<b>Odessa Firemen's Relief &amp; Retirement Fund (Pre-FSRP)</b>	<b>50</b>	<b>20</b>	<b>72.00%</b>	<b>Life Annuity with 2/3 continued to surviving spouse (J&amp;2/3)</b>	<b>None</b>	<b>Yes</b>	<b>24.9775</b>	<b>1798.38%</b>
<b>Odessa Firemen's Relief &amp; Retirement Fund (Post-FSRP)</b>	<b>55</b>	<b>25</b>	<b>72.00%</b>	<b>Life Annuity</b>	<b>None</b>	<b>Yes</b>	<b>20.1329</b>	<b>1449.57%</b>
Port Arthur Firemen's Relief & Retirement Fund	50	20	54.00%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	No	24.9775	1348.79%
San Angelo Firemen's Relief & Retirement Fund	50	20	66.00%	Life Annuity with 72% continued to surviving spouse (J&72%)	1.2% after age 65	No	28.7490	1897.43%
Temple Firemen's Relief & Retirement Fund	50	20	65.75%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	No	24.9775	1642.27%
Texarkana Firemen's Relief & Retirement Fund	50	20	61.80%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	No	24.9775	1543.61%
Wichita Falls Firemen's Relief & Retirement Fund	55	20	50.00%	Life Annuity with 2/3 continued to surviving spouse (J&2/3)	None	Yes	24.9775	1248.88%

<sup>24</sup> Calculated using 2.5% interest rate, male members with spouses 2 years younger, and RP 2006 Healthy Annuitant mortality with fully generational projection using scale MP2018.

## **Comments from Odessa Firemen's Relief and Retirement Fund**



VIA EMAIL

September 6, 2019

Texas Pension Review Board  
P.O. Box 13498  
Austin, TX 78711-3498

Re: Odessa Firefighters' Relief and Retirement Fund  
Intensive Actuarial Review Response

To Whom It May Concern:

Texas Government Code Section 801.202(2) requires the Pension Review Board (PRB) to conduct intensive studies of potential or existing problems that threaten the actuarial soundness of or inhibit an equitable distribution of benefits in one or more public retirement systems. The Odessa Firefighter's Relief & Retirement Fund was made aware of our selection on May 16, 2019, at the request of the City of Odessa.

Based on these requirements, we are writing to respond to the Pension Review Board's (PRB) draft of the Intensive Actuarial Review that was done on behalf of the Odessa Firefighters' Relief and Retirement Fund (Fund). The contents of the remainder of this letter and its attachments will illustrate to the PRB the steps that the Fund has made in the previous months, and years, to improve actuarial soundness and comment on or correct any data needing review.

Upon initial review of the draft it appears we did not receive the full report with pages 20 and 21 missing, or possibly it was just mis-numbered.

#### **Plan Summary**

On page 16 of the draft report, Plan Summary – there are two discrepancies worth noting. First, under vesting: post 2016 benefit vesting is twenty (20) years of service, with full benefits payable at twenty-five (25) years of service. Secondly, is the Social Security notation: the No should be Yes. All current members of the Odessa Firefighter's Relief & Retirement Fund pay into Social Security. It should be noted that the City of Odessa recently approved the construction of a new fire station that will produce new active members creating payroll and contribution growth which will directly assist the funding of the plan. The plan's actuary has been made aware of this information and has discussed the impact of it in their portion of the response.

#### **Attachments**

Attached to this letter is response and correspondence from the Fund's investment consultant, Jeff Swanson, and actuary, Brad Heinrichs, in relation to the Intensive Actuarial Review draft.

It is clear in both Foster & Foster and Southeastern's response that the Fund has taken extraordinary measures over the past several years to improve and restore actuarial soundness. Much consideration has been given to all aspects of the Fund by the Board of Trustees, Actuary, and Investment Consultant. The Fund is in current, and continuous, conversation with the City of Odessa to improve the funding status.

If you have any questions, please do not hesitate to contact us.

