May 26, 2020

Via E-Mail: jaime.jasso@laredofire.com

Board of Trustees
Laredo Firefighters Retirement System
c/o Mr. Jaime Jasso, Administrator
P.O. Box 3069
Laredo, TX 78044

Members of the Board of Trustees:

Please see the enclosed Investment Practices and Performance Evaluation Report. We believe this report fulfills the requirements of Texas Government Code §802.109.

At FEG Investment Advisors (FEG), we collaborate with our clients to help them fulfill their missions. FEG is an independent, employee-owned, full-service investment advisory firm. We offer in-depth education on current investment strategies and trends based on sound research principles. As a 100% employee-owned firm, FEG is structured to ensure our clients-come-first model endures over the long term. We are an objective, institutional partner to our clients and we have no affiliations with broker-dealers. FEG has more than 125 employees and $67 billion[1] in total assets under advisement ("AUA") with approximately $6.7 billion of which is attributable to the Firm's assets under management ("AUM").

FEG currently serves as the non-discretionary investment consultant for the Laredo Firefighters Retirement System and has done so since 2004. FEG does not and has not either directly or indirectly managed investments of the System. We receive no renumeration from sources other than the System for services provided to the System. 100% of FEG's revenue is derived from providing investment services to our clients. We do not charge investment managers direct or indirect fees for inclusion in client portfolios, nor are our employees incentivized to promote one firm product or service over another. It is our goal to put client interests first at all times.

As such, we believe FEG is considered an independent firm and qualified to provide this evaluation.

Best regards,

Alan Bergin, CFA
Senior Vice President / Consultant
FEG Investment Advisors

[1] As of September 30, 2019. Assets under Advisement (AUA) include discretionary and non-discretionary assets of FEG and its affiliated entities. These assets are typically non-discretionary. Some asset values may not be readily available at the most recent quarter-end; therefore, the previous quarter's values were used for this calculation. The values may be higher or lower, depending on the current market conditions. Of the $67 billion in AUA, FEG's total assets under management (AUM) are $6.7 billion, which includes discretionary ($5.1 billion) and non-discretionary AUM ($1.6 billion).

Investment Practices and Performance Evaluation Report

Laredo Firefighters Retirement System

May 28, 2020

Prepared by FEG Investment Advisors

This report is submitted in accordance with Texas Government Code §802.109

# Contents

## Investment Policy Statement

**Background**

FEG Investment Advisors undertook a thorough evaluation of the System's Investment Policy Statement (IPS) and affirms the System is in compliance with the policies defined within the document. Additionally, the System hires the Center for Fiduciary Excellence (CEFEX) to review the System's IPS. CEFEX is an independent global assessment and certification organization dedicated to assisting investment stewards, advisors, investment managers, and financial service companies in applying the highest standards of fiduciary excellence in their investment management, governance, and operational processes. As an assessment and certification organization, CEFEX defines formal procedures to assess whether an investment fiduciary, or an organization providing services to an investment fiduciary, is in conformance with defined practices. While the System's IPS has not yet received CEFEX certification, it is the intention of the Board to do so. The IPS is reviewed annually and was last changed in 2018. The 2018 changes included the addition of a new asset class (private equity energy) and a change in the performance measurement time horizon from three years to five years.

**Recommendations**

- Better integrate the IPS with funding and benefit policies. The IPS is written as a stand-alone document with little consideration for the plan's funding ratio and liquidity needs. There is no reference to the nature of the System's liabilities.
- While the IPS creates a framework for reviewing investment managers who underperform benchmarks, there is little evidence the System is following the framework. It is recommended the System dedicate a portion of a Trustee meeting each quarter to formally review underperforming investment managers and take actions as defined in the IPS.

**Overview of Findings**

- Investment return objectives are not being met, but it is not because of a poorly written IPS or the failure to adhere to the policies.
- The IPS is written clearly and explicitly and we believe anyone could manage the portfolio and conform to the desired intentions.
- The document defines responsibilities, expectations, objectives, and guidelines of the System's Staff, the Board of Trustees (Board) and the providers of investment services retained to assist with the management of the System's assets.
- The IPS establishes formal yet flexible investment guidelines and investment structure for managing the System's assets; structure includes various asset classes, investment management styles, asset allocation, and acceptable ranges expected to produce an appropriate level of overall diversification and total investment return over the investment time horizon, in order to incorporate prudent risk parameters, appropriate asset guidelines and realistic return goals.
- The IPS provides a framework for regular constructive communication between the Board, the Staff, and the System's providers of investment services.
- The statement provided rate-of-return and risk characteristics for each asset class represented by various investment options.
- The IPS provides rate-of-return and risk characteristics for the total portfolio. Relative performance benchmarks are set forth in a "Monitoring" section.

- The IPS creates standards of investment performance which are historically achievable and by which the investment managers must agree to be measured over a reasonable and consistently applied time periods.
- The statement establishes formal criteria to select, monitor, evaluate, and compare the performance results achieved by each investment manager on a regular basis.
- The System's quarterly performance evaluation reports include details on whether the investment managers are meeting IPS defined performance and risk objectives.  There is not evidence any action is being taken to address investment managers who are not meeting objectives, as required by the IPS.

## Asset Allocation

**Background**

The System's Investment Policy Statement defines the process for determining and evaluating its asset allocation. While it is the Board that ultimately establishes asset allocation ranges and investment guidelines, the investment consultant is tasked with making recommendations as to the appropriate target portfolio weightings among the various major asset classes (e.g., stocks, bonds, and cash) within the System. These recommendations are to be supported with materials including asset class performance expectations (risk, return and correlations) for broad and various asset classes within the System. The System's strategic asset allocation is reviewed annually, although it does not change every year.

**Recommendations**

- The System should clearly define a risk tolerance and better use risk parameters in developing its asset allocation. The current asset allocation was chosen because it had a high probability of meeting the System's assumed rate-of-return.
- The System should use risk metrics beyond standard deviation in assessing the overall risk of the asset allocation.

**Overview of Findings**

- The System's IPS does not clearly define risk at the total portfolio level. The portfolio is to be diversified to "minimize the risk of large losses". As a part of the asset allocation process, the investment consultant is to "incorporate prudent risk parameters", but no specific risk criteria are established.
- The IPS does define risk for individual investment managers. Managers are to have a beta no greater than 1.2x that of an appropriate "style specific" benchmark index.
- There is no evidence the investment consultant and actuary communicate regarding their respective future asset class expectations. However, the current assumed rate-of-return, is integral to the strategic asset allocation process. The current assumed rate-of-return is used as the starting point in development of the strategic asset allocation. Theoretically, only portfolios with expected returns greater than the assumed rate-of-return are considered by the Board for further evaluation.
- In recent years, forward looking asset class returns have not been great enough to create a portfolio with a prudent level of risk.
- The System does not implement a tactical asset allocation.
- The System's asset allocation is similar to the average TLFFRA member but does have a slightly smaller allocation to fixed income and a slightly larger allocation to real assets.

