

MEKETA

INVESTMENT GROUP

Austin Fire Fighters' Relief and Retirement Fund

Investment Practices and
Performance Evaluation
Consultant Report

Background

- To assist Austin Fire Fighters' Relief and Retirement Fund ("Austin Fire") with the preparation and filing of the first independent evaluation report required by Texas Government Code Section 802.109(a)(1-5), Austin Fire has engaged Meketa Investment Group, Inc. (the "Consultant" or "Meketa") to prepare and file with the Board a report (the "Report") that includes the topics required to be analyzed and/or reviewed by the Law
- This report was prepared in March and April 2020. Any references to current exposure, policies, or procedures were accurate or applicable at that time and may not be the same or accurate in the future.

Disclosure Statement by Independent Firm

- Meketa is a corporation organized in the Commonwealth of Massachusetts and is owned entirely by its senior professionals. Meketa has no parent organization.
- Meketa does not have any affiliations with brokerage firms, nor any broker-dealer relationships. Meketa does not receive soft dollars, finder fees, commissions, or third-party marketing fees. Meketa's line of business is providing investment consulting and advisory services. Meketa works only for its clients.
- Effective March 2014, Meketa entered into an agreement with Austin Fire to serve as its general investment consultant ("Agreement").
- Under the Agreement, Meketa receives its fees for the services it provides to Austin Fire from Austin Fire directly and does not receive any fees other than those set forth in the Agreement.
- Meketa does not (directly or indirectly) manage Austin Fire's investments. Meketa's role is strictly limited to non-discretionary advice.

Qualifications

- Meketa is a full-service independent investment-consulting firm.
- Meketa has been providing consulting services for over four decades (since 1978) and currently consults on over \$1.4 trillion for over 200 institutional clients.
- Meketa has approximately 200 full-time employees and operates out of seven offices.
- Investment professionals at Meketa average 11 years with the firm and 21 years of investment experience. Meketa currently has 40 CFA Charter holders and 24 CAIA Charter holders.
- Meketa's mission is to provide the highest quality investment advisory services. Meketa aims to utilize, and continuously hone, the best practices that have been developed over its 40-year plus history. Meketa seeks to be a thought leader by evaluating investment industry information with healthy skepticism and performing value-added original research.

Scope

- Sec. 802.109. INVESTMENT PRACTICES AND PERFORMANCE REPORTS.
- (a) Except as provided by Subsection (e) and subject to Subsections (c) and (k), a public retirement system shall select an independent firm with substantial experience in evaluating institutional investment practices and performance to evaluate the appropriateness, adequacy, and effectiveness of the retirement system's investment practices and performance and to make recommendations for improving the retirement system's investment policies, procedures, and practices.
- Each evaluation must include:
 - (1) an analysis of any investment policy or strategic investment plan adopted by the retirement system and the retirement system's compliance with that policy or plan;
 - (2) a detailed review of the retirement system's investment asset allocation, including:
 - (A) the process for determining target allocations;
 - (B) the expected risk and expected rate of return, categorized by asset class;
 - (C) the appropriateness of selection and valuation methodologies of alternative and illiquid assets; and
 - (D) future cash flow and liquidity needs;

Scope (continued)

- (3) a review of the appropriateness of investment fees and commissions paid by the retirement system;
- (4) a review of the retirement system's governance processes related to investment activities, including investment decision-making processes, delegation of investment authority, and board investment expertise and education; and
- (5) a review of the retirement system's investment manager selection and monitoring process.

Section 802.109 – Subsection (a) 1

Section 802.109 – Subsection (a) 1

Law	Requirement
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Sec. 802.109,
Subsection (a) 1

“an analysis of any investment policy or strategic investment plan adopted by the retirement system and the retirement system's compliance with that policy or plan”

Criteria or Topic	Austin Fire Status
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Most Recent Investment Policy Statement Review?

- The Investment Policy Statement (“IPS”) is reviewed annually by the Consultant, Board and Staff, typically in the first quarter of each calendar year.
- The most recent review occurred in February 2020. No changes were recommended or adopted.

Most Recent Significant Modifications?

- The last time significant changes were made to the IPS was in 2014 when there was a consultant change.
- Changes to the IPS must be approved in three consecutive board meetings. It is our understanding this rule was adopted over 10 years ago to avoid making frequent changes to the policy document.

Section 802.109 – Subsection (a) 1 (continued)

Criteria or Topic	Austin Fire Status
Requirement for (at least) annual review?	<ul style="list-style-type: none"> • Yes
Compliance with annual review?	<ul style="list-style-type: none"> • Yes
Current IPS Structure?	<p>Section I: Statement of Policy</p> <p>Section II: Investment Objectives</p> <p>Section III: Investment Constraints</p> <p>Section IV: Allocation of Investment Responsibilities</p> <p>Section V: Fiduciary Conduct</p> <p>Section VI: Available Asset Classes and Investment Guidelines</p> <p>Section VII: Asset Allocation</p> <p>Section VIII: Evaluation and Review</p> <p>Section IX: Securities Lending</p> <p>Section X: Trading</p> <p>Section XI: Voting of Proxies</p> <p>Section XII: Investment Costs</p>

Section 802.109 – Subsection (a) 1 (continued)

