



Temple Firefighter's Relief and Retirement Fund  
Investment Practices and Performance Evaluation

May 19, 2020

# INVESTMENT PRACTICES AND PERFORMANCE EVALUATION

## *Temple Firefighters' Relief and Retirement Fund*

### **Review and Analysis of Investment Policy**

1. Does the system have a formal and/or written policy for determining and evaluating its asset allocation? Is the system following this policy?
  - a. *Yes, the system has a formal policy for determining and evaluating its asset allocation. See section IV of the most recent IPS which details the asset allocation policies, asset classes to be utilized and their purposes, as well as the strategic asset allocation. In reviewing the most recent quarterly report, the plan asset allocation is following the IPS with respect to the asset allocation policy*
  
2. Are the roles and responsibilities of those involved in governance, investing, consulting, monitoring and custody clearly outlined?
  - a. *Yes, see section II of the IPS which clearly identifies the responsibilities of the Board, Investment Consultant, and Custodian.*
  
3. Is the policy carefully designed to meet the real needs and objectives of the retirement plan? Is it integrated with any existing funding or benefit policies? (i.e. does the policy take into account the current funded status of the plan, the specific liquidity needs associated with the difference between expected short-term inflows and outflows, the underlying nature of the liabilities being supported [e.g. pay-based vs. flat \$ benefit, automatic COLAs, DROP, etc.]?)
  - a. *Yes, please refer to our response to question 4 under Review and Analysis of Asset Allocation.*
  
4. Is the policy written so clearly and explicitly that anyone could manage a portfolio and conform to the desired intentions?
  - a. *Yes, the IPS clearly indicates the processes necessary for anyone to manage the portfolio.*
  
5. Does the policy follow industry best practices? If not, what are the differences?
  - a. *Yes, the investment policy follows industry best practices. The roles and responsibilities are clearly defined, the risk and return objectives are identified, and the investment philosophy and asset allocation policy are clearly stated.*
  
6. Does the IPS contain measurable outcomes for managers? Does the IPS outline over what time periods performance is to be considered?
  - a. *Yes, please refer to section V in the IPS. Each asset class should be in the top 50% of the peer average or above the respective benchmark on a rolling 5-year basis.*
  
7. Is there evidence that the system is following its IPS? Is there evidence that the system is not following its IPS?

- a. *There is clear evidence that the system is following its IPS. Examples include:*
- *The plan is following the strategic asset allocation as defined in the asset allocation section in the IPS.*
  - *The IPS defines the roles and responsibilities of all parties involved in the management of the plan. The Board's responsibilities largely relate to oversight of the plan including defining objectives, evaluating and hiring of third parties, and reviewing portfolio performance and general monitoring of the plan assets. The Board does all of these things in conjunction with the investment consultant who is hired by the Board. The consultant is responsible for assisting with the tasks previously noted and responsible for recommending investment managers and meeting with the Board to review the plan/portfolio as well as the general market environment. CAPTRUST provides all of these services as the consultant. The IPS states the investment managers are responsible for managing the assets of the system-being that the portfolio is implemented through external management which is occurring in practice.*
  - *The IPS dictates that the plan be reviewed at least quarterly. CAPTRUST prepares quarterly reviews and the financial advisor presents the materials each quarter.*
  - *As such, there is no evidence the plan is violating its IPS*

8. What practices are being followed that are not in, or are counter to, written investment policies and procedures?

- a. *None- the plan explicitly follows its IPS as is the intent.*

9. Are stated investment objectives being met?

- a. *The investment objectives include: focusing on long-term asset growth, control volatility, strive to achieve the actuarial assumed rate of return over time, and strive to achieve a rate of return in excess of the established benchmarks over a rolling five year period. The Board understands the cyclical nature of the investment markets and that these cycles cannot be accurately predicted. Additionally, the Board recognizes the plan is long-term in nature and understands short term performance should not undermine the long-term objectives of the plan.*

*As of 12/31/2019, the portfolio has outperformed the benchmark by 10 basis points since the inception of the CAPTRUST relationship (6.27% vs. 6.17%) and by 38 basis points over the last three years (9.35% vs. 8.97%).*

*The portfolio tracking error since inception (standard deviation of the portfolio return over the benchmark return) is only 4.17% suggesting volatility has been controlled. Tracking error measures just 1.62% over the last three years.*

*The actuarial assumed rate of return is 7.75% which may be difficult to achieve regardless of asset allocation strategy.*

*Overall, it appears the portfolio has performed well over the long-term and investment goals are being met.*

10. Will the retirement fund be able to sustain a commitment to the policies under stress test scenarios, including those based on the capital markets that have actually been experienced over the past ten, twenty, or thirty years?

- a. *As part of each asset allocation study, CAPTRUST conducts a historical simulation using benchmark indexes to examine how the proposed portfolios would have actually performed across time. This analysis is utilized when constructing the permissible ranges with respect to the strategic asset allocation chosen by the Board.*

*Based on the target asset class weights listed in the IPS, the benchmark portfolio would have experienced the most dramatic losses in 2008 and losses would have measured nearly 30% for the calendar year.*

*However, the strategic asset allocation ranges permit reducing equity exposure down to 45% as opposed to the 65.5% target. That flexibility would have allowed the strategic allocation to be changed materially to allow for a greater allocation to fixed income (10-20% range), cash (0-5% range), and alternatives (0-20% range) to offset the dramatic losses experienced in the equity markets during the financial crisis (as an example, the S&P 500 and MSCI EAFE indexes were down 37% and 43%, respectively, whereas the Bloomberg Barclays Aggregate Bond Index was up over 5%).*

*Additionally, only 20% of the portfolio is invested in vehicles that do not offer daily liquidity. The other 80% would have easily been able to reallocate away from equity during 2008.*