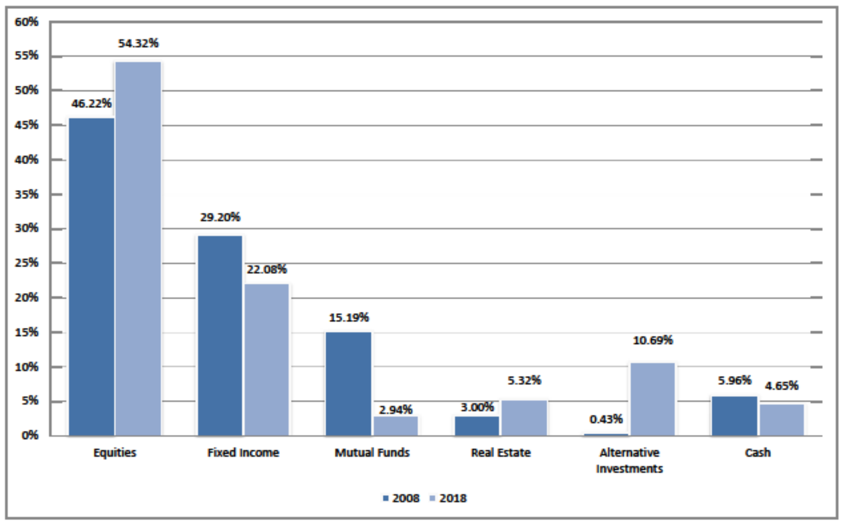
**Asset Allocation and Return Assumptions**

as of December 31, 2019

| | Laredo Strategic Allocation | Expected Rate-of-Return | Expected Risk |
|---|---|---|---|
| Global Equity | | | |
| U.S. Large Cap | 15% | 5.0% | 15.0% |
| U.S. Mid Cap | 8% | 5.5% | 18.0% |
| U.S. Small Cap | 10% | 6.0% | 24.0% |
| Non-U.S. Developed | 12% | 6.5% | 20.0% |
| Emerging Markets | 10% | 9.0% | 33.0% |
| Long/Short Hedge Fund | 7.5% | 5.0% | 13.0% |
| | 62.5% | | |
| Fixed Income | | | |
| Core Fixed Income/Cash | 15% | 2.5% | 6.0% |
| TIPS | 5% | 2.1% | 7.0% |
| | 20% | | |
| Real Assets | | | |
| Public Real Estate | 5% | 5.0% | 20.0% |
| Energy Infrastructure | 2.5% | 7.5% | 23.0% |
| Private Energy | 2.5% | 8.5% | 18.0% |
| | 10.0% | | |
| Diversifying Strategies | | | |
| Multi-Strategy Hedge Fund | 7.5% | 5.5% | 9.5% |
| | 7.5% | | |
| Laredo Firefighters Pension | | 6.2% | 12.3% [1] |

[1] Source: FEG Investment Advisors

**Asset Allocation for TLFFRA Systems**
**2008 vs. 2018 (% of Total Assets)**




*While mutual funds are not an asset class, the PRB did not receive sufficient information from certain retirement systems to identify the asset classes for investments reported as mutual funds.

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[2]

- The System relies on its investment consultant to provide it with forward looking expected rates-of-return and risk. The current investment consultant, FEG Investment Advisors, provides the following on its process for developing asset allocation inputs. All assumptions assume a seven to ten-year time horizon.

[2] Texas Local Fire Fighters Retirement Act (TLFFRA) Pension Report – March 2020 (https://www.prb.texas.gov/txpen/wp-content/uploads/2020/03/2020-TLFFRA-Report.pdf)

# METHODOLOGY

## Introduction

FEG's construction of capital market assumptions varies by asset class and takes into account long-term drivers of return and the macroeconomic environment. Our assumptions are forward-looking and do not assume that recent history will persist.

An asset class is defined as a group of securities with similar characteristics and properties that tend to react in a specific way to economic factors. Examples of pure asset classes are stocks, bonds, and real estate. We review several methods of developing assumptions to "reality check" the results.

### CONSTRUCTING EQUITY CAPITAL MARKET ASSUMPTIONS

| Building Blocks of Equity Returns | | | | | | Risk Premium | Earnings Yield |
|---|---|---|---|---|---|---|---|
| Dividend Yield | Share Repurchases | Real Earnings Growth | Valuation Change | Currency | Inflation | | |

### CONSTRUCTING CORPORATE BONDS CAPITAL MARKET ASSUMPTIONS

| Building Blocks of High Yield Returns | | | Spread to Treasuries | Risk Premium |
|---|---|---|---|---|
| Current Yield | Default Expectations | Recovery Rate | | |

Asset categories that are considered "alternative," in that they provide patterns of risk and return characteristics that differ from the public equity and bond markets, should be modeled with caution due to the peculiarities of available data, which include:

- Returns for illiquid alternative investments (private equity, private real estate, private energy, and timber) are not directly comparable to time-weighted returns in liquid markets, as the returns are generally reported on an Internal Rate of Return basis because of the managers' control over the timing of cash flows. In addition, a "liquidity" premium should be required as capital is locked up for the life of the partnership with much of the return produced at the end of an investment cycle of 5 to 10 years.