Criteria or Topic	Austin Fire Status
Operating Procedures	<ul style="list-style-type: none"> • In addition to the IPS, Austin Fire has “Operating Procedures” that provide direction and governance pertaining to the day-to-day investment of the portfolio. • The Operating Procedures are not subject to the three consecutive meeting requirement. • The Operating Procedures are typically reviewed every May by the Consultant, Board and staff (after the completion of the Fund’s annual asset allocation review). • As of March 2020, the last review of the Operating Procedures occurred in May 2019. • The Operating Procedures are scheduled to be reviewed again in May 2020.
Current Operating Procedures Structure	<ul style="list-style-type: none"> • Section I: Available Asset Classes • Section II: Market Assumptions • Section III: Asset Allocation Targets • Section IV: Asset Class Diversification: Sub-Asset Class Targets • Section V: Performance Objectives • Section VI: Asset Class Guidelines • Section VII: Class Action Lawsuit Policy • Appendix A: Style Benchmarks

Consultant Analysis

- The IPS is well thought-out and in line with industry standards.
- The IPS covers Fund level items and is not overly prohibitive or prescriptive.
- It is consistent with guidance from the CFA Institute.
- Roles and responsibilities of all key parties involved are clearly outlined (Board of Trustees, Investment Consultant, Investment Managers, Custodian Bank) except for the role of Staff.
- The document is written in “plain-English” and is easy for a layperson to understand.
- There is no evidence of any known compliance violations with the IPS at this time.
- It is our opinion that the Board of Trustees and Staff will be able to stay committed to the guidance detailed in the IPS during a stressed or prolonged market scenario.
- Overall: The existing Investment Policy Statement appears appropriate, adequate, and effective in our opinion.

Recommendations

- The role of Staff could be more clearly outlined in the IPS and/or Operating Procedures.

Section 802.109 – Subsection (a) 2

Section 802.109 – Subsection (a) 2

Law	Requirement
Sec. 802.109, Subsection (a) 2	<p><i>“a detailed review of the retirement system's investment asset allocation, including:</i></p> <ul style="list-style-type: none"><i>(A) the process for determining target allocations;</i><i>(B) the expected risk and expected rate of return, categorized by asset class;</i><i>(C) the appropriateness of selection and valuation methodologies of alternative and illiquid assets; and</i><i>(D) future cash flow and liquidity needs”</i>

Section 802.109 – Subsection (a) 2.A

Criteria or Topic	Austin Fire Status
Written policy for asset allocation development?	<ul style="list-style-type: none"> • Yes, outlined in the IPS.
Who has formal approval authority of the strategic policy asset allocation?	<ul style="list-style-type: none"> • Board of Trustees
Frequency of review?	<ul style="list-style-type: none"> • According to the IPS, <i>“The Board will review its asset allocation targets and ranges at least annually or sooner if warranted by a material event in either the liability structure of the plan or the capital markets.”</i> (Section VII Asset Allocation, Subsection B Long Term Allocation Targets).
Tactical vs. Strategic?	<ul style="list-style-type: none"> • Strategic • Minimal tactical decisions have been implemented over the past five years.
Annual Asset Allocation Review Process	<ul style="list-style-type: none"> • Every year (typically in the first quarter of the calendar year) the Consultant provides an overview of its Annual Asset Study. This report summarizes the Consultant’s capital market expectations for over 75 different sub asset classes. • Specifically the Consultant focuses on those asset classes that Austin Fire is invested in or may consider investing in.

Section 802.109 – Subsection (a) 2.A (continued)

Criteria or Topic	Austin Fire Status
<p>Annual Asset Allocation Review Process (continued)</p>	<ul style="list-style-type: none"> • The Consultant provides a year-over-year comparison of forward looking (twenty year) capital market expectations. • The Consultant also provides the total Fund expected return and expected standard deviation (based on Mean Variance Optimization) looking out over the next twenty years. • In certain years (e.g. typically when large changes occur in year-over-year assumptions), the Consultant may provide additional stress test, scenario analysis and historical analysis on the asset allocation target mix. • Expected impact of potential changes to the target asset allocation policy mix are also periodically reviewed and discussed.

Section 802.109 – Subsection (a) 2.B

Criteria or Topic	Austin Fire Status
Active vs. Passive - Policy	<ul style="list-style-type: none"> • According to the IPS (Section XII Investment Costs): <ul style="list-style-type: none"> – <i>“The Board intends to monitor and control investment costs at every level of the Fund through the following:</i> – <i>Where appropriate, passive portfolios will be used to minimize management fees and portfolio turnover.”</i>
Active vs. Passive -Implementation	<ul style="list-style-type: none"> • Austin Fire had approximately 82% in active strategies and 18% in passive strategies as of December 31, 2019. Excluding private market asset classes, 26% of the public markets exposure is passive. • This exposure has been rather steady over the last five years • Austin Fire uses passive strategies in the following asset classes: <ul style="list-style-type: none"> – Domestic large cap equity (S&P 500 Index) – International developed equity (MSCI EAFE Index) – Investment grade bonds (Barclays Aggregate Index) – Treasury Inflation Protected Securities (Barclays TIPS Index).