Respectfully submitted,



Travis Jones - Chairman

September 5, 2019

Board of Trustees  
Odessa Firefighters'  
Relief and Retirement Fund  
1921 E. 37<sup>th</sup> St, Suite C  
Odessa, TX 79762

*Re: Pension Review Board (PRB) Intensive Actuarial Review*

Dear Board:

Foster & Foster has reviewed the Intensive Actuarial Review of your fund and have several comments that we would like for you to pass along to the PRB. First, I think the review was well-done given the amount of information that the PRB had at its disposal, and in general do not dispute the math used in the additional calculations performed by the PRB. We believe, however, that some additional commentary should be included to help properly frame the entire picture as to what has occurred or will occur in the future with this Fund. For purposes of organizing my thoughts into a beneficial format, we will separate our comments into the following three (3) categories: Fund Status as of December 2015, Board Actions Since 2015, and Future Projections/Solutions.

## **Fund Status as of December 2015**

Foster & Foster was engaged to become the Fund's actuary in December of 2015 and was asked to quickly complete the January 1, 2015 Actuarial Report. The most recent actuarial valuation had been completed as of January 1, 2013. A paraphrased summary of results and the assumptions that we inherited are as follows:

Assumed Rate of Return:	8.25% (down from 8.50% in the 2011 valuation)
Payroll Growth Rate:	4.50%
Salary Increases:	4.50%

Amortization Period:	Infinite
Funded Ratio:	49.7%
% of Accrued PVB to Total:	77.4%
Total Normal Cost Rate:	18.7%
City Contribution Rate:	16.0%
Member Contribution Rate:	15.0%

Number of Active Firefighters:	163
Number of Actives 2003:	164
Number of Money Managers:	1
Number of Inv. Consultants:	0



Our initial comments to the Board were as follows:

- 1) We are concerned about the assumptions being used to develop the funded status, adequacy of the contributions, and amortization period. As you can see from the statistics on the prior page, three of the major assumptions were rather aggressive relative to those used by our other 350 public plans, or by most other public funds that exist across the country. In our initial review, it did not appear that the plan had been coming close to meeting those assumptions for as far back as we could see. We recommended (and the Board approved) an Experience Study.
- 2) Even if those assumptions were reasonable, the funded ratio was extremely low and the amortization period was infinite, which clearly means that an infusion of cash or a reduction of benefits was desperately needed.
- 3) We were troubled that 77.4% of the total present value of benefits had already been accrued. This indicated to us only 22.6% of the total PVB is "in play," or, said differently, less than one-fourth (1/4) of the total liability could be lowered by a reduction in benefits. Additionally, the employees are already paying for a majority (15% of the 18.7%) of their annual accrual of benefits, based on the inherited assumptions.

## **Board Actions Since 2015**

The Board approved and we delivered an Experience Study on July 19, 2016. As we feared, the results of the Study showed that the picture was quite a bit worse than the Board had previously been led to believe. Using a 7.75% Assumed Rate of Return (which we continue to feel remains on the aggressive end of the spectrum) and a 3.5% payroll growth assumption (also still somewhat aggressive), along with changes to salary scales, retirement rates, withdrawal rates, and disability rates, the Fund was 14.5% of pay away on an annual basis from achieving a 40-year amortization. The Fund was 25.4% of annual payroll away from achieving a 20-year amortization.

Clearly, adjustments needed to be made, and the Board immediately made the following actions:

- 1) Began by approving all of the assumption changes outlined in our Experience Study.
- 2) Voted to begin performing annual actuarial valuations instead of bi-annual, to better monitor their funded status and amortization period.
- 3) Engaged our firm to perform an actuarial analysis of multiple benefit reduction/contribution increase scenarios.
- 4) Conducted meetings with All of the members (with the actuary and the City Manager present) to provide information about the status of the Fund and to inform them that benefit reductions or contribution increases were imminent.

The results of the 1/1/2016 Actuarial Valuation using the new assumptions showed that the 40-year funding cost was 47.0%, which meant that the Fund was 16.0% of annual payroll away from a 40-year amortization, and not the 14.5% as illustrated in the Experience Study based upon the 1/1/2015 valuation.