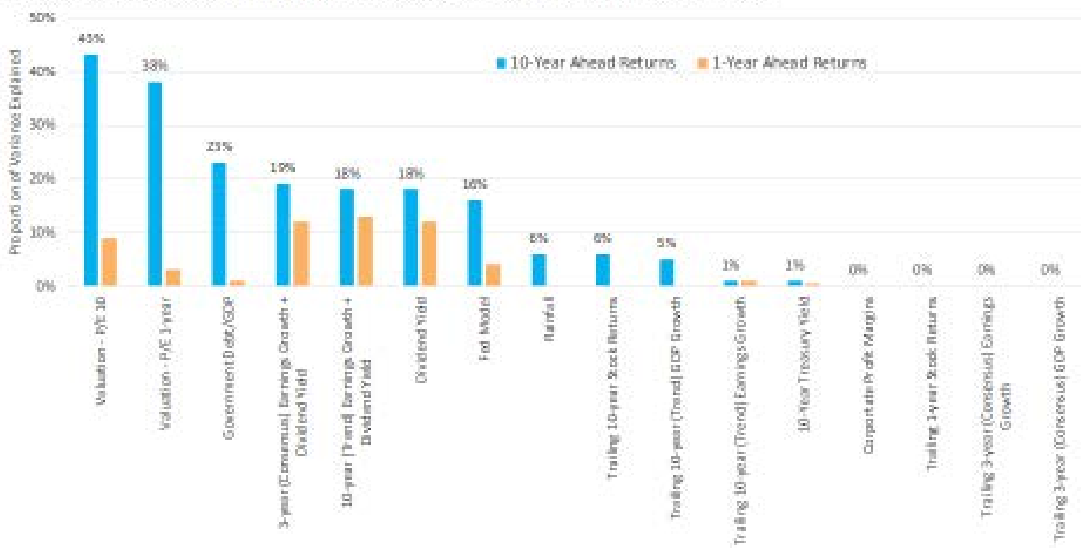
## METHODOLOGY

### Equities

- Valuation, earnings growth, and dividend yield have the strongest relationship with subsequent returns.
- Many commonly cited signals, such as recent stock returns, GDP growth, and profit margins are as irrelevant as rainfall, which intuitively has no relationship with subsequent stock returns.
- Returns are essentially unpredictable over the short-term.

**Valuation Matters**

Proportion of Variance of Future Real Stock Returns Explained by Various Factors




Source: Vanguard

Note: Bars display the R-squared of a regression model of 10-year ahead and 1-year ahead real annualized stock returns on each variable, fitted over the January 1926-June 2012 sample, with the exception of corporate profits, which are fitted for January 1929-June 2012 due to data limitations. Rainfall is included as a reality check and as an indicator of meaningful measures of R-squared, as intuitively there is nothing meaningful in the amount of rainfall to predicting subsequent equity returns.

## METHODOLOGY

- Liquid alternative investments (hedge funds and managed futures) often use leverage, options, and other derivatives that create skewed return distributions. Standard deviation, which measures variability around the mean, is not a comprehensive measure of these immeasurable risks for these types of investments.

- Alternative investments' performance data is based on manager returns. Public market index data are securities-based. Manager-based indices may include alpha (excess return), survivorship bias, and self-selection bias, and therefore, performance may be overstated in comparison to passively managed public market benchmarks.

- Correlation statistics can be misleading.
  - In illiquid markets, due to pricing lags compared to the public markets, and;
  - In liquid alternative investments, there tends to be a divergence of correlation in rising versus falling markets.

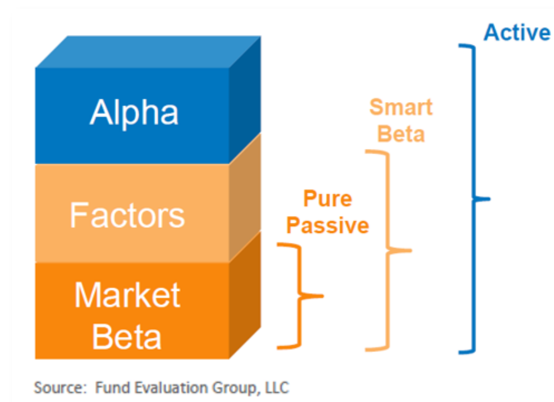
FEG's proprietary risk assessment system, Vigilance, provides portfolio risk decomposition, scenario testing, and shock analysis. We use Vigilance-derived asset class risk assumptions in our capital market assumptions.

- Vigilance measures are purely quantitative factor-derived risk estimates which provide a more robust approach to building the assumptions. These measures provide consistent estimates by applying the full data set to all covariance calculations using imputation techniques.
- Vigilance models the time series dynamics of returns and volatility to capture serial dependence, volatility clustering, and mean reversion and uses Monte Carlo simulations to compute an ensemble of horizon returns using long-term horizon returns in our capital market assumptions. Further, Vigilance is able to adjust for the artificial smoothing of private capital returns to reduce bias in asset class volatility.



- Given FEG's 2020 capital market assumptions, there is not an asset allocation that can meet the System's 7.5% assumed rate-of-return without taking outsized positions in risky asset classes such as emerging markets equity, energy infrastructure, or various private capital strategies. While these asset classes are a part of the System's asset allocation, they are not significant enough to raise the overall expected return greater than 7.5%.

**Active versus Passive Investments**




- Return differences between active and passive strategies are not modelled in asset allocation assumptions. FEG's philosophy incorporates both active and passive investment strategies but applies them to different aspects of portfolio construction. Although active management has the potential to add value over strictly passive means, FEG believes it should be applied appropriately. FEG also believes incentives should be aligned so that investors are paying for outperformance (alpha), as opposed to beta gained inexpensively through passive strategies. Ultimately, FEG focuses on active management strategies in less efficient asset classes to help drive alpha. FEG recommends passive and "Smart Beta" strategies in more efficient areas (e.g. large cap equity) to help keep fees low. When utilizing active management strategies, FEG seeks to identify and invest in high conviction active managers with strong possibilities of outperformance. FEG also works to screen out any "closet indexers" (i.e., active managers delivering index-like performance). Though FEG believes active management can generate alpha across a variety of asset categories, geographies and market environments, FEG remains prudent in our approach and place particular emphasis on sourcing skilled active managers within areas of the market where inefficiencies are most pronounced.

**Alternative Investments**

- The System has 17.5% of its portfolio allocated to alternative investments, defined as either hedge funds (15%) or private capital investments (2.5%). The IPS includes the following language regarding alternative investments.
- Hedge funds are labelled as Diversifying Strategies.
    - "Diversifying Strategies "DS" will refer to any investment or investment strategy that at its core is not a long-only portfolio of traditional equity or fixed income instruments. The System recognizes that DS covers an enormous variety of non-traditional investments and investment strategies, spanning various levels of risk and return. The System will seek DS which are generally on the conservative end of the alternative strategy risk spectrum, and which offer significant diversification benefits to the System's investment program, with the goal of helping to lower the overall investment program's volatility of returns.
    - The System will generally invest in funds of funds vehicles, by which a single investment is pooled in a diversified program of DS which will be monitored by independent third-party Managers. This is expected to afford the System's portfolio of DS with immediate diversification as well as an added level of due diligence on individual DS Managers. The DS shall be invested in a broad array of alternative, non-traditional investment strategies including, but not limited to commodities and futures, distressed securities, short/long or both, international opportunities, relative value.
    - No individual fund or DS investment Manager will comprise more than 15% of the total of any fund of fund portfolio. In multiple strategy portfolios, no single DS strategy will comprise more than 35% of the total fund of funds portfolio. All DS investments must have at least yearly