Section 802.109 – Subsection (a) 2.B (continued)

Criteria or Topic	Austin Fire Status
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Asset Class Return¹ and Standard Deviation Expectations Development

- Austin Fire uses capital markets assumptions developed by its Consultant.
- A summary of Meketa’s process is listed below.
- Meketa recommends its client use the 20 year projections.
 - Each year Meketa Investment Group conducts an Asset Study to attempt to forecast future expected returns, future expected risk and correlation measures for over 75 asset classes and sub-asset classes.
 - The process relies on both quantitative and qualitative methodologies.
 - First, a large set of quantitative models are used to arrive at a set of baseline expected ten-year annualized returns for major asset classes.
 - These models attempt to forecast a gross “beta” return for each public market asset class; that is, it does not model “alpha,” nor does it apply an estimate for management fees or other operational expenses¹.
 - The models are fundamentally based (based on theoretically defined return relationship with current observable factors).

¹ Our expectations are net of fees where passive management is not available (e.g., private markets and hedge funds).

Section 802.109 – Subsection (a) 2.B (continued)

Criteria or Topic	Austin Fire Status
<p>Asset Class Return and Standard Deviation Expectations Development (Continued)</p>	<ul style="list-style-type: none"> – Some of the models are more predictive than others. For this reason, a qualitative overlay is required, which takes the form of a data-driven deliberation among the research team at Meketa and the Investment Policy Committee at Meketa. – Return assumptions for hard-to-predict asset classes as well as those with limited data are influenced more heavily by the qualitative analysis. – As a result of this process, ten-year annualized return expectations are calculated, which serve as the foundation of the longer-term, twenty-year expectations. – The twenty-year annualized return expectations are formed by systematically considering historical returns on an asset class by asset class level. Qualitative assessments are made on the value of the historical data and the confidence we have (or lack thereof) that the historical average return is representative of future returns – Specifically, a weighted average of the ten-year expectations and average historical returns in each asset class is calculated.

Section 802.109 – Subsection (a) 2.B (continued)

Criteria or Topic	Austin Fire Status
<p>Asset Class Return and Standard Deviation Expectations Development (Continued)</p>	<ul style="list-style-type: none"> – The weights are determined by a qualitative assessment of the value of the historical data. Generally, if there is little confidence that the historical average return is representative of what an investor can expect,¹the weight of the ten-year forecast will be greater. Therefore, the weight on the ten-year forecasts ranges from 0.5 to 0.9. – Volatility and correlation expectations are developed differently. These assumptions rely primarily on historical averages, with an emphasis given to the experience of the trailing ten years. – Qualitative adjustments, when applied, usually serve to increase the correlations and volatility over and above the historical estimates (e.g., using the higher correlations usually observed during a volatile market). – Adjustments to volatility are made based on the historical skewness of each asset class (e.g., increasing the volatility for an asset class that has been negatively skewed). – In the case of private markets and other illiquid asset classes where historical volatility and correlations have been artificially dampened, public market equivalents are used as a base for estimates before applying any qualitative adjustments.

¹ For example, Meketa has less confidence in historical data that do not capture many possible market scenarios or that are overly polluted by survivorship bias.

Section 802.109 – Subsection (a) 2.B (continued)

Criteria or Topic	Austin Fire Status
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Asset Class Return and Standard Deviation Expectations Development (Continued)

- These volatility and correlation expectations are then combined with our twenty-year return expectations to assist us in subsequent asset allocation work, including mean-variance optimization and scenario analyses.

Exhibit #2 – Target Asset Allocation and Minimum/Maximum Weights

Strategic Target Asset Allocation ¹	Target Weight (%)	Minimum Weight (%)	Maximum Weight (%)
Public Domestic Equity	20	13	27
Public Foreign Equity	22	15	29
Private Equity	15	5	25
Investment Grade Bonds	13	10	20
TIPS	5	0	10
High Yield/Bank Loans	5	0	10
Emerging Market Debt	7	0	10
Core Real Estate	5	0	10
Value Add Real Estate	5	0	10
Private Natural Resources	3	0	5
Expected Return (20 years)	7.5		
Expected Standard Deviation (20 years)	13.1		

¹ Expected return and standard deviation are based upon Meketa Investment Group's 2020 Annual Asset Study. Throughout this document, returns for periods longer than one year are annualized. "Private" is defined by all asset classes not traded on public exchange or broker to broker. Specifically: private equity, private debt, private real estate, private natural resources and private infrastructure.

Exhibit #3 – Capital Market Assumptions

Asset Classes	20 Year Return Expectations' (%)	20 Year Standard Deviation Expectations' (%)
Public Domestic Equity	7.4	17.0
Public Foreign Equity	8.6	22.0
Private Equity ²	8.2	23.0
Investment Grade Bonds	3.0	4.0
TIPS	2.9	7.0
High Yield/Bank Loans	5.1	10.0
Emerging Market Debt	4.7	12.5
Core Real Estate	6.3	11.0
Value Add Real Estate	8.4	18.0
Private Natural Resources	8.8	21.0

¹ Expected return and standard deviation are based upon Meketa Investment Group's 2020 Annual Asset Study. Throughout this document, returns for periods longer than one year are annualized. "Private" is defined by all asset classes not traded on public exchange or broker to broker. Specifically: private equity, private debt, private real estate, private natural resources and private infrastructure.