By the end of 2016, the Board/City/Members agreed to substantial benefit reductions as well as to increase contributions. At that time, under our guidance, the Board filed a Funding Soundness Restoration Plan with the PRB. The 1/1/2017 Actuarial Valuation showed the impact of the benefit changes and contribution rate increases. The stats were as follows:

Assumed Rate of Return:	7.75% (down from 8.25% in the 2015 valuation)
Payroll Growth Rate:	3.50% (down from 4.5% in the 2015 valuation)
Salary Increases:	6.40% (up from 4.5% in the 2015 valuation)

Amortization Period:	46.5 (previously infinite)
Funded Ratio:	45.1% (up from 41.8%)
% of Accrued PVB to Total:	84.6% (up from 77.9%)
Total Normal Cost Rate:	15.1% (down from 21.6%)
City Contribution Rate:	20.0% (up from 16.0%)
Member Contribution Rate:	18.0% (up from 15.0%)

Number of Active Firefighters:	161
Number of Actives 2003:	164
Number of Money Managers:	1
Number of Inv. Consultants:	0

As you can see above, these changes were substantial. Many representatives from other TLFFRA funds viewed these changes to be drastic. Both the Members and the City shared the pain caused by these changes.

The 2018 Actuarial Valuation prompted the Board to make further changes. They did not sit idle, since their objective is to obtain an acceptable amortization period and for this Fund to be sustainable over the long term. Upon receiving the 2018 Valuation, the Board decided to make some changes to the way it handles its investments. They hired Southeastern Advisors, an investment consulting firm, to provide them with an analysis and opinion as to how they were currently invested relative to their goal of achieving a 7.75% Assumed Rate of Return. While we will leave the technical details to Mr. Swanson, the Fund's Consultant, the Board made several changes to its money management process. At a minimum, they hired new managers and a new custodian. We are told that their ability to achieve a 7.75% return assumption is much greater now, and at less risk, than what was previously possible.

Unfortunately, the market took a major downturn at the end of 2018, causing nearly all pension funds across the country to sustain major investment losses. These losses were manifested in Odessa's 1/1/2019 Actuarial Valuation, shown in the statistics below:

Assumed Rate of Return:	7.75%
Payroll Growth Rate:	3.50%
Salary Increases:	6.40%

Amortization Period:	77.5
Funded Ratio:	39.3%
% of Accrued PVB to Total:	83.6%
Total Normal Cost Rate:	14.9%
City Contribution Rate:	20.0%
Member Contribution Rate:	18.0%

Number of Active Firefighters:	160
Number of Actives 2003:	164
Number of Money Managers:	10+
Number of Inv. Consultants:	1

The 40-year funding cost for this Fund is currently 42.75%, which is 4.75% more per year than what is currently being contributed.

## **Future Projections**

Since the 1/1/2019 Actuarial Valuation, the stock market has erased the losses it sustained at the end of 2018, and the Fund is on more stable ground. If we were to update the previous valuation with today's assets, we believe that you would see numbers like those inherent in the 2018 valuation, with an amortization period in the mid 40's.

It is our opinion that future benefit cuts are not a good idea, in spite of the Fund's current funded status, for the following reasons:

- 1) With 84% of the total PVB already accrued, benefit reductions for current members would make very little difference in the overall result. In other words, there isn't much meat left on the bone.
- 2) The Members contribute 18% of pay, and their Normal Cost is less than 15% of pay. This means that the Members are paying 3.1% more for their benefit than what they are earning.
- 3) As illustrated nicely in the Intensive Review, the pension benefits provided to Odessa Firefighters are now worse than those Fire Departments that Odessa competes with for talent. Specifically, neighboring cities like Midland and San Angelo now have larger benefits than Odessa. Furthermore, what is not inherent in the Peer Value Benefits Comparison is that Odessa Firefighters now pay much more for their lower benefits than their peers. This issue is currently causing retention problems within the Odessa Fire department.

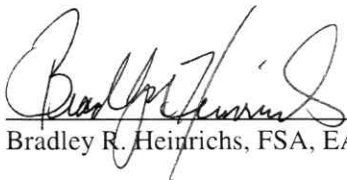



- 4) **Help is on the way!** It is our understanding that the City has agreed to add another fire station, and the department size is expected to grow from the 160 actives shown in the 2019 valuation to approximately 210 over the next three years. These future Members will bring along at least an additional few million dollars in extra annual payroll, which would add an approximate \$700,000 of additional annual contributions to help pay down the Unfunded Liability. This \$700,000 would represent over 5% of current payroll, which would bring the Fund in line with a 40-year amortization.

The Board has requested that Foster & Foster perform a special actuarial analysis to estimate the impact of the changes to the size of the Fire department that will be occurring over the next few years in conjunction with the strong investment performance thus far in 2019. The results of this analysis will be completed and ready for discussion with a Foster & Foster representative in attendance at the scheduled September 19, 2019 PRB meeting. We feel that the result of this analysis will illustrate that no further action is currently needed in the form of a revised Funding Soundess Restoration Plan.