liquidity - the ability to make withdrawals from a diversified DS program at least once per year. Preference will be given to investment vehicles offering quarterly liquidity or better.
    - DS will generally produce a return of 3-4x above the rate of return of the risk-free rate (T-bills). The System will generally use a floating target of T-bills + 7% (annualized), and appropriate sub-asset class benchmarks when as appropriate. In addition to the expectation that the DS Fund of Funds will provide a high likelihood of positive absolute returns, it is expected that the Fund of Funds will should generate returns that have low correlation with the equity and fixed income markets."
- Additionally, the IPS includes the following regarding Private Equity.
    - "Private Equity will refer to any investment or investment strategy that at its core is not comprised of publicly traded equity or fixed income instruments. The System recognizes that Private Equity covers an enormous variety of non-traditional investments and investment strategies, spanning various levels of risk and return. Private equity Managers are expected to manage assets in the style upon which they built their historical track record. Any significant deviation from the Manager's stated style will require written approval.
    - The System may be invested in a broad array of private equity investment strategies including, but not limited to: traditional private equity, early and late stage venture capital, leveraged buyouts, mezzanine financings, distressed companies or securities, international opportunities, secondary opportunities.
    - No individual private equity fund (excluding funds of private equity funds) will comprise more than 15% of the System's total private equity exposure on a fully funded basis. In multiple strategy portfolios, no single strategy will comprise more than 50% of the total Fund of Funds portfolio.
    - Once the System has committed assets to a private equity fund or fund of funds, the System will be unable to withdraw assets prior to termination of the partnership without significant loss of principal. In all cases, the System will try to avoid withdrawing from its limited partnership status (selling its stake in the partnership), unless there are specific prudent reasons to do so. The System will use a combination of absolute and relative benchmarks to gauge the performance of its private equity investments.
    - Given the high absolute risk of these strategies, the System expects to achieve an absolute return of T-bills+10% over a full market cycle, which may be 10-15 years for private equity investments. The performance of these investments will also be measured against private equity total return benchmarks, which are currently in their infancy and vintage year benchmarks."
- The System relies on its investment consultant for recommending and monitoring alternative investments. FEG believes alternatives can be beneficial when utilized as part of a holistic portfolio solution and have been advising and educating clients on such strategies for nearly 30 years. FEG recommends the System incorporate exposure to alternative investments (including hedge funds and private capital), as they can provide the potential for increased portfolio returns (illiquidity premium), niche opportunities, diversification, and reduced volatility. FEG employs a multi-disciplinary approach and maintains an ever-evolving roster of recommended alternative investment strategies spanning private capital (including private equity, private debt, private natural resources, etc.), real assets, and hedge funds. All recommended hedge fund / alternative investment managers must meet operational "best practices" and maintain an institutional infrastructure that provides the System the confidence needed to make significant investments. The evaluation criteria that recommended alternative investment managers must meet as part of FEG's initial and ongoing due diligence process are highlighted below:

- OPERATIONAL – FEG considers managers of institutional caliber and focuses on those with an organized and thorough back office. FEG's onsite due diligence reviews best practices and confirms relationships with quality brokers, accountants, etc.
- TRANSPARENCY – FEG requires access to pertinent information regarding all investment issues.
- FRAUD – FEG performs a thorough review and checks industry references. FEG also assess valuation policies and procedures for illiquid investments.
- LIQUIDITY – The liquidity match between the fund strategy and investor terms are reviewed and verified.
- LEVERAGE – The use of leverage is consistently monitored and must remain in an appropriate range for both the fund's strategy and risk profile.
- KEY-MAN RISK – FEG assesses each employees impact on the management firm / fund.
- EXIT PROVISIONS – FEG compares all notice requirements against the fund's strategy and liquidity provisions.
- HEADLINE RISK – Proper and timely due diligence can help significantly reduce the likelihood of a market, or fraud-related, "blow-up."

**Alternative Investment Performance Reporting / Benchmarking**

- FEG generates an IRR for all private capital managers using System-specific valuations and cash flows. Since these valuations are provided on a quarter-lag, FEG uses the previous quarter's data and adjust the market value by any contributions or distributions that took place during the current quarter. FEG believes this best represents the System's true month-end market value. Upon receipt of the next quarterly valuation, we retroactively adjust the values.
- FEG tracks several performance measures on a fund-level basis. FEG's fund-specific reports (included in the back section of the quarterly performance report) incorporate the IRR and distributions / total value as a multiple of called capital. These values are then compared to vintage-year peer universe benchmarks from Thomson One.
- FEG calculates a comparative return pattern (best described as an "opportunity cost" measure) and match the fund's cash flows against an equivalent public market benchmark. This report (1) tracks capital that has been committed, called, distributed, and the total value in graphic form; (2) highlights System-specific investment balances for the current and prior quarters; and (3) notes certain total fund data; such as percent called, vintage year, and strategy.

**Future Cash Flow and Liquidity Needs**

- The funding policy of the Laredo Firefighters Retirement System requires contributions equal to 15% of pay by the firefighters, the rate elected by the firefighters according to TLFFRA. The city contributes a percentage of pay for each active firefighter according to a collective bargaining agreement, beginning with 20.35% effective October 1, 2018 and increasing in 0.25% annual increments until the rate is 21.10% effective October 1, 2021. For fiscal year 2019, the city contributed $7.6 million and firefighters contributed $5.6 million. Benefit payments were $10.9 million. Contributions have recently exceeded distributions and excess cash is invested on a quarterly basis as a part of an overall investment portfolio rebalancing exercise.
- As of September 30, 2019, the Plan Fiduciary Net Position as a Percentage of the Total Pension Liability was 57.7%. At that funding level, the Trustee's focus has been on maximizing investment returns for an

acceptable level of risk.  As the System approaches full funding, a less risky asset allocation would likely be adopted.

- The System's investment consultant has the capabilities to conduct portfolio stress testing, but no testing has been studied in the past few years.  FEG Investment Advisors' proprietary risk management tool, VIGILANCE, centralizes data to evaluate risk across all asset classes and risk factors. VIGILANCE performs sophisticated computations able to handle the complexities of institutional portfolios and includes numerous applications, such as risk forecasting, decomposition, stress-testing, scenario analysis, and sensitivity analysis. FEG believes VIGILANCE is unique when compared to many off-the-shelf systems, as it allows one to view a portfolio's risk profile by both asset class AND risk factor. The multi-factor core of the model enables it to quantify the risk of an investment in the context of both the investment portfolio and broader enterprise. VIGILANCE allows the System to operate within a framework that utilizes traditional asset classes as the fundamental building blocks of its investment portfolio, while also classifying and quantifying said assets according to their inherent risk characteristics.