² Fund of funds

Section 802.109 – Subsection (a) 2.C

Criteria or Topic	Austin Fire Status
<p>Alternative Investment Selection process</p>	<ul style="list-style-type: none"> • Austin Fire has averaged 1-2 private market investments per year over the past five+ years • With one exception, Austin Fire has historically only invested in fund-of-funds strategies in private equity, private debt, private natural resources and/or private closed-end real estate • Austin Fire has a zero percent target to hedge funds and has no exposure to hedge funds.. • When investing in private equity, private debt, private natural resources or private closed-end real estate, the Consultant will typically prepare a “search document” when it is determined that additional private market commitments are required to maintain or reach target asset allocation weights. • While each search document is customized for the given search mandate, they generally each include the following: <ul style="list-style-type: none"> – A comparison/contrast of more than one firm/fund to choose from – An overview of each firm – An overview of each fund – An overview of each team and how decisions are made – Information on fees, liquidity, expected size of the fund, anticipated geographic and strategy focus – Information on the philosophy and process followed – Performance track record – A meeting log of the Consultant’s recent due diligence meetings with each investment manager.

Section 802.109 – Subsection (a) 2.C (continued)

Criteria or Topic	Austin Fire Status
Valuation approach	<ul style="list-style-type: none"> In all cases, Austin Fire values its alternative investments based on fair value determinations provided by audited financial statements and appraisals provided to Austin Fire from its alternative investment managers.
Exposure to alternative investments	<ul style="list-style-type: none"> The current exposure is average to above average relative to industry averages for peer plans around the \$1 billion asset size. As of December 31, 2019, Austin Fire is overweight its private equity target (19% vs 15%), slightly underweight its real estate target (9% vs 10%) and is at its private natural resources target (3%). The IPS outlines target weights to alternatives as well as permissible ranges. Austin Fire is within the allowable exposure range for all its investments (as of December 31, 2019).

Section 802.109 – Subsection (a) 2.D

Criteria or Topic	Austin Fire Status
Annual expected contributions	<ul style="list-style-type: none"> • The average contribution into the Fund has been approximately \$37.2 million per year, over the last three years. This has been split roughly 54% from the city’s contribution (average contribution of \$20.1 mm per year, over the last three years) and 46% from the active fire fighters (average contribution of \$17.1 mm per year, over the last three years). • City contributions are expected¹ to increase by \$910,000 per year in the future. • Participant contributions are expected¹ to increase by \$800,000 per year in the future.
Annual expected benefit payments ¹	<ul style="list-style-type: none"> • The average benefit payment has been approximately \$45.6 million per year, over the last three years • Benefit payments are expected¹ to increase by approximately \$3 million per year in the future.
Annual expected administration expenses ¹	<ul style="list-style-type: none"> • Annual operating costs (excluding investment fees) have averaged approximately \$900,000 per year, over the last three years • Annual operating costs (excluding investment fees) are expected¹ to increase to approximately \$1.1 million per year in the future.

¹ Source: Austin Fire Fighters staff.

Section 802.109 – Subsection (a) 2.D (continued)

Criteria or Topic	Austin Fire Status
Annual expected net cash flows ¹	<ul style="list-style-type: none"> • Net cash flows out of the Fund (contributions – benefit payments – administration expenses) have averaged \$9.3 million per year, over the past three years. • Net cash flows out of the Fund are expected to average \$13.6 million per year, over the next three years. • Based on an average Fund value of \$1 billion the Fund is expected to have average net cash outflow of approximately 1.4% per year for the next three years. ($\\$13.6 \text{ mm} / \\$1,000 \text{ mm} = 1.4\%$).
Asset Liability Analysis	<ul style="list-style-type: none"> • The most recent actuarial valuation report was published in June 2019 (by Foster and Foster) with data as of December 31, 2018. • The fiscal year 2019 report was in production, but not finalized, as of March 2020. • Foster and Foster was conducting an Experience Study as of March 2020 as well.
Actuarial Assumed Rate(s) of Return	<ul style="list-style-type: none"> • The assumed rate of return is 7.70%. It was last adjusted in February 2016 when the Board lowered it from 7.75% to 7.70%. • As of March 2020, the Board was contemplating lowering the rate of return assumption.
Actuarial Highlights	<ul style="list-style-type: none"> • Funded status is 88% based on the actuarial value of assets and 94% based on the market value of assets.²
Funding Policy	<ul style="list-style-type: none"> • The Board of Trustees adopted a funding policy in December 2019, as required by SB 2224, which was passed by the Texas Legislature in 2019.

¹ Source: Austin Fire Fighters staff.

² According to the December 31, 2018 Actuarial Valuation report by actuary Foster and Foster.

Section 802.109 – Subsection (a) 2**Consultant Analysis**

- Austin Fire has done a great job of adopting a long-term strategic asset allocation and sticking to it. We believe its long term performance has benefited from the Board's restraint in not overly tinkering with allocation changes.
- In our opinion, the approach Austin Fire takes to formulate asset allocation is sound, consistent with best practices, and leads to a well-diversified portfolio.
- The analysis, thought, and conversation by the Board that accompanies each new private market investment is very robust and thorough, which we believe has led to good decision making.
- The current asset allocation targets are consistent with peer systems of similar size. The Fund is better funded than most public pension plans (and has minimal net annual cash flows) which allows it to invest more in private equity than most peers.
- The target asset allocation is well diversified and built with a global perspective in mind given the globally investable universe.
- Austin Fire's approach to passive management is consistent with industry best practices (e.g. passive is used in efficient asset classes).
- Austin Fire's minimal net cash outflows put the Fund in a much better position to withstand market corrections than other public pension with more significant net cash flows.