*As such, the policy has been constructed with enough flexibility to weather severe market downturns.*

11. Will the investment managers be able to maintain fidelity to the policy under the same scenarios?
  - a. *CAPTRUST's diligence team is actively involved in the selection and monitoring of the individual investment managers. Only best-in-class managers measured on both quantitative and qualitative measures are selected.*

*Furthermore, quarterly due diligence includes review of forward-looking indicators of investment managers' ongoing viability such as assets under management and investment professional turnover.*

12. Will the policy achieve the stated investment objectives under the same scenarios?
  - a. *The current IPS is drafted to achieve the system-specific objectives as they currently stand while abiding by the system's risk tolerances and constraints. Additionally, the strategic asset allocation (as defined in the IPS), is the mix of assets deemed suitable to achieve the current objectives. Should system-specific goals, risk tolerance, or constraints change, the IPS would be updated to reflect the new changes.*

13. How often is the policy reviewed and/or updated? When was the most recent substantial change to the policy and why was this change made?
  - a. *The IPS is reviewed quarterly. The most recent substantial change occurred in June 2018 when the strategic asset allocation was altered.*

### **Review and Analysis of Asset Allocation**

## A. Process for determining target allocations

1. Does the system have a formal and/or written policy for determining and evaluating its asset allocation? Is the system following this policy?
  - a. *Yes, the system has a formal policy for determining and evaluating its asset allocation. See section IV of the most recent IPS which details the asset allocation policies, asset classes to be utilized and their purposes, as well as the strategic asset allocation. In reviewing the most recent quarterly report, the plan asset allocation is following the IPS with respect to the asset allocation policy.*
2. If no formal policy exists, what is occurring in practice?
  - a. *N/A*
3. Who is responsible for making the decisions regarding strategic asset allocation?
  - a. *The investment consultant serves as a co-fiduciary and recommends a strategic asset allocation to the client. The Board must provide its approval to implement.*
4. How is the system's overall risk tolerance expressed and measured? What methodology is used to determine and evaluate the strategic asset allocation?
  - a. *Please review the asset allocation section in the attached IPS which details the system's risk tolerance and how it is measured.*

*When determining and evaluating the strategic asset allocation, a proactive and regimented process is conducted. The asset allocation is the result of an iterative exchange between the Board, the consultant, and the actuaries. Allocations are the result of a combination of quantitative modeling (portfolio optimization) and qualitative overlays (appropriate asset classes differ by plan).*

*When constructing defined benefit plan allocations, a considerable amount of time is spent evaluating the liabilities of the plan and importance is placed on ways to de-risk plan allocations - from reducing portfolio volatility to reducing contribution volatility. Several optimizers are utilized, and philosophical views are expressed when constraining portfolio optimizations. The Board relies on CAPTRUST's capital market forecasts for strategic mixes which will also convey their near-term or tactical views on markets in the form of underweight, neutral or overweight as it relates to agreed-upon targets and ranges.*

*Risk management is a key part of this process. On the asset side, risk is analyzed through modeling a variety of capital market assumptions and scenarios, vetting asset classes for return, risk, and cross-correlation properties, analyzing and understanding the investment vehicles / managers in the plan and potentially incorporating portfolio hedges where appropriate. Additionally, plan-specifics are considered including cash flow and other accounting / financial considerations surrounding the plan as well as a macro view on the role the plan plays now and the Board's intention going forward.*

*A multi-input approach is utilized in portfolio construction. The major inputs to the process are mean-variance optimization, stress-testing, Monte Carlo simulation, and historical analysis.*

*Mean-Variance Optimization - CAPTRUST creates their own capital market forecasts based on proprietary research. Using these inputs, hypothetical portfolio allocations are evaluated from a quantitative risk and return prospective and are reviewed by the Board.*

*Stress-Testing - CAPTRUST evaluates portfolios based on a variety of potential market conditions before submitting any recommendations to the Board. For plan sponsors who subscribe to LDI the biggest focus is on evaluating how potential interest rate scenarios will impact not only assets, but also liabilities. Stress-testing also plays a significant role in the design of dynamic asset allocation “glidepaths”.*

*Monte Carlo Simulations - CAPTRUST performs Monte Carlo analysis for plan sponsors with specific accumulation goals. Monte Carlo analysis provides extremely compelling evidence for plan sponsors struggling to determine the attractiveness of implementing a “de-risking” dynamic asset allocation.*

*Historical (“Scenario”) Analysis - Once all analytical tools have been leveraged, it is prudent to bring the theoretical quantitative analysis back to reality. The potential portfolios are simulated through a historical return analysis to determine how the portfolios would have performed on a historical basis. This ensures that portfolios aren’t taking risks that have not been captured in the quantitative analysis and would have adversely impacted the portfolio.*

*It is important to note that the asset class forecasts generated by CAPTRUST’s Consulting Research Group focus on a time horizon that covers a market cycle, typically a 5 to 7 year period. The forecasts are reviewed at least semiannually and subject to more frequent review pending potential market dislocations at the aggregate or individual asset class level. The intent is to create stable forecasts that are consistent with market fundamentals yet retain conservative underpinnings.*

5. How often is the strategic asset allocation reviewed?
  - a. *The strategic asset allocation is reviewed at a minimum quarterly.*
  
6. Do the system’s investment consultants and actuaries communicate regarding their respective future expectations?
  - a. *Yes, the investment consultant and plan actuary communicate as necessary particularly regarding the determination of the plan’s present value of expected future benefit payments. The actuary uses their expected return on assets as the discount rate for their valuation. CAPTRUST, as the consultant, speaks directly with the actuary with respect to how they determine the expected rate of return. It is also important to note the actuary derives the accounting valuation of the plan whereas CAPTRUST monitors the plan liability on an economic basis. Discussions around actuarial assumptions in determination of the plan liability are common for this reason.*
  