## Investment Fees and Commissions Paid by the System

**Background**

The Laredo Firefighters Retirement System places great emphasis on monitoring investment fees. However, the System recognizes its mission is to provide benefits to its members and their beneficiaries, requiring a 7.5% required rate-of-return, net of fees. In seeking this return, the System has chosen to invest in many actively managed investment portfolios, some of which can have above average investment fees. The System's Board has historically chosen investments based on the highest expected net-of-fees return, not the lowest fee.

The System's Investment Policy Statement requires the Board to monitor all expenses associated with the Plan. The Board relies on Staff and the Investment Consultant to determine investment fees. As most of the System's assets are invested in public securities, calculating investment fees is relatively straightforward. Fees are typically a percentage of assets invested in the strategy. The System does invest in two hedge fund-of-funds and a private equity fund-of-funds. The managers of these funds are paid a management fee based on the market value, but also are paid an incentive fee based on fund performance. In addition, fees are paid to underlying investment managers. These fees are only disclosed to the System annually. For hedge funds, incentive fees are typically 15% to 20% of returns greater than 0%. A high-water mark structure often exists to ensure fees are only paid on new returns, not the recovery of prior losses. For private equity funds, incentive fees are also typically 15% to 20%, but only on returns greater than a hurdle rate. There are many ways to define a hurdle rate, but rates are typically around 6% to 8%.

**Recommendations**

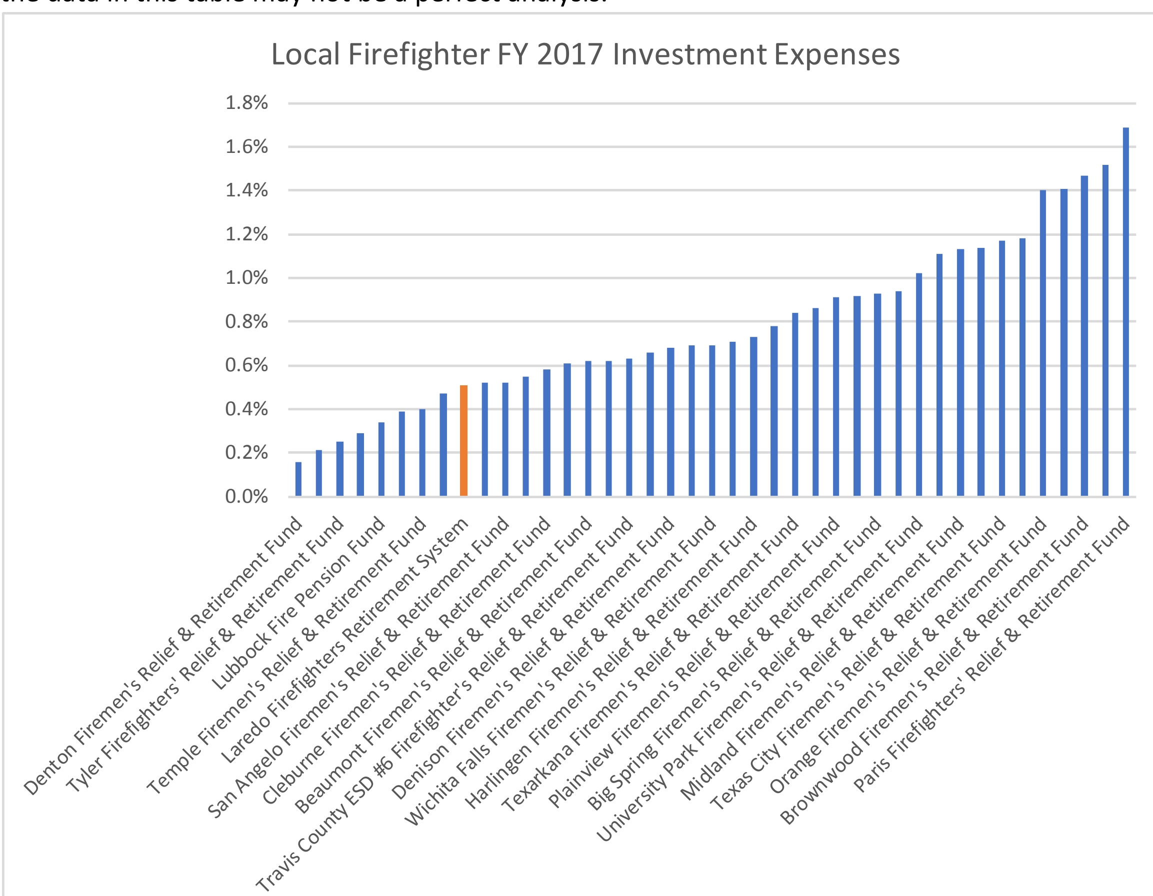
- Continue to monitor investment fees and ensure fees are an important discussion in all manager selections.
- Ensure investment returns are clearly stated gross or net of fees. The current investment performance evaluation report has a blend of both gross and net of fees returns.
- Understand that overall portfolio fees are influenced by size and asset allocation. For example, fixed income manager fees tend to be less than equity manager fees. A portfolio with a greater allocation to fixed income would likely have lower fees than one with a greater allocation to equity. Likewise, "alternative" investments have higher fees than other investments. Portfolios with higher allocations to "alternatives" will likely be paying higher fees.

**Overview of Findings**

- The first page of the System's Investment Policy Statement includes the following language:
  - "In making investments for the System, the Board shall discharge its duties:
    - For the exclusive purposes of:
      - providing benefits to members and their beneficiaries; and
      - defraying reasonable expenses of administering the System"
- The IPS also requires the Investment Consultant to "review at least annually all costs associated with the management of the plan, including:
  - Expense ratios of each Manager and/or mutual fund
  - Administrative fees: costs to administer the plan, including record keeping, custody, and trust services

- o The proper identification and accounting of all parties receiving soft dollars and/or 12b-1 fees generated by the plan

- As a part of initial due diligence on all investment managers, the IPS states “Consultant will assist Staff and the Board in compensation negotiations with Investment Managers, Custodians and other service providers. Fees paid to investment vendors should never be among the highest quartile relative to peers.”
- Additionally, the IPS includes the following for both mutual and commingled funds: “The System will monitor both management fees and administrative expenses, to ensure that expenses are within stated criteria. Each Investment Manager's fees are expected to be lower than the top 25% percentile of peers.”
- The Investment Consultant, as a part of the quarterly reporting to the Board, details all investment expenses, including custody and consulting.
- As of the last available data (fiscal year 2017), relative to other local firefighter systems, Laredo ranks in the top quartile for the level of investment expenses. As different Systems report fees in different ways, the data in this table may not be a perfect analysis.