Section 802.109 – Subsection (a) 2 (continued)**Recommendations**

- We recommend the Board continues to remain patient with its approach to asset allocation.
- We recommend the Board and Staff closely monitor contribution levels and expected net out flows.
- We recommend Austin Fire consider adjusting actuarial valuation assumptions as necessary based on the outcomes and advice of the actuary upon conclusion of the experience study expected in 2020.
- We recommend the Board continues to use future return projections (and the advice of the actuary and consultant) when evaluating and setting its actuarial return target.

Section 802.109 – Subsection (a) 3

Section 802.109 – Subsection (a) 3

Law	Requirement
<p>Sec. 802.109, Subsection (a) 3</p>	<p><i>“a review of the appropriateness of investment fees and commissions paid by the retirement system”</i></p>

Criteria or Topic	Austin Fire Status
<p>Policy Language</p>	<ul style="list-style-type: none"> • According to the IPS, <ul style="list-style-type: none"> – <i>“The Board intends to monitor and control investment costs at every level of the Fund through the following:</i> – <i>Professional fees will be negotiated whenever possible.</i> – <i>Where appropriate, passive portfolios will be used to minimize management fees and portfolio turnover.</i> – <i>The Fund may enter into performance-based fees with specific managers.</i> – <i>If possible, assets will be transferred in-kind during manager transitions and Fund restructurings to eliminate unnecessary turnover expenses.</i> – <i>Managers will be instructed to appropriately minimize brokerage and execution costs”.</i> – (Section XII. Investment Costs).

Section 802.109 – Subsection (a) 3 (continued)

Criteria or Topic	Austin Fire Status
Internal process for paying manager fees	<ul style="list-style-type: none"> • Upon receiving investment management fee invoices, the Pension Administrator verifies that the fees charged are in accordance with the contract. The Pension Administrator verifies the amount with its own calculation, verifying the fee schedule against the investment management agreement • The invoice is then verified by one pre-identified Board member, and once approved by said Board member, the Pension Administrator arranges for payment • If a discrepancy is found, Austin Fire requests additional explanation from the investment manager prior to payment. If an error is found, Austin Fire requests correction from the investment manager prior to payment. • The process is not documented in any written formal procedure.
Public Markets Fees	<ul style="list-style-type: none"> • The Consultant monitors investment manager fees and appropriateness relative to similar investment strategies. • A public markets fee analysis is included in every quarterly report. It shows each public manager’s effective annual fee in both basis points and dollars. • The Consultant has provided a fee benchmarking exercise that compared each manager to the industry median fee for each respective asset class/strategy.

Investment Practices and Performance Evaluation

Private Markets Fees

- As is expected in the industry, private market strategies represent a larger proportion of fees than their pro-rata market value exposure.
- Austin Fire has little to no control on the fee arrangements of private market strategies that were committed to previously with contractually required fees detailed in previously executed Limited Partnership Agreements or other governing documents.
- Annually the Consultant provides an analysis of the expected annual fee per private market strategy.
- This analysis is used to provide an estimate of the total fee for the Fund (in both dollars and basis points).

Subsection 802.109 – Subsection (a) 3 (continued)

Criteria or Topic	Austin Fire Status
Total Annual Fees	<ul style="list-style-type: none"> • Based on our analysis, we estimate Austin Fire paid a blended average fee of approximately 0.64% bps in calendar year 2019 to investment managers. This is above the industry average of 0.60% (according to the latest available NCPERS survey conducted)¹. • The biggest source of fees was in private real estate, private equity and international equity. • The calculations were based on the following: <ul style="list-style-type: none"> • For public markets managers the calculations are based on market values at the end of the fiscal year, multiplied by the basis points fee schedule. • For private markets managers the calculation is based on the commitment amount multiplied by the base fund management fee (of the fund of funds manager) for the investment period. The calculation adjusts for funds that charge on invested (rather than committed) capital, as is common for funds later in their lifecycle. <ul style="list-style-type: none"> – The calculation does not take into consideration performance fees. – The calculation does not take into consideration the underlying fee each fund of funds pays to the underlying managers. • Total estimated fees paid for calendar year 2019 are detailed in Exhibit #7 (Consultant calculation).

¹ The 2018 NCPERS Public Retirement Systems Study includes responses from 167 state and local government pension funds with more than 18.7 million active and retired members and total assets of \$2.6 trillion. Roughly half the survey participants were Police/Fire pension plans.

Subsection 802.109 – Subsection (a) 3 (continued)

Criteria or Topic	Austin Fire Status
Communication to the Board	<ul style="list-style-type: none"> The Consultant presents its annual fee analysis in the first half of each calendar year.
Brokerage Fees and Commissions	<ul style="list-style-type: none"> The public market managers pay explicit commission costs and implicit opportunity costs inherent in bid-ask spread differentials (equity and fixed income strategies). These cost are shared by all investors in a commingled trust or specific to Austin Fire in the investments that are structured as separately managed accounts. Commission costs are tracked by the Fund’s custodian (State Street Bank). 2019’s brokerage fees and commissions are detailed below in Exhibit #8.
Legal Review	<ul style="list-style-type: none"> Austin Fire outsources all legal contract reviews to an external independent legal firm. Representatives from the law firm are generally present at every Board meeting.