7. How does the current assumed rate of return used for discounting plan liabilities factor into the discussion and decision-making associated with setting the asset allocation? Is the actuarial expected return on assets a function of the asset allocation or has the asset allocation been chosen to meet the desired actuarial expected return on assets?
  - a. *With regard to defined benefit plans, our investment philosophy is to first gain an understanding of the plan sponsor’s objectives, the nature of the plan liabilities, and*

*the cash flow requirements of the plan. In conjunction with the consultant, the Board models, and ultimately develops, an acceptable asset allocation strategy that will control risk to the funded ratio while achieving a reasonable return.*

*The Board remains cognizant of the expected return on assets utilized for accounting purposes but the long-term benefit to participants takes precedence in terms of setting the asset allocation.*

*It is important to note the actuarial present value of benefit payments is utilized for accounting purposes but is not the true "economic value" of the liability.*

8. Is the asset allocation approach used by the system based on a specific methodology? Is this methodology prudent, recognized as best practice, and consistently applied?

*a. A comprehensive discussion of asset allocation methodologies is described under question 4 under Review and Analysis of Asset Allocation.*

9. Does the system implement a tactical asset allocation? If so, what methodology is used to determine the tactical asset allocation? Who is responsible for making decisions regarding the tactical asset allocation?

*a. The plan has not historically but can implement a tactical asset allocation through altering the target weights of the asset classes listed in the IPS. Each asset class has a minimum and maximum allowable weight which can deviate based upon the client and/or the investment consultant/financial advisor's views.*

*The Board must approve any decisions recommended by the consultant.*

10. How does the asset allocation compare to peer systems?

*a. Please see the attached 2019 study (TEXPERS Asset Allocation Report 2019) conducted by Maples Group that compares the asset allocations across public Texas pension plans (including Temple Firefighters' Relief and Retirement Fund). The study measures asset allocations as of 9/30/2018 across 85 unique pension plans.*

## **B. The Expected Risk and Rate of Return, Categorized by Asset Class**

11. What are the strategic and tactical allocations?

*a. Strategic Asset Allocation per the 2018 IPS (allowable tactical range shown in parentheses)*

- Money Market or Equivalent 1% (0-5%)*
- Fixed Income 15% (10-20%)*
- Domestic Equities 38% (29-47%)*
  - Large-Caps 25% (20-30%)*
  - Small/Mid-Caps 13% (9-17%)*

- *International Equities 27.5% (16-37%)*
- *Real Estate 5% (0-10%)*
- *Alternatives 13.5% (10-20%)*
- *Commodities 0% (0-10%)*

12. What is the expected risk and expected rate of return of each asset class?

a.

<b>Asset Class</b>	<b>Expected Return</b>	<b>Expected Risk</b>
Money Market or Equivalent	2.0%	0.36%
Fixed income	2.8%	3.29%
US Large-Cap Equity	7.25%	15.0%
US Mid-Cap Equity	7.5%	17.0%
US Small-Cap Equity	7.5%	19.0%
International Equity	7.0%	17.0%
Emerging Market Equity	7.75%	20.0%
US Public Real Estate	6.0%	20.0%
Private Equity	9.5%	9.0%
Reinsurance Bonds	6.5%	3.0%

13. How is this risk measured and how are the expected rates of return determined? What is the time horizon?

- a. *It is important to note that the asset class forecasts generated by CAPTRUST's Consulting Research Group focus on a time horizon that covers a market cycle, typically a 5 to 7 year period. The forecasts are reviewed at least semiannually and subject to more frequent review pending potential market dislocations at the aggregate or individual asset class level. The intent is to create stable forecasts that are consistent with market fundamentals yet retain conservative underpinnings. It is also important to highlight that asset class forecasting is the product of both quantitative and qualitative assessments. There are three outputs in CAPTRUST's asset class forecasting process: return, standard deviation, and cross-correlation assumptions for major asset classes across both traditional and non-traditional types. Asset class assumptions do not include an active management premium or discount.*

*The process focuses on six interrelated steps:*

- *Asset class definitions and assigned proxies (peer group and benchmarks): Here, parameters are established for an asset class and the most relevant proxy (and peer group and benchmark) for each asset class. The definitions and parameters of domestic and international equity, fixed income, and several alternative asset classes vary by firm, so CAPTRUST is prudent in the definition and break down of the specifics of each asset class. For example, within the commodities space, return and standard deviation histories are considerably different for indexed strategies compared with actively managed strategies, and as such it makes sense to model accordingly.*



- *Historical context: This step involves data analysis for as far back as can be obtained with as frequent periodicity as possible. Asset class proxies are viewed through various periods of market dislocation, define periods of muted or heightened volatility, and try to understand what types of relationships have existed in the past and are likely to repeat under various scenarios. Historical context is particularly useful when thinking about cross-correlations. Because some asset classes do not have robust histories as stand-alone assets or proxy data is infrequent, over-reliance on history can be a pitfall.*
- *Current fundamentals: Assessing the fundamentals of an asset class, especially supply / demand factors that can heavily influence short to medium-term returns, involves both art and science. Tracking fund flows, maintaining a macroeconomic view, and understanding the interrelations within global asset classes is critical. Relationships with external managers, data providers, and their own clients are also important qualitative tools in this step.*
- *Longer-term considerations: A structural understanding of the challenges and dynamics of an asset class are important to forecasting. For example, understanding global central bank asset / liability management, the emergence of competing reserve currencies, and other factors that could change the standard deviation and return characteristics of the U.S. core fixed income market are potential considerations to the forecasts.*
- *External sources: Having external providers with differing data sources, methodologies, and perspectives helps improve the approach. The external research and input serves as a consistent “head check” and challenges internal assumptions; if there is a disparity with internal forecasts and an external source’s, time is taken to understand the differences. That disparity may not cause a change to internal assumptions, but it does serve as a healthy challenge.*
- *Group discussion: The internal asset class forecasts are the product of team collaboration and viewpoint. Having multiple people within the department working on asset allocation forces best thinking and allows multiple viewpoints to enter into the process. CAPTRUST’s Chief Investment Officer, Kevin Barry, has ultimate authority on the forecasts, but the end result is a product of team collaboration.*