In conclusion, we feel that the Board has acted swiftly to make positive changes to their Plan. We intend to continue to work with the Board and its Investment Consultant to monitor experience as it pertains to the actuarial assumptions and make recommendations for change when necessary. The Board also intends to work closely with the City of Odessa to make sure that the Plan is adequately funded and is sustainable and capable of paying benefits for all current and future retirees.

Respectfully submitted,

  
Bradley R. Heinrichs, FSA, EA, MAAA

  
Drew D. Ballard, EA, MAAA



SOUTHEASTERN ADVISORY SERVICES, INC.  
*Registered Investment Advisor*



September 5, 2019

Board of Trustees  
Odessa Firefighters'  
Relief and Retirement Fund  
1921 E. 37th Street, Suite C  
Odessa, TX 79762

***Re: Pension Review Board (PRB) Intensive Actuarial Review***

Dear Board:

Southeastern Advisory Services has reviewed the Intensive Actuarial Review and would like to address each of the items that are raised regarding the investment program. I would like to start by commending the Board for their commitment and diligence and in making significant progress with the assets. I believe the PRB response is reasonable and I understand the logic behind their conclusions. The comments below are offered to assist to assist you in understanding the work and recommendations we have provided thus far.

**Background**

The Board hired their former manager in 2013 to manage all assets of the Fund. Southeastern has had a working relationship with this manager for many years. This manager was well known for its Large Cap Domestic Value Equity product. However, we were not aware of any other institutional clients using this firm as the sole manager where they also provide total portfolio management and asset allocation. Our firm had also evaluated the firm's other product offerings periodically through the years. Based on our research, we have never approved or recommended any of the other specialty products from this manager.

Upon review of the legacy Investment Policy Statement (IPS), risk allocations, and the individual manager's products, we developed the following general concerns:

- Concentration of assets with a single firm using internal products.
- The IPS document was authored by the asset manager.
- Overly aggressive IPS allocations given the Fund's cash outflows.
- Target allocation to public equity significantly higher than any of our public fund clients.
- The allocation to international equity of 24% was the highest that we have seen.
- The allocation to emerging market equity of 10% is higher than any public fund that we advise.
- Specialty strategies (MLP/REIT/Converts) generally had not added value to the Fund.
- High management fees for institutional balanced asset management.

Following our analysis of the investment portfolios for the fiscal year ending 12/31/18, we became uncomfortable with the Fund's asset performance and the level of risk taken. We noted the following specific concerns:

- The FYE 12/31/18 loss of -6.5% ranked #88 in the Wilshire Public Fund Universe.
- During the 4Q18 market correction, the loss of -10% ranked #90 in the Wilshire Public Fund Universe.
- For the three years ending 12/31/18, the standard deviation ranked #94 in the Wilshire Public Fund Universe.
- While we found that asset manager's flagship product had merit, the other internal specialty products were generally not compelling.

After sharing our findings with the Board, it was determined that first action should be to identify new assets manager(s). In order to do so, it would be necessary to revise the IPS and identify an appropriate target index. In doing so we provided target portfolio analysis including asset allocation modeling. We also provided a comparison of capital market assumptions to the current assumed rate of return. These comparisons were used to identify a base-line allocation summarized as follows:

- 65% weighting to public equity- the most common equity target amongst our public fund clients.
- 25% weighting to fixed income- consistent with the median in the Wilshire Public Fund Universe.
- 10% weighting to international equity- consistent with the median in the Wilshire Public Fund Universe.
- Deletion of the specialty segment and the addition of private real estate.

The Board then spent the first half of 2019, revising the investment policy, identifying and hiring an independent custodian and selecting target managers/funds. The revised IPS was adopted on May 30, 2019.

### **PRB Specific Concerns**

The Board has relied on Southeastern to provide the base-line allocation. We agree with the PRB that the Board should have an asset allocation plan and engage in a strategic asset allocation review. We also agree that this follows industry best practices. In our judgement however, we determined that moving the assets to new management with responsible risk allocations was the priority. The Board is now in an excellent position to conduct an asset allocation study that can often be a multi-quarter process. Southeastern acknowledges the Fund's negative cash flow and funded status and will provide a comprehensive asset allocation study that considers these factors in the coming quarters.