[3]

[3] Pension Review Board Comparative Data For Local Firefighters Fiscal Year 2017 (https://data.prb.texas.gov/comparison/TLFFRA-2017.html)

# Laredo Firefighters Retirement System

Analysis of Year Ending Fees as of March 31, 2020

| | Annual Fee / Expense Ratio | Avg Market Value | Percent Allocation | Weighted Average Fee | Weighted Average Fee ($) |
|---|---|---|---|---|---|
| Small Cap Equity Manager 1* | 1.00 | $ 6,897,714 | 5.0% | 0.05 | $ 68,977 |
| Mid Cap Equity Manager 1* | 0.70 | $ 5,195,643 | 3.8% | 0.03 | $ 36,370 |
| Mid Cap Equity Manager 2* | 0.75 | $ 6,407,739 | 4.7% | 0.03 | $ 48,058 |
| Small Cap Equity Manager 2* | 1.00 | $ 6,611,359 | 4.8% | 0.05 | $ 66,114 |
| Large Cap Equity Manager | 0.02 | $ 20,911,919 | 15.2% | 0.00 | $ 3,137 |
| International Equity Manager | 0.97 | $ 16,690,609 | 12.1% | 0.12 | $ 161,899 |
| Emerging Markets Equity Manager | 0.54 | $ 11,647,490 | 8.5% | 0.05 | $ 62,896 |
| U.S. Fixed Income Manager 1 | 0.48 | $ 14,117,563 | 10.3% | 0.05 | $ 67,764 |
| U.S. Fixed Income Manager 2 | 0.42 | $ 14,056,850 | 10.2% | 0.04 | $ 59,039 |
| U.S. Fixed Income Manager 3 | 0.98 | $ 1 | 0.0% | 0.00 | $ 0 |
| Global REIT Manager | 0.14 | $ 6,885,938 | 5.0% | 0.01 | $ 9,640 |
| Energy Infrastructure Manager 1 | 0.85 | $ 982,500 | 0.7% | 0.01 | $ 8,351 |
| Energy Infrastructure Manager 2 | 0.93 | $ 2,326,241 | 1.7% | 0.02 | $ 21,634 |
| Hedge Fund-of-Funds 1** | 0.95 | $ 11,142,146 | 8.1% | 0.08 | $ 105,850 |
| Hedge Fund-of-Funds 2**[1] | 1.00 | $ 11,272,238 | 8.2% | 0.08 | $ 112,722 |
| Private Equity Fund-of-Funds Manager***[2] | 1.00 | $ 2,067,177 | 1.5% | 0.02 | $ 20,672 |
| Money Market Fund | 0.00 | $ 388,058 | 0.3% | 0.00 | $ - |
| **Investment Management Fees** | | **$ 137,601,185** | **100.0%** | **0.62** | **$ 853,124** |
| Consulting Fees | 0.06 | $ 137,601,185 | 100.0% | 0.06 | $ 85,536 |
| Custody Fees | 0.03 | $ 137,601,185 | 100.0% | 0.03 | $ 46,784 |
| **Total Fees** | | | | **0.72** | **$ 985,444** |

[1] Hedge Fund-of-Funds Manager 2 has 1% annual management fee.  In addtion to this fee, if performance is greater than 10% net of fees for the year, then at the end of the year 1% of the ending balance is taken out + 2% of the net profits

[2] Private Equity Fund-of-Funds Manager has a 1% annual management fee on capital commited which will lower to .5% over the life of the fund. In addition to this fee, once the fund returns 70% cummulative return there is a 5% incentive fee.

* Indicates Separate Account

** Indicates Commingled Fund

*** Indicates Private Partnership

Unless otherwise indicated, investment is an institutional mutual fund or ETF

## System Governance Process

**Background**

The System has a number of governance policies separate from policies embedded within the Investment Policy Statement. These policies cover long term Board goals, elections, funding, gifts, attendance, travel and expense reimbursement. Additional policies cover non-endorsements, non-participation in entities employed the System, and a separate code of ethics. Collectively, these documents, along with adherence to Texas Pension Review Board and Texas Local Fire Fighters Retirement Act requirements and guidance, create a strong governance structure. These documents are all available on the System's website. Additionally, the website contains all meeting agendas and minutes, actuarial valuations, financial reports, investment reports, and other reports required by the Pension Review Board. The System is transparent in all activities. Board meetings are open to public and the public is invited to make comments at each meeting.

The Investment Policy Statement contains clear language defining the Board's responsibilities concerning selecting investments (asset allocation and investment manager selection) and the monitoring of investments. Board members are elected representatives of the System's beneficiaries, a representative of the city manager's office, and a representative appointed by the mayor. There are no requirements that Board members have investment expertise. Investment education is very important to the Board and all Board members meet the requirements of the Minimum Educational Training (MET) Program of the Pension Review Board. The MET program requires all new Trustees to receive seven hours of training in their first year and other Trustees to receive four hours of training every two years. Areas of training include "Core" content areas of Fiduciary Matters, Governance, Ethics, Investments, Actuarial Matters, Benefits Administration, and Risk Management and "Non-Core" content areas of Compliance, Legal and Regulatory Matters, Pension Accounting, Custodial Issues, Plan Administration, Texas Open Meetings Act, and Texas Public Information Act. Training is typically received during annual meetings and dedicated training seminars of the Texas Association of Public Employee Retirement System (TEXPERS) and the Texas Local Fire Fighters Retirement Act (TLFFRA).

**Recommendations**

- In addition to the PRB MET Program, new Trustees should meet with the investment consultant in their first year of service for investment training. This training can be basic or more advanced depending on the investment expertise of the Trustee. The consultant can also educate the Trustee on the current portfolio, its expected return and risk, how it was constructed, and any manager specific issues.

**Overview of Findings**

- The System Board meets monthly to discuss Plan financials and expected cash flows over the next month. Estimated investment results are reviewed, but no actions are typically taken. On average, monthly meetings last about an hour. Once a quarter, the investment consultant presents the investment performance evaluation report and makes recommendations on asset allocation or investment managers, using the process defined in the IPS. These quarterly meetings tend to last about two hours.
- The investment portfolio is externally managed the Board and Staff do not select individual securities. The Board relies on its investment consultant for advice and recommendation on the investment portfolio. As defined in the IPS, the investment consultant is to be independent and not take discretion over portfolio investments. The investment consultant is paid a percentage of overall investment assets

and is not allowed to receive brokerage commissions, soft dollar payments, or any compensation from investment managers or marketing firms representing managers. Together with specific criteria for investment manager selection (see next section), the Board receives impartial investment advice and guidance.