*This approach, along with the tools described herein, allows the development of the asset allocation strategies. Combined with a client’s goals and risk tolerance, CAPTRUST’s Consulting Research Group is able to develop, implement, and monitor strategic allocation recommendations. The asset allocation is reviewed on a quarterly basis during the client review along with all other aspects of the portfolio. If the goals or needs of the portfolio have changed, then the recommended asset allocation would be reviewed and updated as necessary.*

14. What mix of assets is necessary to achieve the plan’s investment return and risk objectives?

- a. *The strategic asset allocation is by definition the mix of assets selected to best achieve the plan's investment return and risk objectives. See the response to question 11 under Review and Analysis of Asset Allocation section B.*
15. What consideration is given to active vs. passive management?
- a. *Both active and passive management techniques are implemented in the portfolio. These decisions are based upon the specific asset classes to be utilized, the current market environment, and the plan-specific objectives/risk tolerances. Generally, passive approaches are utilized where it is difficult for a manager to add "alpha." Costs are an additional consideration with respect to active vs passive management.*
16. Is the approach used by the system to formulate asset allocation strategies sound, consistent with best practices, and does it result in a well-diversified portfolio?
- a. *Yes, the system utilizes an investment consultant to formulate asset allocation strategies which is common throughout the industry. CAPTRUST (as consultant) utilizes best practices in the determination of suitable asset allocation recommendations. The methodologies implemented by CAPTRUST and the resulting asset allocation in place have resulted in a well-diversified portfolio across several different asset classes and investment managers.*
17. How often are the strategic and tactical allocations reviewed?
- a. *The strategic and tactical asset allocations are reviewed at a minimum quarterly.*

**C. The Appropriateness of Selection and Valuation Methodologies of Alternative and Illiquid Assets**

18. How are alternative and illiquid assets selected, measured and evaluated?
- a. *The investment vehicle selection process focuses on four key areas regardless of asset class and investment type (public/private and active/passive): (1) Risk-adjusted performance, (2) Excess return, (3) Peer analysis, and (4) Qualitative assessments / intangibles*
- While past results do not portend the future, they do help form an opinion on the viability and repeatability of a given strategy. Ongoing due diligence is conducted by the consultant through a combination of onsite visits, quarterly communications, in-person meetings, and a network of relationships throughout the investment community.*

*Individual investment managers are responsible for valuing the assets held in their respective portfolios.*

*Below are some additional details on the four key areas of the investment selection process:*

- *Risk-Adjusted Performance: Efforts focus on measuring the risks that investment managers take relative to a benchmark, with the objective to identify managers that provide representation of an asset class, while justifying their fees based on the value they add per unit of risk. Methods incorporated in the analysis include, but are not limited to, alpha, beta, up / down capture, standard deviation, Sharpe ratios, and Treynor ratios. The quantitative results can then be related to the qualitative assessment of the manager's investment process to understand the intentional and unintentional consequences of their process, as well as the consultant's opinion of the likelihood that the process can be repeatable into the future.*
- *Excess Return: Returns are examined on a non-risk-adjusted basis to gauge if an actively or passively managed strategy has achieved its stated goals while remaining representative of a given index. A full market cycle is an appropriate timeframe for this type of assessment. Specifically, statistics such as annualized excess return, R-squared, t-statistics, and information ratios are observed to derive excess return profiles.*
- *Peer Analysis: This analysis involves comparing risk-adjusted (for active managers) and excess returns of a given manager relative to other choices in a given asset class. Both rolling and non-rolling time periods are examined to uncover periods of dislocation between a strategy and its peer groups, and then considerable efforts are taken to understand the factors that caused these dislocations.*
- *Qualitative Factors: Understanding a manager's business model is critical to assess their investment capabilities. Aspects focused on include assets under management, management tenure, organizational ownership structure, process consistency, depth of team and resources, buy and sell approach and discipline, fee considerations, trading costs and capabilities, employee turnover and retention tools, operational infrastructure, organizational culture, and growth of the portfolio. Managers should be managing money, not gathering assets.*

*While there is much quantitative and qualitative rigor that goes into the search and selection process itself, it is rare that a definitive selection can be reached based on the analysis work alone. Typically, more than one investment candidate will emerge as a suitable alternative for each of the universes being studied.*

*The philosophy of CAPTRUST (as consultant) has always been to interact with clients on a quarterly basis to update the performance of the portfolio. However, their advisors can meet on an as needed basis. During these meetings, the team provides the client and its committee with the quarterly report, which provides a thorough economic commentary, verifies the portfolio's compliance with each of the criteria spelled out within the IPS, reviews the investment performance and details any material industry-specific or legislative information. As a co-fiduciary, CAPTRUST has a vested interest in maintaining portfolio compliance.*

*Performance Monitoring*

*The following criteria provide an outline for the monitoring process:*

*On a quarterly basis, CAPTRUST will provide the committee with a comprehensive report of each investment option's relevant performance and relative rankings against appropriate indexes, and within appropriate peer groups.*

*CAPTRUST will also communicate with the committee on an ad hoc basis, as appropriate, concerning any material changes affecting any of the selected investment options. Material changes may include management changes, changes to the investment option's pricing structure or significant changes in the investment option's fundamental policies and procedures that CAPTRUST feels warrant committee review.*

19. Are the system's alternative investments appropriate given its size and level of investment expertise? Does the IPS outline the specific types of alternative and illiquid investments allowed, as well as the maximum allocation allowable?