Exhibit #7 – Estimated Investment Management Fees Paid in 2019

	% of Fund	Year-end Market Value (\$mm)	Estimated Annual Fee (\$)	Estimated Effective Fee (%)
Domestic Equity	17	175.1	811,742	0.46
International Equity	22	225.3	1,628,778	0.72
Fixed Income	30	309.7	701,803	0.23
Private Equity ¹	19	192.0	1,885,362	0.76 ²
Real Estate	9	89.8	1,145,743	0.92 ²
Natural Resources ³	3	26.0	324,434	0.76 ²
Totals	100%	\$1,018.0³	\$6,497,862	0.64%

Exhibit #8 – Brokerage and Commissions Paid in 2019

Accounts	Number of Shares Traded	Total Fees and Commissions	Fees and Commissions Per Share
Total of three U.S. equity separately managed accounts	3,855,000	\$99,726	2.6 cents/share

¹ For private markets managers the calculation is based on the commitment amount multiplied by the base fund management fee (of the fund of funds manager) for the investment period. The calculation adjusts for funds that charge on invested capital (rather than committed), as is common for funds later in their lifecycle. The calculation does not take into consideration performance fees. The calculation does not take into consideration the underlying fee each fund of funds pays to the underlying managers.

² Effective fee is divided by commitment amount, not current exposure.

³ Approximately \$8.2 mm (1%) was held in cash at the end of 2019.

Subsection 802.109 – Subsection (a) 3 (continued)**Consultant Analysis**

- Austin Fire has done a good job of identifying public market's managers with competitive fees.
- Austin Fire's use of passive index funds has helped reduce overall costs for the Fund.
- The private markets related fees are expensive but not surprising, nor outside the norm for fund of funds.
- At approximately \$1 billion in assets, Austin Fire is large enough to build a diversified direct program of private equity investments (if it wished) or continue with fund of funds.
- The commissions paid appear reasonable and in-line with industry norms.

Recommendations

- We recommend Austin Fire maintains its passive exposure in efficient market classes
- We recommend that Staff, the Board, and the Consultant all remain diligent in monitoring fees.
- We recommend Austin Fire staff document its internal process for fee reconciliation and payment in a formal procedure document or memo.
- The Trustees may want to explore more direct investments in private markets to reduce overall costs relative to fund of funds. Doing so would result in additional advisory costs which would likely (but not guaranteed) be less than FOF fees.

Section 802.109 - Subsection (a) 4

Section 802.109 - Subsection (a) 4

Law	Requirement
Sec. 802.109, Subsection (a) 4	<i>“a review of the retirement system's governance processes related to investment activities, including investment decision-making processes, delegation of investment authority, and board investment expertise and education”</i>

Criteria or Topic	Austin Fire Status
Website and transparency	<ul style="list-style-type: none"> • The website is simple and easy to navigate. • The website includes (non-exhaustive list): <ul style="list-style-type: none"> – Upcoming events – Annual reports – Board of Trustees Governance Policy – Trustee biographies – Staff biographies – News links – Archives – Summary of fund history – Pension Statute – Fund Rules & Policies – Benefits Guide – Pension Guide and Calculator. – Board meeting agendas – Board meeting minutes – Audited financial reports

Section 802.109 - Subsection (a) 4 (continued)

Criteria or Topic	Austin Fire Status
Delegation of Investment Authority?	<ul style="list-style-type: none"> • The Board of Trustees has investment authority. • Any action by the Board requires a majority vote. • Rebalancing recommendations are approved by the Board upon recommendation from the Consultant. Staff is authorized to implement the rebalancing efforts after Board approval.
Investment Decision Making Process	<ul style="list-style-type: none"> • Most investment decisions are based on the recommendation of the Consultant, with extensive conversation among Board members prior to approval. • The Board of Trustees frequently debates the pros-and-cons of each investment decision in open public meetings. • All investments are managed by external investment managers.
Investment Consultant	<ul style="list-style-type: none"> • Austin Fire hired Meketa Investment Group in March 2014 after conducting a national RFP process. • Prior to the hire of Meketa, Austin Fire was engaged with one consulting firm for approximately 15 years. • Meketa Investment Group receives a hard dollar fee (specified in advance) from Austin Fire and does not receive any additional fees (unless pre-approved by the Board of Trustees for projects beyond the scope of the investment advisory agreement). • Meketa’s fee is included in the annual fee review and reported to the Trustees annually. • Meketa Investment Group is an independent employee owned organization with no affiliation to investment managers or brokerage firms.

Section 802.109 - Subsection (a) 4 (continued)

Criteria or Topic	Austin Fire Status
Board Composition	<ul style="list-style-type: none"> • 5 member Board of Trustees : • The Fund is administered by a Board of Trustees consisting of five (5) members. Per the pension plan's governing statute, the Mayor serves as the pension board Chairman and the City Treasurer serves as the Treasurer of the Board. Members of the Fund, both active and retired, elect three (3) fellow members to serve on the Board. • Two members of the Board were appointed within the last two years. • The other two members of the Board average ten year of service on the Board. • The Mayor position turns over every time a new Mayor is elected. • Trustee election procedures are listed on the website in the Fund Rules document last amended in August 2017. • Active fire fighters can nominate and elect a fellow active or retired fire fighter, and vice versa. • Nominating candidates for the election of a member of the Board begins on September 1 and ends September 15 of each calendar year. • <i>"Nomination forms are for both active fire fighters and retired fire fighters: ballots are scheduled for distribution by regular mail to the active and retired fire fighters' home addresses during the first week of November. The ballots can be returned to the pension office by regular mail in the pre-postage paid return envelopes to be provided".</i> • Details on term limits are not disclosed in the Fund Rules.