- There is no set time frame for issuing RFPs for evaluating the investment consultant. The investment consultant is continuously reviewed, using the System's investment performance as the primary measurement criteria. Investment performance is measured against both the required rate-of-return and returns of System peers.
- As discussed in previous sections, the IPS clearly defines the investment decision making process. The Board retains all discretion over the investment portfolio. The investment consultant is tasked with educating and making recommendations to the Board. System staff is tasked with implementing all actions taken by the Board, often with the assistance of the investment consultant.
- The IPS clearly defines portfolio measurement, including appropriate benchmarks and procedures for investments failing to meet IPS defined performance goals (see next section).

## Investment Manager Selection and Monitoring Process

**Background**

Investment managers are selected by the Board of Trustees, with guidance from the investment consultant. To reduce conflicts of interest between the investment consultant and investment managers, the Investment Policy Statement clearly defines a manager selection criterion. This includes an eleven-step screening process to eliminate from consideration managers who are not “institutional” in quality (i.e. lack of track record, experience of managers, assets under management, and various performance metrics). Using this screening process, the investment consultant typically presents two to four different investment managers to the Board for discussion. The Board can choose to interview each investment manager. Following discussion, the Board chooses one or more investment managers. The System staff works with the investment consultant, custodian, and investment managers to transition to the new investment manager(s). The process is similar for “alternative” investment managers, but depending on the asset class, multiple managers may not be reviewed, particularly with regards to private capital managers.

Performance measurement is driven by the investment consultant. Following industry return calculation guidelines, the investment consultant calculates the returns of all investment managers, asset class composites, and the overall investment portfolio on a monthly basis. Working with the Board, and defined in the IPS, each manager, asset class, and the overall portfolio are compared to appropriate benchmark indexes. The investment results are published and presented to the Board quarterly. The performance evaluation report summarizes key investment data so all Trustees, regardless of investment experience, can understand key points. For Trustees with significant investment expertise, the performance evaluation report contains a thorough return and risk analysis of each investment manager.

Investment manager retention guidelines are detailed in the IPS. Faced with a manager that has underperformed expectations, the Board is required to take one of four actions. The first is to discuss the manager’s performance and take no action, continuing to monitor the manager on a quarterly basis. This is commonly the action for investment managers with a distinct investment style, such as a concentration in certain economic sectors, which can deviate from benchmark indexes over short time periods. The second action is to formally place the manager on a “Watch List”. This requires the manager to be discussed quarterly for one year. At the end of one year, the manager is either removed from the Watch List and retained or terminated. The third option is to place the investment manager under “Formal Review”. This process requires notifying the manager of the review and requiring their presence at the next Trustee meeting. Following that meeting, the manager either goes on the Watch List, is retained, or is terminated. The final option is the immediate termination of the investment manager.

**Recommendations**

- Refine the manager selection criteria so that it places less emphasis on past performance. The current criteria would like prefer managers “at the top of the game” versus those who have recently underperformed. Manager performance is often not consistent period to period and the System should seek to avoid hiring last year’s winners.

**Overview of Findings**

- According to the IPS, the Board is required to:
    - "Prudently select consultants, investment Managers and other services providers consistent with investment strategy."
    - "Monitor and supervise all service vendors and the investment program with respect to each of the above points, recommending and implementing change as appropriate."
- As defined in the IPS, the Investment Consultant is to:
    - "Serve as objective, third-party professionals retained to assist the Board in managing the overall investment process. The Consultant(s) are responsible for guiding the Board through a disciplined and rigorous investment process to enable the Board to meet the fiduciary responsibilities outlined above. Investment Consultant(s) will act as co-fiduciary"
- The IPS has the following language regarding manager selection:
    - "Consistent with TLFRRA statute, each investment option should be managed by: (i) a bank; (ii) an insurance company; (iii) a registered investment company (mutual fund); or a registered investment adviser.
    - Assist the Board through the selection process by identifying and screening candidates for appropriate portfolio and organizational characteristics. Attend formal presentations of finalists, if required. Perform due diligence checks. Help quantify the trade-offs between expected returns and risks among various alternatives. Gather and submit information as requested by the Board.
    - The screening criteria include:
        - Inception Date: The investment must have at least a 3-year track history.
        - Manager Tenure: The investment Manager must have at least a 2-year track history (Most senior Manager's tenure)
        - Assets: The investment must have at least $75 million under management. {Total across all share classes for funds/ETFs)
        - Composition: The investment's adherence to its asset class should be at least 80% as indicated by statistical measurements including by not limited to $R^2$
        - Style: The investment's style should match peers or sub-asset classes.
        - Prospectus Net Expense Ratio: The investment should be lower than the top 25th percentile (most expensive) of its peers.
        - Alpha: The investment should place in the top 50% relative to peers over five years,
        - Sharpe: The investment should place in the top 50% relative to peers over five years,
        - 1 Year Return: The investment should place in the top 50% of its peer group.
        - 3 Year Return: The investment should place in the top 50% of its peer group.
        - 5 Year Return: The investment should place in the top 50% of its peer group.
- The IPS has the following language regarding monitoring investment performance:
    - "A performance evaluation report of the System and its investment component parts will be conducted quarterly. The Consultant(s) written report will cover five basic areas:
        - Returns and other performance metrics - Total time-weighted returns over specified short, intermediate and long-term periods;
        - Comparisons - Returns will be compared to appropriate benchmark indices and a statistical universe of similar systems;