Southeastern does not rely on asset-only models when developing strategic asset allocation reviews. Our intention in setting the base-line allocation was not an effort to achieve the predetermined overall target returns of 7.75%. The base-line allocation was determined to be one that, in our judgement, was a responsible starting point from which to allocate the assets and to later conduct a comprehensive review. As an aside, we consult with every client each year on the reasonableness of the assumed rate of return and have been advocates for reducing these assumptions for many years.

Regarding the IPS, we believe risk is best measured by standard deviation. The new IPS does explain that the volatility of the total portfolio is expected to be similar to the target index. Our reporting measures this and scores each client's risk profile to their peers in the Wilshire Public Fund Universe. I believe that the asset allocation study will provide the answer to what constitutes a reasonable level of risk given the Fund's near-term liquidity needs. Once this study is completed, we are, of course, in favor of adding this into the IPS document.

In summary, we have been on retainer with the Odessa Fire for the past three quarters. In this short time, the Board has taken decisive action to address the risks and hopefully to improve future investment performance. I understand the Fund's unique challenges, the PRB's concerns and acknowledge that we have more work to do. Southeastern is committed to assisting with the Board in every way possible to ensure a responsible and profitable investment program.

Sincerely,



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Jeffrey Swanson, Senior Consultant



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John Small, President

ODESSA FIREFIGHTERS'  
RELIEF AND RETIREMENT FUND

Actuarial Projection Analysis  
September 17, 2019





September 17, 2019

Board of Trustees  
Odessa Firefighters'  
Relief and Retirement Fund  
1921 E. 37<sup>th</sup> St, Suite B  
Odessa, TX 79762

*Re: Projection Analysis*

Dear Board:

As requested, we have performed a special actuarial projection analysis to estimate the amortization period and City funding costs in the coming years under various scenarios. As you are aware, the Texas Pension Review Board (PRB) recently submitted a preliminary draft of their intensive actuarial review of the Odessa Firemen's Relief and Retirement Fund (Fund). Included in this review are comments from the PRB that the recent benefit reductions combined with the contribution increases from the members and the City, as included in the Funding Soundness Restoration Plan (FSRP), are not sufficient to achieve a 40-year amortization period by the target date of 2026. The PRB has deemed the Fund out of compliance with their original FSRP and stated that a revised FSRP must be submitted on or before November 30, 2019.

As you know, the stock market saw a significant decline in the fourth quarter of the 2018 calendar year (the S&P500 decreased from around 2,914 to 2,507; about 14%), resulting in significant asset losses to the Fund. Since the actuarial valuation is performed based on a measurement date of January 1<sup>st</sup> of each year, the asset values used for the valuation were captured following this decline, which increased the amortization period significantly in the 2019 actuarial valuation. The asset losses realized in the fourth quarter of 2018 were quickly recouped at the beginning of 2019 (the S&P500 rose from 2,507 to above 2,914 by the end of April) and the Fund is currently realizing strong investment returns thus far in 2019. As of the date of this letter, the S&P is around 3,000, approximately 20% higher than its value on January 1<sup>st</sup>. The Fund's investment consultant has estimated that the Fund's 2019 year-to-date return is approximately 13% (net of fees). This analysis will take into account this investment performance when estimating the actuarial funding metrics beyond 2019.

Also, based on prior conversations with the Board and the City, it is our understanding that the City Council has approved a plan to build a new fire station in the City which will increase the department size significantly in the next few years. This analysis will illustrate the estimated actuarial impact that the increased active membership will have on the Fund. As requested, the body of this letter provides the Board with actuarial projection results based on the following:

*Scenario 1:* Baseline projection – future experience in line with current actuarial assumptions and no growth in active membership

*Scenario 2:* Same as Scenario 1 but assuming an actual investment return (net of expenses) in calendar 2019 of 13% based on most recent return information as provided by the Fund's investment consultant

*Scenario 3:* Same as Scenario 2 but reflecting expected increase in active membership from 160 firefighters on January 1, 2019 to 180 active firefighters in 2020 and 2021 and 210 firefighters from 2022 and beyond (the anticipated completion date of the new fire station).

We feel the results of this analysis will provide valuable information for the upcoming meeting with the PRB later this week. Prior to discussing results of each scenario, it is important to first review the various assumptions that have been utilized to estimate future assets and liabilities, as well as the resulting estimated amortization period.