*a. Defined benefit systems have long term investment horizons which are generally able to accept higher levels of risk (and lower liquidity constraints). 13.5% of the portfolio is allocated to Alternatives as of the 4Q19 performance report. Given the plan is nearly \$50mm in size, the Alternatives allocation and types utilized are appropriate.*

*Yes, the IPS identifies the maximum allowable allocation to Alternatives and the investment types permitted for alternatives. Although, the IPS could be improved in that area by furthering clarifying which Alternatives are permitted and prohibited.*

20. What valuation methodologies are used to measure alternative and illiquid assets?

*a. Extraco Banks (as custodian) provides asset valuations used for plan reporting purposes. The custodian receives the alternative asset valuations from the individual investment managers who are responsible for determining fair value.*

**D. Future Cashflow and Liquidity Needs**

21. What are the plan's anticipated future cash flow and liquidity needs? Is this based on an open or closed group projection?

*a. As of the most recent actuarial valuation report (9/30/18), the present value of the expected benefit payments measured \$83.56MM. At that time, the funded status of the plan measured roughly 53%. The unfunded actuarial liability was \$16.39mm and the current contribution policy (30.24% of payroll) will be sufficient to amortize the unfunded actuarial liability over 28.6 years provided the future plan experience is consistent with the underlying methods and assumptions used. This is based on an open group projection.*

*The actuary provided the plan expected cashflows as of the latest measurement of the present value of expected benefit payments (9/30/2018). Both the cashflows and the most recent actuarial report have been attached to this document for reference.*

*For the current plan fiscal year, the expected benefit payment measures \$3.96mm versus an asset pool of approximately \$47MM as of December 31, 2019. From a benefit coverage perspective, the plan has enough assets to cover the benefit payment for the current year nearly 12x. Over 80% of the current portfolio is invested in daily liquidity mutual funds. As such, the plan maintains a sufficiently liquid and sized asset pool to meet the projected benefit payment and total fees (assuming the fees paid remain in line with figures reported in the attached fee analysis) for the upcoming plan fiscal year.*

*Expanding this analysis out to five years, the total expected benefit payments measure \$21.13MM. The benefit payment coverage ratio measures 2.2x based on the current assets. Again, over 80% of the current portfolio is invested in daily liquidity mutual funds. On a five-year basis, the plan has a sufficiently liquid and sized asset portfolio to cover the next five years' worth of benefit payments and fees.*

*Note this is assuming the future plan experience is consistent with the underlying methods and assumptions used by the actuary in determination of the benefit payment schedule.*

22. When was the last time an asset-liability study was performed?
  - a. *Please review the three asset allocation studies attached. Additionally, CAPTUST is working on an additional study currently.*
  
23. How are system-specific issues incorporated in the asset allocation process? What is the current funded status of the plan and what impact does it have? What changes should be considered when the plan is severely underfunded, approaching full funding, or in a surplus? How does the difference between expected short-term inflows (contributions, dividends, interest, etc.) and outflows (distributions and expenses) impact the allocation? How does the underlying nature of the liabilities impact the allocation (e.g. pay-based vs. flat \$ benefit, automatic COLAs, DROP, etc.)?
  - a. *Please review our response to question 4 under Review and Analysis of Asset Allocation.*
  
24. What types of stress testing are incorporated in the process?
  - a. *Please review our response to question 4 under Review and Analysis of Asset Allocation.*

### **Review of Investment Fees and Commissions Paid**

1. Do the system's policies describe the management and monitoring of direct and indirect compensation paid to investment managers and other service providers? What direct and indirect investment fees and commissions are paid by the system?
  - a. *The IPS does not directly address the system's policies and procedures with respect to direct and indirect compensation paid to investment managers.*

*Please refer to the attached fee analysis to view fees paid by the system.*

2. Who is responsible for monitoring and reporting fees to the board? Is this responsibility clearly defined in the system's investment policies?
  - a. *The investment consultant monitors and reports investment fees to the board. This is clearly stated in the IPS.*

*The Board is responsible for the monitoring of all other fees incurred by the plan.*

3. Are all forms of manager compensation included in reported fees?
  - a. *Yes- the net expense ratio is the appropriate metric to determine the fee charged for mutual fund investments. Private managers have management fees and charge performance fees which vary across different managers. The fee analysis attached includes both management and performance fees.*
4. How do these fees compare to peer group and industry averages for similar services? How are the fee benchmarks determined?
  - a. *Mutual fund benchmarking has been included on page 4 of the attached Temple Fee Analysis and measures the mutual fund expense ratio against the Evestment peer universe (based on asset class). Note, the private fund investments and the investment in Stone Ridge Reinsurance Interval Fund are not included. Fees charged by private investment managers vary although the industry standard is a 2% management fee and a 20% incentive fee. This type of information is not publicly available and in many cases this information cannot be disclosed by investors for legal reasons. Given the lack of available data, it is difficult to benchmark private investment fees.*

*Stone Ridge Reinsurance Interval Fund does not have a suitable peer universe given the unique exposure to insurance related assets. For reference, the net expense ratio is 2.31%. The Global High Yield Universe median expense ratio measures 50 basis points.*

*Benchmarking for other investment services can be seen below. The peer benchmarking is determined by BCG Pension Risk Consultants via survey. Only BCG Pension Risk Consultants has access to the raw data but the summary below was provided to the investment consultant.*

- *Trust and Custody: ranked in 2<sup>nd</sup> quartile (51 respondents)*
- *Administration: ranked in 1<sup>st</sup> quartile (59 respondents)*
- *Actuarial: ranked in 2<sup>nd</sup> quartile (61 respondents)*
- *Investment Advisory: ranked in 3<sup>rd</sup> quartile (31 respondents)*
- *Accounting: ranked in the 2<sup>nd</sup> quartile (54 respondents)*

5. Does the system have appropriate policies and procedures in place to account for and control investment expenses and other asset management fees?