        - Diagnostics - Measurement of risk-adjusted performance, analyses of risks, style characteristics, and return attribution;
        - Compliance - Portfolios will be checked for compliance with the objectives, targets, and policy guidelines specified in this Statement; and
            - The total returns of each asset class and the System will be compared to the distribution of returns represented by an appropriately balanced universe of similarly managed systems that are not subject to capital gains or income taxes.
            - A quarterly report will be analyzed to ensure that each component employed by the System is ranked in the top 50% of the appropriately balanced universe over a five-year time period."
- The Consultant is also tasked with the following:
    - "Monitor risk-adjusted performance and place investment option on a watch list for more thorough or ongoing review and analysis when it fails to meet aforementioned objective criteria.
        - Each Manager's Sharpe Ratio should exceed its respective benchmark 's Sharpe ratio for five year rolling time periods.
        - Monitor the diversification, quality, duration, and risk of fixed income holdings."
    - "The Consultant(s) in consultation with the Board will meet to review each investment for:
        - Adherence to the Watch List Criteria identified below;
        - Material changes in the investment option's organization, investment philosophy and/or personnel; and
        - Any legal and/or regulatory proceedings affecting the investment option's organization."
- With regards to report, all investment managers are required by the IPS to do the following:
    - "For actively managed, separate accounts, produce a statement at the end of each month describing the portfolio asset class weightings, individual security positions showing both cost and market value, and all principal cash transactions, including all buys and sells in sufficient descriptive detail. For commingled assets, this statement should show unit position, unit value and relevant portfolio characteristics. These reports shall include for comparison purposes, for each Manager or asset class, the performance of each Manager or asset class compared to the relevant Benchmark Index as described in Section XI. Each Manager is required to inform the System in writing of any violations of self-dealing transactions that may arise as a result of the investment management activities on behalf of the System. A list of the disqualified persons will be sent to the Manager annually. A list of disqualified persons and/or firms will be provided to the Board by the Consultant(s) no less than annually."
- Investment managers are also required to submit themselves for ongoing diligence purposes, as required by the IPS:
    - "At the request of the Board, but not less than once each year, each Investment Manager will participate in a due diligence review meeting, the agenda to include:
        - A review and re-appraisal of the investment program;
        - A commentary on investment results in light of the appropriate standards of performance;
        - Annually, a summary of these review meetings will be made available to the Board.
        - A synopsis of the key investment decisions made by the Manager, his or her underlying rationale, and how those decisions could affect future results; and

        - A discussion of the Manager's outlook, what specific investment decisions this outlook may trigger and how these decisions could affect future results."
- Regarding communications, investment managers are required by the IPS to do the following:
    - "Each Investment Manager is responsible for maintaining frequent and open communication with Staff and/or Consultant(s) on all material matters pertaining to investment policies and the management of System's assets. In particular, each Investment Manager will:
        - Provide notice of any material changes in its investment outlook, strategy, and portfolio structure; and
        - Provide notice of material changes in its firm ownership, organizational structure, financial condition, senior staffing and management, or substantial involvement in any litigation or regulatory investigation."
- IPS Defined Benchmark Indexes:

| | |
|---|---|
| U.S. Large Cap Stocks | S&P 500 Index |
| U.S. Mid Cap Stocks | Russell 2500 Index |
| U.S. Small Cap Stocks | Russell 2000 Index |
| Non-U.S. Developed Stocks | MSCI EAFE Index |
| Non-U.S. Emerging Stocks | MSCI Emerging Markets Free Index |
| Fixed Income - Core | Barclay Aggregate Bond Index |
| Fixed Income - TIPS | Barclay TIPS Index |
| Diversifying Strategies | HFRI Fund of Funds Conservative or Strategic |
| Energy | Alerian MLP Index |
| Commodities | BB Commodity Index |
| Real Estate | FSTE NAREIT All Equity |

- Additional monitoring criteria for investment managers, as defined by the IPS:
    - "The System's investment Managers will be compared to style specific indices. The following table summarizes the quantitative performance objectives for the active Managers. Any passively managed product will be expected to approximate the total return of its respective benchmark. Betas will be calculated versus the appropriate benchmark index."

| MANAGER/CLASS | PRIMARY INDEX | RISK MEASURE | PEER UNIVERSE |
|---|---|---|---|
| **EQUITY** | | | |
| Large Cap Growth | Russell 1000 Growth | 1.2x Beta | Top 50% |
| Large Cap Value | Russell 1000 Value | 1.2x Beta | Top 50% |
| Mid Cap Growth | Russell Mid Cap Growth | 1.2x Beta | Top 50% |
| Mid Cap Value | Russell Mid Cap Value | 1.2x Beta | Top 50% |
| Small Cap Growth | Russell 2000 Growth | 1.2x Beta | Top 50% |
| Small Cap Value | Russell 2000 Value | 1.2x Beta | Top 50% |
| International Developed | MSCI EAFE | 1. 2x Beta | Top 50% |
| International Emerging | MSCI Emerging Markets (Free) | 1.2x Beta | Top 50% |
| **FIXED INCOME** | | | |
| Core Fixed Income | Barclay Aggregate | +/-20% duration | Top 50% |
| Real Estate | FTSE NAREIT All Equity | | Top 50% |
| Absolute Return | HFRI Fund of Funds | | Top 50% |
| Commodities | BB Commodities | | Top 50% |
| Energy | Alerian MLP | | Top 50% |

- The overall System return is measured by the following:
  - "The total returns of each asset class and the System will be compared to the distribution of returns represented by an appropriate and statistically valid Universe of similarly managed systems that are not subject to capital gains or income taxes. Over the predefined specified time period, each component employed by the System is expected to rank in the top 50% of the appropriate Universe.
  - Consultant will provide quarterly monitoring report."
- The IPS defines an automatic review process for investment funds:
  - "Investment performance reviews of all portfolios will be conducted at least quarterly to ascertain progress against the return objectives of each component and at any time a formal review may be requested of any Manager. The quarterly reports cover four basic areas: returns, comparisons of returns to benchmarks and a statistical universe of similar portfolios, diagnostic risk analyses, and compliance with relevant policies and objectives and risk-adjusted performance.
  - Beyond these customary reviews, certain circumstances or events, as outlined below, will trigger automatic formal reviews and where appropriate, reconsideration by the System of the appropriateness of continuing to use the affected Manager in the investment structure. None of these circumstances or events shall serve as automatic causes for changing investment Managers, but will merely indicate the need for review.
    - DISAPPOINTING RELATIVE PERFORMANCE
      - Percentile ranking of portfolio's five-year cumulative return against peer group is below median;
      - Percentile ranking of portfolio's one-year return against peer group is at or below 50; and
    - DISAPPOINTING RISK-ADJUSTED PERFORMANCE

- Sharpe: The investment must place in the top 50% relative to peers over five years

- FUND MANAGEMENT ORGANIZATION CHANGES
  - Turnover of portfolio Manager or other personnel significant to the portfolio management process;
  - Ownership change; and
  - Involvement in relevant regulatory investigation or litigation
- DEVIATION FROM INVESTMENT METHODS THAT BUILT HISTORICAL RECORDS
  - Aggregate assets in product are insufficient to ensure broad diversification, efficient trading, and economies of scale;
  - Assets in product either fall or grow too large to be managed in manner similar to methods that built historical record;
  - Portfolio characteristics do not match stylistic expectations; and
  - Significant increase in fees
- RELATIVE PERFORMANCE IN EXCESS OF EXPECTATIONS
  - Percentile ranking of portfolio's five-year cumulative return is in the upper quintile (above the 20th percentile);
  - Percentile ranking of portfolio's quarterly return versus peer portfolios is in the upper decile (above the 10th percentile)