### *Assumptions Utilized for Projection*

When reviewing the estimated results presented in this analysis, please keep in mind the following:

- The liability projections were based upon census data as of the January 1, 2019 actuarial valuation. Additionally, we relied upon actuarial assumptions, methods, asset information, and plan provisions set forth in the January 1, 2019 actuarial valuation report.
- Under Scenario 1, the market value of assets were assumed to earn 7.75% per year, net of all expenses, beginning January 1, 2019. This is the respective assumption currently used for valuation purposes. Under Scenarios 2 and 3, the market value of assets were assumed to earn 13.0% in calendar 2019, and 7.75% per year in all subsequent years.
- Under Scenarios 1 and 2, the active population was assumed to be constant, meaning that as active members are projected to terminate or retire, they will be replaced with new members. Under Scenario 3, based on direction from the Board, the active population was assumed to be as follows:

<u>Year Beginning January 1</u>	<u>Active Population</u>
2019	160
2020-2021	180
2022+	210

- Based on recent experience, the following demographics were used for populating new entrants into the Fund:

<u>Weighting Factor</u>	<u>Hire Age</u>	<u>Beginning Salary (2019)</u>	<u>Percent Male</u>
20%	19-20	\$48,432	95%
30%	22-23	\$48,432	95%
20%	25-26	\$48,432	95%
15%	28-29	\$48,432	95%
15%	31-32	\$48,432	95%

- Unless otherwise stated, future mortality, disability, turnover, retirement, payroll, and wage increases were all assumed to occur in accordance with the actuarial assumptions outlined in the January 1, 2019 actuarial valuation report.

Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions or contribution rates, changes in assumptions, or plan experience differing from expectations.

It is important to remember that the ultimate cost of your retirement plan is independent of any actuarial assumptions or methods utilized. This cost will be the sum of the benefits paid from the fund and expenses incurred, less any net investment gains received.

## ***Results Discussion***

### ***Scenario 1 – Baseline Projection***

Scenario 1 represents a projection of the Fund's asset and liabilities such that future experience is in-line with the current actuarial assumptions in all future years with a constant active membership size of 160 firefighters. The PRB states in its intensive actuarial review that based on similar parameters, the Fund's assets are expected to be depleted within 16 years based on an analysis prescribed by the Governmental Accounting Standards Board (GASB). The PRB review acknowledges that the GASB analysis does not include contributions expected to finance benefits of new members hired after the valuation date and estimated that including such contributions would only postpone the asset depletion date by 5-10 years.

Based on our Scenario 1 projection analysis, we estimate that the Fund's assets will be depleted sometime in calendar year 2044, consistent with the PRB's estimates. This may come as a surprise to the Board since the most recent actuarial valuation resulted in an amortization period of 77.5 years which would indicate that the Fund would eventually be 100% funded and never run out of money. It is important to understand that the amortization period of 77.5 years was based on the smoothed actuarial value of assets as of the valuation date which was about \$4.6 million higher than the market value of assets, meaning that the Fund has \$4.6 million in deferred investment losses that have not yet been recognized in the actuarial value.

As noted on page 5 of our January 1, 2019 actuarial valuation report, if the actuarial smoothing technique was removed and the market value of assets was used, the amortization period would be infinite. In fact, based on our scenario 1 projection analysis, the amortization period is expected to reach an infinite level in 2020 as a portion of the deferred investment losses are recognized.

These results should be areas of concern for the interested stakeholders but are also the basis for performing this analysis to demonstrate the expected impact of scenarios 2 and 3 on the Fund. We have included an exhibit following this letter that shows a number of important figures under each scenario.

### ***Scenario 2 – 13% Investment Return in Calendar 2019***

As previously mentioned, the actuarial valuation was performed at a time following a significant stock market decline in the final quarter of calendar 2018. Since that time, the S&P500 has rebounded (and more) from the losses sustained during that quarter and has increased approximately 20% so far in calendar 2019. Based on information provided by your investment consultant, the Fund has realized a return of approximately 13% (net of fees) year-to-date, surpassing the 7.75% return assumption.

Based on the valuation timing and the market bounce back, we felt it would be valuable information in advance of the PRB meeting to estimate the actuarial impact of the 2019 investment gains realized thus far. As mentioned above, the baseline projection resulted in an estimated asset depletion in the year 2044.