- a. *Yes, the system has appropriate policies in place to account for and control fees. The Board selects the investment managers after their own evaluation and the investment consultant is responsible for monitoring and further evaluation of the managers selected.*

*Additionally, an investment consultant provides more scale to, on many occasions, negotiate lower fees than a single plan sponsor.*

6. What other fees are incurred by the system that are not directly related to the management of the portfolio?
  - a. *Other fees incurred by the system include: investment consultant fee, accounting fees, actuarial fees, custodial fees, PBI fee, website subscriptions, and legal fees.*
7. How often are the fees reviewed for reasonableness?
  - a. *Investment fees are monitored on an ongoing basis by the investment consultant. Administrative and custody fees are monitored on a quarterly basis. Administrative and custody fees are reviewed and assessed every 5 years per contract.*
8. Is an attorney reviewing any investment fee arrangements for alternative investments?

*Yes. When investments requiring a separate agreement are added, the plan's attorney will review the agreement.*

## **Review of Governance Processes Related to Investment Activities**

### **Transparency**

1. Does the system have a written governance policy statement outlining the governance structure? Is it a stand-alone document or part of the IPS?
  - a. *Yes, there is a governance policy outlined in Vernon's Civil Statutes in accordance with the Texas Constitution. It is a separate document from the IPS.*
2. Are all investment-related policy statements easily accessible by the plan members and the public (e.g. posted to system website)?
  - a. *Yes, all investment-related policy statements are accessible to the plan members via the system website. However, the documents are accessible only to the plan members and not the general public.*
3. How often are board meetings? What are the primary topics of discussion? How much time, detail, and discussion are devoted to investment issues?
  - a. *Meetings are held monthly by board members. Topics of discussion range from accounting related items (fees discussions/approvals), budgeting, and investment*

*related discussions/reviews. Investment issues are discussed as appropriate and in as much depth as necessary.*

*At a minimum, the board meets with their CAPTRUST financial advisor to review the portfolio, performance, and any related issues each quarter.*

4. Are meeting agendas and minutes available to the public? How detailed are the minutes?
  - a. *Yes, meeting agendas and minutes are available to the public. The minutes are detailed sufficiently to describe the agenda.*

#### **Investment Knowledge/Expertise**

5. What are the backgrounds of the board members? Are there any investment-related educational requirements for board members?
  - a. **Daniel Meyer**- *Active member, has worked for ten years in the Temple Fire Department and serving as a driver for three years. Bachelor degree from Texas A&M University.*
  - Jason Haltom**- *Active member, has worked for ten years in the Temple Fire Department and serving as a driver for three years. Bachelor degree from Lamar University.*
  - Matthew Byrd**- *Active member, has worked for five years in the Temple Fire Department and serving as a driver for 1 year. Bachelor degree from Texas A&M University.*
  - Randal Ramsey**- *Mayor's appointee. Heart of Texas Division President at BancorpSouth Bank. Bachelor degree from Texas Tech and Master's degree from Southern Methodist University.*
  - Bryan Daniel**- *Finance Director's appointee. Financial Advisor, Certified Financial Planner. Bachelor degree from Baylor University and Master's degree from University of Texas.*
  - Blake Stapp**- *Civilian Trustee- Partner in local CPA firm with a Bachelor degree from University of Mary Hardin Baylor and Master's degree from University of Phoenix.*
  - Patrick Kelly**- *Civilian Trustee - Served on the Temple Fire Department for over twenty years and retired at the rank of Captain.*



*There are no minimum investment related educational requirements for board members.*

6. What training is provided and/or required of new board members? How frequently are board members provided investment-related education?

a. *The State Pension Review Board shall provide technical assistance, training, and information to members of the boards of trustees established under the Vernon's Civil Statutes.*

*The training required is designed to meet the specific needs of members of boards of trustees administering benefit plans for local fire fighters, including small-to-medium-sized benefit plans.*

7. What are the minimum ethics, governance, and investment education requirements? Have all board members satisfied these minimum requirements?

a. *All board members perform the PRB required training concerning these areas.*  
b. *Yes.*

8. Does the system apply adequate policies and/or procedures to help ensure that all board members understand their fiduciary responsibilities?

a. *Yes, the IPS clearly defines the responsibilities of all parties involved. The Board is responsible for clearly identifying specific responsibilities between members.*

9. What is the investment management model (i.e. internal vs. external investment managers)?

a. *CAPTRUST serves as the investment consultant in a non-discretionary capacity. The consultant is responsible for recommending suitable external managers to the Board.*

10. Does the board receive impartial investment advice and guidance?

a. *Yes, the Board receives impartial investment advice from the investment consultant.*

*CAPTRUST does not have any proprietary products. CAPTRUST does not have any soft dollar arrangements and does not accept any gifts, gratuities, entertainment, contributions, donations, and the like from any money manager, service provider, or any other third party.*

11. How frequently is an RFP issued for investment consultant services?

a. *This is performed when requested by the Board. It is based on when the Board deems it necessary. The fees are monitored and approved quarterly. Fees are also compared to peer funds.*

## Accountability

12. How is the leadership of the board and committee(s), if any, selected?
- a. *The Board of Trustees consists of the Mayor/ or Mayor's appointee from the municipality, the Finance Director/ or Finance Director's appointee, two civilian trustees (nominated and elected by the board), and three elected members based on the following:*

*During each period that begins on December 1 of one year and ends on January 31 of the following year, the participating members of a fire fighters' retirement system in a municipality shall elect by secret ballot and certify to the governing body of the municipality a member to the board of trustees to serve a term of approximately three years that expires on the day before the date of the first board meeting that occurs after the election of a successor. To be elected a member of a board of trustees, a person must be a member of the retirement system and receive a majority of the votes cast in the election, and at least 50 percent of all participating members of the retirement system must vote in the election.*

13. Who is responsible for making decisions regarding investments, including manager selection and asset allocation? How is authority allocated between the full board, a portion of the board (e.g. an investment committee), and internal staff members and/or outside consultants? Does the IPS clearly outline this information? Is the board consistent in its use of this structure/delegation of authority?