Section 802.109 - Subsection (a) 4 (continued)

Criteria or Topic	Austin Fire Status
Board Leadership	<ul style="list-style-type: none"> The Mayor is the default chairman. The vice chairman is elected by the other board members.
Board Investment Expertise	<ul style="list-style-type: none"> Some of the Board members have significant investment expertise across asset classes from their time on the Board, attendance at industry conferences and active commitment to learning.
Board Education	<ul style="list-style-type: none"> The Board members routinely participate in the TEXPERS conferences as well as other national pension conferences (e.g. NCPERS). Each Trustee and the Fund Administrator must comply with the minimum and continuing education requirements under state law, including ethics and fiduciary training. After the first year of service, Trustees and the Fund Administrator shall attend at least one continuing education program every two (2) years.

Section 802.109 - Subsection (a) 4 (continued)

Criteria or Topic	Austin Fire Status
Frequency of board / Investment meetings	<ul style="list-style-type: none"> • Monthly meetings are required. • Investment meetings are held quarterly
Investment meeting dynamics	<ul style="list-style-type: none"> • Most investment related decisions are accompanied by thoughtful conversation among the Board members and Consultant. • There is very little (to no) “rubber stamping.” • The agenda for each investment meeting is set by the Pension Administrator in consultation with the Consultant. • The Consultant keeps a running “roadmap” that is shared with the Board. It sets the stage for the direction of the Fund over the coming 2-3 meetings.
Transparency of Board Activities	<ul style="list-style-type: none"> • Board meeting and investment agendas are posted to the City of Austin website and the Austin Fire Fighters website at least 72 hours prior to meetings. • The meeting minutes are clear and succinct.

Section 802.109 - Subsection (a) 4**Consultant Analysis**

- Monthly board meetings are common for public pension plans.
- The website is in a state of evolution. We are pleased to see progress.
- The separation of board meeting vs. investment meeting is very productive for sound decision making and allocation of time and resources.
- Flexibility exists for investment matters to be discussed at the monthly board (non-investment meetings) as needed. This has been helpful a number of times of the past few years.
- Board discretion on all investment actions (i.e. not granting investment authority to staff) is common for a \$1 billion pension with limited staff that mostly focuses on administering the plan (i.e. not dedicated to investments).
- Austin Fire's Board members work extremely well together. The small size of the board (and continuity) has helped with sound decision making and ultimately greatly benefited the participants in our opinion.
- Austin Fire's Board meeting frequency is standard for public pension meetings. We have conducted surveys of large public pension plans and found that many are moving towards less frequent meetings but more in depth (lengthy) meetings. This is essentially accomplished already with Austin Fire through the use of dedicated quarterly investment meetings.

Recommendations

- None

Section 802.109 - Subsection (a) 5

Section 802.109 - Subsection (a) 5

Law	Requirement
Sec. 802.109, Subsection (a) 5	<i>“A review of the retirement system’s investment manager selection and monitoring process”</i>

Criteria or Topic	Austin Fire Status
Responsibility for selecting investment managers?	<ul style="list-style-type: none"> • Board of Trustees, with the advice and recommendation of the Consultant • According to the IPS, <i>“the Board will select, contract with, monitor, and evaluate the investment consultant, investment managers, bank custodian, and other parties to ensure that actual results meet objectives”</i> (IPS Section IV Allocation of Investment Responsibilities, subsection A Board of Trustees). • <i>“The consultant will assist the Board in investment manager selection, when needed, and will promptly inform the Board and discuss the impact of material changes taking place within any current manager’s organization and/or investment process. Within this process, the investment consultant assumes fiduciary responsibility for advice given regarding the management of the investment process.”</i> (IPS Section IV Allocation of Investment Responsibilities, subsection B Investment Consultant).

Section 802.109 - Subsection (a) 5 (continued)

Criteria or Topic	Austin Fire Status			
Last Five Manager Hires	Date ¹	Strategy	Funding Amount (\$ mm)	Asset Class
	November 2019	Pacific Asset Management Bank Loans	18.5	Bank Loans
	March 2019	TT Emerging Markets Equity	30.0	International Equity
	September 2018	SVB Strategic Investors Fund IX	10	Private Equity
	August 2018	Aether Real Assets V	10	Natural Resources
	June 2018	Partners Group RE Secondary 2017	15	Real Estate

Evaluation process

- The consultant leads the evaluation process on manager selection.
- Meketa has a process where it continuously monitors and reviews investment managers in the industry. From this work, Meketa creates a “bullpen” of high conviction products that have been thoroughly vetted through Meketa’s multi-phase process.
- Meketa’s multi-phase process looks at a manager’s organization, investment team, investment philosophy, investment process, performance and fees (among other criteria).
- When presenting a short-list of possible strategies to the Board, Meketa seeks to find competitive firms for the mandate. Typically Meketa will prepare a “Search-document” with three or four possible strategies.
- Meketa provides an overview to the Board of each strategy and compares/contrasts each strategy.

¹ Dates in the table above are inception/ funding dates. Each strategy was funded intra-month so performance start dates are the first of the next month.