If we were to assume the Fund achieves a 13% market value return in 2019, the estimated asset depletion date would extend from 2044 to 2048. It is important to point out that, due to the current level of deferred investment losses, the Fund's amortization period is still expected to be at an infinite level following recognition of those asset losses even with the anticipated favorable market return in 2019.

### *Scenario 3 – 13% Investment Return in Calendar 2019; Active Membership Growth*

It is our understanding that the City has approved measures that will finance the construction of a brand-new fire station (as well as updating an existing one) that will result in significant growth to the Odessa Fire department. We have also been told that there are currently around 180 firefighters on the active payroll (up from 160 as of January 1<sup>st</sup>) with the expectation that seven (7) new firefighters will be hired before the end of 2019. Based on this information and the estimated completion date of the new fire station, scenario 3 reflects an increasing department size from 160 active firefighters as of January 1, 2019 to 180 actives in 2020 and 2021 and 210 actives in 2022 and beyond.

The Board's main question to us was "What impact will this have on the Fund and its amortization period?"

As shown on the table below, the impact is significant, and the expected department growth has the effect of lowering the amortization period to a level that should satisfy the PRB. There are two major components to consider under scenario 3 that are driving the actuarial projection results in a manner that results in an amortization period that is below 40 years.

First, the current payroll growth assumption used in the actuarial valuation is 3.5% per year. If the active membership size grows from 160 actives in 2019 to around 210 in 2022, this represents over a 30% increase in the active workforce and a similar growth in the covered payroll. This significant increase in covered payroll means a significant increase in expected contributions to the Fund (the City contributes 20% of payroll and the members contribute 18%) which results in a substantial increase in cash available to pay off the unfunded actuarial accrued liability.

Also, we have determined that the Normal Cost rate (the annual cost of benefit accruals) for new entrants is approximately 13.25% of salary but they are required to contribute 18% of their paychecks. This means that the influx of new entrants expected in the next several years will not only be funding their benefit accruals but will also be contributing around 4.75% (18.00% minus 13.25%) of their annual pay to help pay down the existing unfunded liability.

Below, we have included a table that shows the estimated amortization period over the next ten (10) years based on our scenario 3 analysis. As you can see, the amortization period drops significantly in the year 2022 when the active membership is estimated to reach 210 firefighters. It is important to note that the amortization period is estimated to be below 40 years (39.8) by the FSRP target date of 2026. Also, unlike the results of scenarios 1 and 2, the Fund is not expected to run out of money based on the estimates of scenario 3.

January 1	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
Amortization Period	77.5	64.6	65.3	43.5	43.5	41.9	41.0	39.8	38.4	37.1



## ***Conclusion***

As stated in our comments as a response to the PRB's intensive actuarial review, we feel their review was well-done given the information available to them and in general do not dispute the math used in their additional calculations. We also feel that the economic outlook of the Fund has changed considerably since completion of the January 1, 2019 actuarial valuation, as outlined in scenarios 2 and 3 of this analysis.

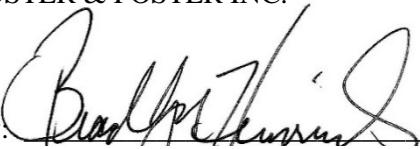
Due to the strong investment performance thus far in 2019, and the expected increase in the size of the Odessa Fire department, we believe the results of this analysis show that no further action is necessary and the current Funding Soundness Restoration Plan is still viable and valid. Please refer to the exhibits included at the end of this report.


It is important to understand that future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions or contribution rates, changes in assumptions, or plan experience differing from expectations.

The undersigned is familiar with the immediate and long-term aspects of pension valuations, and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein.

Respectfully submitted,

FOSTER & FOSTER INC.