- a. *The Board is responsible for ultimate approval regarding manager selection and asset allocation with the investment consultant making the recommendations. Full authority is granted through the voting process by the Board.*

*The roles and responsibilities of all parties is clearly identified in the IPS.*

14. Does the system have policies in place to review the effectiveness of its investment program, including the roles of the board, internal staff and outside consultants?

- a. *Yes, the IPS clearly define these guidelines. See section VI in the IPS for reference.*

15. Is the current governance structure striking a good balance between risk and efficiency?

- a. *The system's governance structure is outlined through Vernon's Civil Statutes which serves as the de facto codifications of the Texas Constitution. Article 6243e is specific to the Texas Local Fire Fighters Retirement Act which describes the structure and laws with which the system must follow.*

*As it relates to risk, the roles and responsibilities of each party involved in the management of the plan is clearly defined in the IPS. In short, the Board is responsible for developing the investment objectives of the plan, hiring of all parties, allocating assets, review of investment results and investment policy.*

*The consultant assists the Board with these responsibilities, but ultimate approval resides with the Board. Lastly, the investment managers are directly responsible for the management of the plan's assets.*

*This structure is very common throughout the industry and serves as a good system of checks and balances.*

16. What controls are in place to ensure policies are being followed?
  - a. *The biggest control in place is the roles and responsibilities outlined in the IPS. The IPS is critical to ensure the policy objectives are being met. Additionally, the monitoring and review of the plan on a quarterly basis (at a minimum) with the investment consultant is a good control to ensure policies are being followed.*
  
17. How is overall portfolio performance monitored by the board?
  - a. *The portfolio performance is evaluated each quarter and is in compliance with the requirements under the IPS. The investment consultant reports on performance quarterly and details performance versus the relevant benchmarks as well as peer groups as determined by Morningstar.*
  
18. How often are the investment governance processes reviewed for continued appropriateness?
  - a. *Governance process are reviewed on an as needed basis and discussed during the monthly meeting when appropriate.*

### **Review of Investment Manager Selection and Monitoring Process**

1. Who is responsible for selecting investment managers?
  - a. *The investment consultant serves as a co-fiduciary to the plan and recommends investment managers to the board. Ultimately, the board is responsible for approval of the investment managers.*
  
2. How are the managers identified as potential candidates?
3. What are the selection criteria for including potential candidates?
4. What are the selection criteria when deciding between multiple candidates?
  - a. Responses to questions 2 through 4

*When recommending investment managers to the Board, CAPTRUST invests significant time and resources into the qualitative and quantitative factors in evaluating portfolios and*

*the manager research process, with a dedicated team solely devoted to manager search and selection. The team uses industry leading tools and has access to proprietary databases and information that creates a competitive advantage in the industry.*

*Since manager selection is foremost about forward-looking views and investment recommendations, CAPTRUST is committed to the qualitative assessment of investment managers. CAPTRUST believes that understanding a manager's firm and its people is critical to the assessment of investment capabilities. Aspects that CAPTRUST focuses on includes the experience of the investment team, their backgrounds and tenure, the organization and its ownership structure, division of labor, and compensation and alignment of fees and expenses. Employee turnover and retention tools are also critical, as are the firm's growth portfolios and culture. CAPTRUST wants money managers managing money, not gathering assets. Process consistency is extremely important as well, as is depth of team and resources, buy and sell approach and discipline, trading costs and capabilities, and operational infrastructure.*

*CAPTRUST consistently reviews new ideas and investment strategies. CAPTRUST maintains an extensive travel and research budget to conduct this qualitative research wherever managers are located and believe it is a critical component of any institutional quality manager research process. New clients with legacy managers may fall under other strategies. The networks CAPTRUST has developed in the investment community, legal and tax advisors, or third-party administrators provides a structural advantage when sourcing new ideas.*

*When conducting a specific manager search within an asset class, CAPTRUST begins by narrowing the universe of available options based upon a set of primary requirements, some quantitative, but most qualitative.*

*These can be bucketed into a few major categories:*

- *The Consistency and Quality of Returns within the Asset Class*
- *Quality of the Team*
- *Quality of the Firm*
- *Fees and Expenses*

#### *Investment Vehicle Options*

*The quantitative tools at CAPTRUST's disposal are optimized to identify truly skillful managers within any given asset class and separate skillful from lucky managers. Metrics they look at include factor exposures, holdings-based analysis, historical performance characteristics measured through a variety of market conditions, and the application of a quantitative model that helps identify managers who have delivered a consistent performance profile through time. These approaches can narrow the universe considerably, typically resulting in a list of candidates ranging from approximately eight to twenty asset managers, depending upon the asset class.*

*CAPTRUST then conducts in-depth qualitative due diligence meetings with portfolio managers, analysts, and other senior investment personnel, typically in person.*

*The objectives of these meetings are to:*

- *Understand the investment mandate, degree of investment flexibility, and process that the team follows and compare this to past results to verify consistency*
- *Discuss investment idea generation, security selection, and the portfolio construction process, including position sizing and sell decisions*
- *Evaluate the risk management process and controls that are in place*
- *Understand the depth of resources available to the team, including the size and stability of the supporting analyst team*
- *Evaluate the team's investment culture and the firm's commitment to the strategy – is this a growth area that the firm is likely to continue to invest in, or an ancillary business?*
- *Discuss the ownership structure and employee compensation structure to assess the degree of alignment with investor interests*