Section 802.109 - Subsection (a) 5 (continued)

Criteria or Topic	Austin Fire Status
Benchmarking	<ul style="list-style-type: none">• Policy benchmarks for each asset class and the total Fund are included in the Operating Procedures and quarterly performance reports.• The Consultant makes recommendations on which benchmarks are appropriate.• Individual manager benchmarks are determined based on each investment strategy's mandate and will generally, but not always, match the recommended benchmark identified by the investment manager.

Section 802.109 - Subsection (a) 5 (continued)

Criteria or Topic	Austin Fire Status
<p>Performance measurement</p>	<ul style="list-style-type: none"> • Austin Fire’s total fund performance and individual manager performance is monitored by Staff, Consultant, and the Board. • The Consultant produces a quarterly performance report that is shared with Staff and the Board of Trustees. • Among other things, the report includes: <ul style="list-style-type: none"> – Net of fees performance – Executive Summary with a one page green/red flash summary (for the quarter) – Quarterly cash flow summary – Total Fund performance relative to peer pension plans (InvestorForce Public Pension net performance for plans between \$250 mm - \$1 bb, as well as the \$1 bb+ version because the Fund recently crossed the \$1 bb threshold) – Total Fund performance vs. static policy benchmark (as stipulated in the Operating Procedures) and relative to a dynamic policy benchmark (based on actual prior month allocation weights) – Total exposure vs. target weights – Asset allocation history over trailing five years – Trailing time weighted returns for investment managers, and asset classes, over recent trailing time periods (QTD, FYTD, 1 YR, 3 YR, 5 YR, 10 YR and Since Inception) relative to benchmarks and peer groups – Attribution effects for the quarter vs. policy benchmarks – Risk statistics over trailing five year period including annualized standard deviation, information ratio, share ratio, beta and tracking error

Section 802.109 - Subsection (a) 5 (continued)

Criteria or Topic	Austin Fire Status
<p>Performance monitoring</p>	<ul style="list-style-type: none"> • The Consultant is primarily responsible for monitoring the performance of the investment managers and reporting to the Board. • The Consultant conducts periodic meetings, conference calls, and constant oversight of the investment managers. • The Consultant and the Board discuss individual strategies in more depth, as warranted. • In the past two years, one manager has been terminated. • The Consultant prepared a written recommendation citing the reasons for the termination recommendation. The most recent termination was the result of a portfolio manager departure at the investment manager. • The recommendation to conduct a replacement search was approved at the February 2019 investment meeting. The Board reviewed a search document of four possible replacement strategies (prepared by the Consultant) at the next investment meeting in May 2019. • The Board interviewed two finalists at the following investment meeting in August 2019. A decision to invest with one of the firms was made during the same meeting. • The contract with the new manager was executed in November 2019 and the transitioned from the old manager to the new investment manager occurred in the same month.

Section 802.109 - Subsection (a) 5**Consultant Analysis**

- Performance monitoring and benchmarking is in-line with industry best practices.
- Manager selection and evaluation is in-line with industry best practices.

Recommendations

- We recommend Austin Fire formally documents the rationale for all hiring and firing decisions.

Conclusions

Subsection	Overall Status	Adhering to established policies?
1. Investment Policy Statement analysis	Meets Industry Best Practices	Yes
2. Asset allocation (and liability) process review and execution	Meets Industry Best Practices	Yes
3. Fees review and procedures	Meets Industry Best Practices	Yes
4. Governance processes	Meets Industry Best Practices	Yes
5. Investment manager selection and monitoring	Meets Industry Best Practices	Yes

Summary of Recommendations

Subsection (a) 1

- The role of Staff could be more clearly outlined in the IPS or Operating Procedures.

Subsection (a) 2

- We recommend the Board continues to remain patient with its approach to asset allocation
- We recommend the Board and Staff closely monitor contribution levels and expected net out flows
- We recommend Austin Fire consider adjusting actuarial valuation assumptions as necessary based on the outcomes and advice of the actuary upon conclusion of the experience study expected in 2020.
- We recommend the Board continues to use future return projections (and the advice of the actuary and consultant) when evaluating and setting its actuarial return target.

Subsection (a) 3

- We recommend Austin Fire maintains its passive exposure in efficient market classes
- We recommend that Staff, the Board, and the Consultant all remain diligent in monitoring fees.
- We recommend Austin Fire staff document its internal process for fee reconciliation and payment in a formal procedure document or memo.

Summary of Recommendations

Subsection (a) 3 (continued)

- The Trustees may want to explore more direct investments in private markets to reduce overall costs relative to fund of funds. Doing so would result in additional advisory costs which would likely (but not guaranteed) be less than FOF fees.

Subsection (a) 4

- None

Subsection (a) 5

- We recommend Austin Fire formally documents the rationale for all hiring and firing decisions.

Sources Reviewed in Creation of the Report

Files	Files
Investment Policy Statement	Texas PRB Guidance for Inv. Practices and Perf. Evaluations
Operating Procedures	Conversations with Staff
Board Meeting minutes	Conversations with Trustees
Fund Rules document	Foster and Foster Actuarial Valuation Report
Austin Fire website	
Meketa performance reports	
Meketa attendance at Board meetings	
Meketa attendance at Investment meetings	
Statute Article 6243a-1	
2018 Annual Report	