By:   
Bradley R. Heinrichs, FSA, EA, MAAA

By:   
Drew D. Ballard, EA, MAAA

**Exhibits****Scenario 1 -- Estimated Baseline Projection**

Valuation	Covered		Asset	Actuarial		Funded	Amortization	City 40-
<u>Year</u>	<u>Payroll</u>	<u>Contributions</u>	<u>Return</u>	<u>Asset Value</u>	<u>UAAL</u>	<u>Ratio</u>	<u>Period</u>	<u>Year Cost</u>
2019	11,919,000	4,704,000	7.75%	43,887,000	67,827,000	39.3%	77.5	24.8%
2020	12,406,000	4,824,000	7.75%	39,877,000	73,080,000	35.3%	Infinite	25.8%
2021	12,849,000	4,960,000	7.75%	38,462,000	76,935,000	33.3%	Infinite	26.3%
2022	13,358,000	5,135,000	7.75%	37,254,000	80,858,000	31.5%	Infinite	26.6%
2023	13,763,000	5,285,000	7.75%	34,933,000	85,296,000	29.1%	Infinite	27.3%
2024	14,201,000	5,485,000	7.75%	34,476,000	88,750,000	28.0%	Infinite	27.6%
2025	14,651,000	5,696,000	7.75%	33,911,000	92,331,000	26.9%	Infinite	27.8%
2026	15,201,000	5,849,000	7.75%	32,580,000	96,093,000	25.3%	Infinite	27.9%
2027	15,771,000	6,029,000	7.75%	31,363,000	99,792,000	23.9%	Infinite	27.9%
2028	16,330,000	6,210,000	7.75%	30,006,000	103,673,000	22.5%	Infinite	28.0%

**Scenario 2 -- Estimated -- 13% Investment Return in Calendar 2019**

Valuation	Covered		Asset	Actuarial		Funded	Amortization	City 40-
<u>Year</u>	<u>Payroll</u>	<u>Contributions</u>	<u>Return</u>	<u>Asset Value</u>	<u>UAAL</u>	<u>Ratio</u>	<u>Period</u>	<u>Year Cost</u>
2019	11,919,000	4,704,000	13.00%	43,887,000	67,827,000	39.3%	77.5	24.8%
2020	12,405,000	4,824,000	7.75%	40,263,000	72,694,000	35.6%	Infinite	25.6%
2021	12,849,000	4,960,000	7.75%	39,383,000	76,014,000	34.1%	Infinite	25.9%
2022	13,358,000	5,135,000	7.75%	38,721,000	79,391,000	32.8%	141.1	26.0%
2023	13,763,000	5,285,000	7.75%	36,959,000	83,270,000	30.7%	Infinite	26.6%
2024	14,201,000	5,485,000	7.75%	37,074,000	86,151,000	30.1%	Infinite	26.6%
2025	14,651,000	5,696,000	7.75%	36,711,000	89,531,000	29.1%	Infinite	26.8%
2026	15,201,000	5,849,000	7.75%	35,597,000	93,077,000	27.7%	Infinite	26.9%
2027	15,771,000	6,029,000	7.75%	34,613,000	96,541,000	26.4%	Infinite	26.9%
2028	16,330,000	6,210,000	7.75%	33,508,000	100,170,000	25.1%	Infinite	26.9%

**Scenario 3 -- Estimated -- 13% Investment Return in Calendar 2019; Active Membership Growth**

Valuation	Covered		Asset	Actuarial		Funded	Amortization	City 40-
<u>Year</u>	<u>Payroll</u>	<u>Contributions</u>	<u>Return</u>	<u>Asset Value</u>	<u>UAAL</u>	<u>Ratio</u>	<u>Period</u>	<u>Year Cost</u>
2019	11,919,000	4,704,000	13.00%	43,887,000	67,827,000	39.3%	77.5	24.8%
2020	13,403,000	5,203,000	7.75%	40,263,000	72,694,000	35.6%	64.6	23.5%
2021	13,939,000	5,375,000	7.75%	39,776,000	75,775,000	34.4%	65.3	23.6%
2022	16,122,000	6,185,000	7.75%	39,557,000	78,871,000	33.4%	43.5	20.8%
2023	16,754,000	6,422,000	7.75%	38,915,000	82,046,000	32.2%	43.5	20.8%
2024	17,399,000	6,700,000	7.75%	40,280,000	84,114,000	32.4%	41.9	20.5%
2025	18,043,000	6,985,000	7.75%	41,303,000	86,565,000	32.3%	41.0	20.2%
2026	18,777,000	7,208,000	7.75%	41,730,000	89,062,000	31.9%	39.8	19.9%
2027	19,527,000	7,456,000	7.75%	42,439,000	91,352,000	31.7%	38.4	19.6%
2028	20,284,000	7,713,000	7.75%	43,261,000	93,673,000	31.6%	37.1	19.2%