*In addition to proprietary tools, CAPTRUST also reviews more traditional areas of quantitative analysis, including:*

- *Risk-Adjusted Performance: focus on measuring the risks that investment managers take relative to a benchmark, with the objective to identify managers that provide representation of an asset class, while justifying their fees based on the value they add per unit of risk. Methods that are incorporated in the analysis include, but are not limited to, alpha, beta, up / down capture, standard deviation, Sharpe ratios, and Treynor ratios. CAPTRUST relates the quantitative results observed to their qualitative assessment of the manager's investment process, to understand the intentional and unintentional consequences of their process, as well as their opinion of the likelihood that the process can be repeatable into the future.*
  - *Excess Return: examines returns on a non-risk-adjusted basis to gauge if a strategy has achieved its stated goals while remaining representative of a given index. A full market cycle is an appropriate timeframe for this type of assessment. Specifically, they look at statistics including annualized excess return, R-squared, t-statistics, and information ratios to derive excess return profiles.*
  - *Peer Analysis: This analysis involves comparing risk-adjusted (for active managers) and excess returns of a given manager relative to other choices in a given asset class. Both rolling and non-rolling time periods are gauged to uncover periods of dislocation between a strategy and its peer groups, and then time is taken to understand the factors that caused these dislocations.*
5. How does the selection process address ethical considerations and potential conflicts of interest for both investment managers and board members?
- a. *Manager recommendations are generally provided by the consultant, not the Board itself. CAPTRUST serves as an independent co-fiduciary and therefore does not have any proprietary products. Additionally, CAPTRUST does not have any soft dollar arrangements and does not accept any gifts, gratuities, entertainment, contributions,*

*donations, and the like from any money manager, service provider, or any other third party.*

6. Who is responsible for developing and/or reviewing investment consultant and/or manager contracts?
  - a. *It is the Board's responsibility to develop and review the investment consultant and investment manager contracts. The consultant may assist in the review of the investment manager contracts.*
  
7. What is the process for monitoring individual and overall fund performance?
  - a. *Once a manager is selected for inclusion in the portfolio, CAPTRUST's (as consultant) efforts shift to ongoing monitoring, ensuring that the investment thesis remains intact, performance remains competitive and representative of the process employed, and the team remains stable, adequately resourced, and free from distraction. This is accomplished through both quantitative and qualitative monitoring, including a quarterly Request for Information (RFI) process to gather pertinent changes or updates, as well as regular ongoing meetings with portfolio management teams. The cumulative activity of the manager search, selection, and monitoring yields a large number of touchpoints with the asset management community. In addition to providing a rigorous fiduciary framework for investment-related decisions, this continuous interaction allows CAPTRUST to remain at the forefront of emerging trends in the industry.*
  
8. Who is responsible for measuring the performance?
  - a. *The Board is ultimately responsible for measuring the performance of the plan but with the consultant's input. CAPTRUST presents to the Board each quarter the performance of the plan relative the pre-specified benchmarks and peer groups but it is the Board's responsibility to interpret the performance.*
  
9. What benchmarks are used to evaluate performance?
  - a. *Please refer to the attached quarterly performance reports which detail the policy benchmark (and individual asset class benchmarks) including portfolio vs. benchmark returns.*
  
10. What types of performance evaluation reports are provided to the board? Are they provided in a digestible format accessible to trustees with differing levels of investment knowledge/expertise?
  - a. *At a minimum, CAPTRUST provides quarterly performance packages for all clients. Please refer to the attached as an example. CAPTRUST provides an update on the current market environment, highlights the changes to the plan funded status (for DB clients), reviews the asset allocation and its standing with the target weights, a*

*performance evaluation, and statistical summary. The reports are easily digestible for all to understand.*

11. How frequently is net-of-fee and gross-of-fee investment manager performance reviewed? Is net-of-fee and gross-of-fee manager performance compared against benchmarks and/or peers?

*a. At a minimum, performance is monitored quarterly but will be more frequent in nature during times of stress. Performance is measured against both the appropriate benchmarks as prescribed under the IPS as well as the asset class universe from Morningstar. Note, performance is always evaluated on a net-of-fee basis.*

12. What is the process for determining when an investment manager should be replaced?

*a. Every quarter, CAPTRUST's (as consultant) investment research team issues an opinion – in Good Standing, Marked for Review, or consider for termination - on all managers. The team continuously assesses new candidates or “bench” managers to add to the portfolio in the event a change is necessary. Manager and investment strategy due diligence is a fluid process, and a number of variables can impact the timing of hire and fire decisions. CAPTRUST does not wait for the end of a quarter to take action on a recommendation should the situation dictate a more immediate response.*

*The primary vehicle for examining investment manager performance is the quarterly Investment Policy Monitor, which is delivered in quarterly review meetings. If an investment option is nearing the “Considered for Termination” level under this system, it will be flagged for further review and possible action. The system highlights absolute, risk-adjusted, and peer-relative returns, with an emphasis on consistency of returns over multiple time periods, combined with ongoing qualitative assessment of the team and process in place.*

*In addition to their standard quarterly process, when circumstances require a more immediate response, CAPTRUST does not wait for the end of a quarter to relay their views and potential actions. Intra-quarter recommendations may be based upon due diligence findings, manager departures, strategy shifts, or other material events. CAPTRUST also operates a daily monitoring system that examines changes in daily Net Asset Value (NAV) prices of funds relative to their peers or benchmarks. Abnormal or unexpected return patterns may result in a closer examination, which could lead to a recommendation to terminate a manager prior to the next scheduled meeting.*

13. How is individual performance evaluation integrated with other investment decisions such as asset allocation and investment risk decisions?

*a. Please see our response to question 12 under Review of Investment Manager Selection and Monitoring Process.*